Curriculum Vitae
YangQuan Chen, Ph.D.
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Contact Information

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LAB: http://mechatronics.ucmerced.edu/

Education

Ph.D.	Electrical Engineering	Nanyang Technological University, Singapore	1998
M.S.	Automatic Control	Beijing Institute of Technology, China	1989
B.S.	Industrial Automation	Univ. of Science and Technology of Beijing, China	1985

Employment History

2017-	Professor (step 3), Dept. of Mechanical Engineering, University of California, Merced.
2014-2017	Associate Professor (step 4) with tenure, School of Engineering, Univ. of California, Merced.
2012-2014	Assistant Professor (step 6), School of Engineering, Univ. of California, Merced.
2011-2011	Visiting Professor, CNES Member, Dept. of EE, University of Pretoria, South Africa
2008-2012	Associate Professor with tenure, Graduate Coordinator (08-10), ECE Dept. of USU.
2002-2008	Assistant Professor, ECE Dept. of USU. Director of CSOIS (since June 2004)
2000-2002	Research Assistant Professor of Electrical Engineering, ECE Dept. and CSOIS.
1999-2000	Staff Engineer, Servo Product Dev. Group, Seagate Technology International, Singapore Science Park Design Center, Singapore. (http://www.seagate.com)
1998-1999	Professional Officer, Center for Intelligent Control, National University of Singapore. (http://www.ece.nus.edu.sg/cic)
1996-1998	Research Engineer, ECE Dept. of National University of Singapore.
1995-1996	Research Scholar, School of EEE, Nanyang Technological University, Singapore. (http://www.ntu.edu.sg/eee/)
1994-1995	Associate Professor, Dept. of Electrical Engineering, Xi'an Institute of Technology
1992-1995	Deputy Dept. Head, Dept. of Electrical Engineering, Xi'an Institute of Technology, China (now Xi'an Technological University http://www.xatu.edu.cn)
1988-1994	Lecturer, Dept. of Electrical Engineering, Xi'an Institute of Technology, China
1987-1988	Visiting Researcher, Dept. of Automatic Control, Beijing Institute of Technology, China.

Patents (Awarded and Applications Published online)

1. US06,324,890. 12/04/2001. "Method of characterizing and screening voice coil motor pivot friction in a low velocity region"
2. US06,437,936. 08/20/2002. "Repeatable runout compensation using a learning algorithm with scheduled parameters"
3. US06,563,663. 05/13/2003. "Repeatable runout compensation using iterative learning control in a disc storage system"

4. US06,574,067. 06/03/2003. “Optimally designed parsimonious repetitive learning compensator for HDDs having high track density”
5. US06,636,375. 10/21/2003. “Seek in a disc drive with nonlinear pivot friction”
6. US06,654,198. 11/25/2003. “Repeatable run-out error compensation method for a disc drive”
7. US06,661,599. 12/09/2003. “Enhanced adaptive feedforward control to cancel OPR disturbance by shaping the internal mode”
8. US06,674,589. 01/06/2004. “Method for harmonic frequency identification in a disc drive”.
9. US06,674,607. 01/06/2004. “Method and apparatus for determining high order polynomials for linearization of position signals”.
10. US06,690,534. 02/01/2004. “Method & apparatus for handling multiple resonance freq. in disc drives using active damping”.
11. US06,704,159. 03/09/2004. “Automatic acoustic management system for a disc drive”.
12. US06,785,073. 08//31/2004 “Identification and cancellation of cage frequency in a hard disc drive”.
13. US06,831,804. 12/14/2004 “Method and apparatus for handling resonance effects in disc drives using active damping”.
14. US07,599,752. 10/06/2009. “Tuning methods for fractional-order controllers”.
15. US20110010026, 01/13/2011. “Calibration Method for Aerial Vehicles”
16. US20130268219, 10/10/2013. "Fractional Order Power Point Tracking",

Consulting
2002 Seagate Technology International.
2004 Cornice Inc.
2010-2011 Samsung SISA.
2013- Lam Research

Professional Registration
Certified Six Sigma Green Belt (2000, Singapore)

Scientific and Professional Societies Membership
Senior Member, IEEE (Control Systems Society, Systems, Man, and Cybernetics Society, Robotics and Automation Society, Signal Processing Society);
Member of ASME (American Society of Mechanical Engineers), AMA (Academy of Model Aeronautics), ASEE (American Society for Engineering Education), AUVSI (The Association for Unmanned Vehicle Systems International), AWRA (American Water Resources Association), ASPRS (American Society of Photogrammetry and Remote Sensing) and AIAA (The American Institute of Aeronautics and Astronautics).

Teaching
Graduate courses taught at UC Merced:
- ME280. “Fractional Order Mechanics”; Fall 2013. 2014; 2017 (4 units, lab intensive)
- ME211. “Nonlinear Controls”; Fall 2015, Fall 2018. (4 units, lab intensive new 2015 textbook)
- ME212. “*Advanced Controls: Robustness and Optimality*” (4 credits, proposed, starting Fall 2019)

Undergraduate courses taught at UC Merced:
- ME190. ME ST “Unmanned Aerial Systems” (Fall 2016, Summer 2017)
- ME143. Unmanned Aerial Systems (UAS) (summer 2018, 4 credits, lab intensive)
- ME142. Mechatronics (4 units, lab intensive); Sp. 2013-2015, 2017-2019
- ENGR097/ENGR197 Engineering Service Learning, Spring 14-19; Fall 14-18. (1-2 units)
- ENGR190 Capstone Project (4 units) Sp 15. Fall 15, Sp 16
- ME170 Capstone Project (3 units) Sp 13, 14, Fall 13, 14.

- ME195/ENGR195 Independent Research Project. Fall 2012-18, Sp2013-19 (2-4 units)

Graduate courses taught at USU: (IS: "Independent Study" course aka ST: Special Topics course)

- ECE/MAE7350 Intelligent Control Systems (3 credits)
- ECE/MAE6320 Linear Multivariable Controls (3 credits, also online distant edu)
- ECE/MAE7330 Nonlinear and Adaptive Control (3 credits)
- ECE/MAE7360 Robust and Optimal Control (3 credits)
- ECE/MAE7750 Distributed Control Systems (3 credits)
- ECE6010 Random Processes in Electronic Systems (3 credits)
- ECE6930 ST: Machine Vision in Control and Automation (3 credits, IS)
- ECE7930 ST: Computational Intelligence (3 credits, IS)
- ECE7930 ST: Computational Optimal Control (3 credits, IS)
- ECE6930 ST: Advanced Control Designs (3 credits, IS)
- ECE6930 ST: Sensor Networks (3 credits, IS)
- ECE6930 ST: Fractional Calculus in Modeling, Control & Signal Proc. (3 cr., IS)
- ECE7930 ST: Distributed Control of Robotic Networks (4 credits, IS)
- ECE6930 ST: Multi Unmanned Aerial Vehicle Systems (3 credits, IS 09, 10)
- ECE6930 ST: Solving Math. Problems in MATLAB
  (3 credits, regular summer'09 course, with D. Xue)
- ECE6930 ST: Applied Fractional Calculus in Engineering
  (3 credits, regular summer'09 course, with C. Li, Y. Li and D. Xue)
- ECE6930 ST: Multimodal Collaborative Inertial Navigation Measurement (Fall10)
  (3 credits, IS)
- ECE6930 ST: Fractional Order Stochastic Systems and Controls (Fall10)
  (3 credits, IS)

Undergraduate courses taught at USU:

- ECE3620 Circuits and Signals (3 credits)
- ECE4840 Design-II (Senior Design) Engineering Design (3 credits)
- ECE4850 Design-III (Senior Design) Engineering Communications (2 credits)
- PHYX2400 ST: Nanoscience and Technology - Materials Today.
  - Two credits, regular course, NSF NUE grant)
- PHYX3500 ST: Nanomechatronics (3 credits, regular course, NSF NUE grant)
- ECE/MAE5320 Mechatronics (lab intensive) (4 credits)

Honors and Awards

2018

- Senate Distinguished Scholarly Public Service award, UC Merced.
- Highly Cited Researcher in engineering, 2018, Clarivate Analytics Inc. (http://hcr.clarivate.com)
- Visiting Professor, School of EEE, Nanyang Technological University (NTU), Singapore, 11/10-11/20/2018.
- Plenary lecture. 2018 12th ADRC Beijing, China.
- Plenary lecture. 2018 ICFDA, Amman, Jordan
- Plenary lecture. 2018 IEEE/CSAA GNCC, Xiamen, China
- Plenary lecture, 2018 IFAC Conference on PID, Ghent, Belgium.
- Invited Speaker, CITRIS-Honeywell Drone Workshop 2018, UC Berkeley.

2017

- ASME/IEEE MESA 2017 Best Paper Award (first author: Dr. Prof. Guimei Zhang)
- UCEAP Campus Faculty Director for UC Merced (2017 Jan -)
- Thesis reviews for Singapore, India, New Zealand, South Africa
- Preconference Tutorial Workshop on Regional Analysis of Distributed Parameter Systems at IFAC World Congress 2017 Toulouse, France.

2016

- Member, the IEEE-USA's Committee on Transportation and Aerospace Policy (CTAP) as the representative for IEEE Robotics and Automation Society (RAS).
- Senate Joint Resolution 18. Citation. https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=201520160SJR18
- Invited TC member for IFAC TC4.2 Mechatronics http://tc.ifac-control.org/4/2/members-1/yangquan-chen
- Top member by reads: https://www.researchgate.net/institution/University_of_California_Merced/stats
- Best TC Award ($1000), IEEE Robotics and Automation Society (RAS). Technical Committee on ARUAV (Aerial Robotics and Unmanned Aerial Vehicles).

2015

- MESA Lab's 9th approved FAA CoA (Certificate of Authorization) is for night flight! March 16, 2015.
- Invited Plenary Speaker. The International Symposium on FSS (Fractional Signals and Systems), Technical University of Cluj-Napoca, Romania. Oct. 2015
- Invited Speaker. February 18, 2015. Davis, CA. UC ANR RECS (Research and Extension Center System). Regional Directors meeting.
- Invited Panelist. February 17, 2015. Sacramento, CA. Oversight Hearing. "Drones: Is California Law Ready?" A Hearing of the Senate Committee on Judiciary.
- Invited Speaker. Southwest Ag Summit. Yuma, AZ, USA. Feb. 2015
- Invited Plenary Speaker. California Melon Research Board. San Diego, CA, USA. Jan. 2015
- Invited Panelist. 2015 Unified Wine and Grape Symposium. Sacramento, CA, USA. Jan. 2015.

2014

- Dec. 2014. Guest Lecturer. College of Mathematic Science, South China University of Technology.
- 5/27/2014. Invited Tutorial. ICUAS14 Tutorial: Emerging sUAS Technology for Precision Agriculture Applications (AgDroneTech14) at Int. Conf. on Unmanned Aircraft Systems. Orlando, FL, 2014.
- Aug. 2014. Two Pre-Conference Tutorial Workshops offered at IFAC World Congress, Cape Town, South Africa. Presidential Appreciation Dinner.
- June 2014. Elected as Steering Committee Chair, Int. Conf. on Fractional Derivatives and Applications (ICFDA), Catania, Italy.

2013

- Invited Plenary Speaker. TOK (Turkish National Control Conference). Malatya, Turkey, Sept. 26, 2013.
- Invited Panelist. Legislative Hearing on Drone Uses. State of California Assembly, Public Safety Committee. August 6, 2013, Sacramento, CA.
- 2012. Robins Award - Researcher of the Year, Utah State University
- 2012. Guest co-editor, Royal Society Philosophical Transactions A, Theme Issue of "*Fractional Calculus and its Applications*" (May 2013, vol. 371 issue 1990, http://rsta.royalsocietypublishing.org/content/371/1990.toc)
- 2012. Guest co-editor, International Journal of Bifurcation Chaos, Special Issue on "*Fractional Dynamics and Control*" (Volume 22, issue 4, April issue of 2012)
- Editorial. Guest – Editors: Virginia Kiryakova, Yury Luchko, Francesco Mainardi, Blas Vinagre, Igor Podlubny, YangQuan Chen. SPECIAL ISSUE Dedicated to 80th Anniversary of Professor Rudolf Gorenflo.

Fractional Calculus and Applied Analysis. Volume 14 / 2011 DOI: 10.2478/s13540-011-0001-0.

- 2011. Invited Panelist. Int. Symposium on Resilient Control Systems. August 2010, Boise, ID, USA.
- 2011: Recommended and selected to serve as Associate Editor for the journal *ISA Transactions*.
- 2011: Best Journal Paper Award $500 (among all IFAC "*Control Engineering Practice*" journal papers published in 2008-2011), IFAC World Congress, Milan, Italy.
- 2011: Member of Advisory Committee. Invited Tutorial at 2011 ICUAS (Int. Conf. on Unmanned Aerial Systems) (full day) on May 24th, 2011, Denver, CO., on "*Multi-UAV Based Multi-Spectrum Collaborative Personal Remote Sensing: Concepts, Platform & Applications*"
- 2011: 1st Place again! 9th AUVSI SUAS (Student Unmanned Aerial Systems) Competition. Wins $13,400. First team in the history of the competition to have won first place twice!
- 2011: Visiting Professor (Jan. – May, 2011). University of Pretoria, South Africa.
- 2010: Dissemination Award. Program Chair. The 4th IFAC Fractional Differentiation and its Applications (FDA10). Badajoz, Spain.
- 2010: Invited participant. NSF DDDAS Workshop. Aug. 30-31. Hilton Ballston. Washington DC.
- 2010: Invited Panelist. International Symposium on Resilient Control Systems. August 12, 2010, Idaho Falls, ID, USA.
- 2010: Invited Speaker. Institute of Mathematical Science, Shandong University, China. July 8th
- 2010: 9th Place! 8th AUVSI UAS (Unmanned Aerial Systems) Competition. Wins $6,200. First team in the history of the competition to have finally figured out the magic phrase: "FLY SAFE JUST JOE"
- 2010: Designated Editor. (IFAC journal) *Control Engineering Practice* (CEP) (since August 2010)
- 2010: Associate Editor for IFAC journal *Mechatronics*.
- 2009: Associate Editor for *IEEE Transactions on Control Systems Technology* (TCST)
- 2009: Associate Editor, ASME *Journal of Dynamic Systems, Measurement and Control* (J-DSMC)
- 2009: Member of Editorial Board, *Fractional Calculus and Applied Analysis* (FCAA)
- 2009: Associate Editor**,** *Acta Montanistica Slovaca* (http://actamont.tuke.sk/eb.html)
- 2009: Retention Award, USU.
- 2009: First Prize, 7th AUVSI UAS (Unmanned Aerial Systems) Competition. Wins $14,000 for First Place Overall
- 2009: Graduate thesis External Examiner. Kuwait University
- 2009: Graduate thesis External Examiner & Oral Examiner, University of Canterbury, New Zealand.
- 2009: June 10. Tutorial Session. Organizer and Speaker. American Control Conference. June 10-12, 2009, St. Louis, MO, USA
- 2009: May 27. Semi-Plenary Speaker. The 4th IEEE Conference on Industrial Electronics and Applications (ICIEA 2009), Xi'an, China.
- 2009: March 13. UC Berkeley Invited Seminar. "Fractional order thinking: from mechatronics to biomechatronics and beyond".
- 2008: Second Prize, 6th AUVSI UAS (Unmanned Aerial Systems) Competition. Wins $8,000 for 2nd Place Overall, 2nd Place in Mission, Honorable Mention in both Orals and Journal, and Prize Barrels for Autonomous Mission Flight, Autonomous Landing, JAUS and Perfect Identification of the Off-Path Target.
- 2008: Invited Panelist. "*Panel Discussion: What skills do controls engineering graduates need to have for industry?*" 2008 American Control Conference, Seattle, WA, July 2008.
- 2008: Plenary Speaker. The 3rd IFAC Fractional Differentiation and its Applications (FDA08). Ankara, Turkey, 05 - 07 Nov., 2008.
- 2008: Ph.D. student Yan Li won the prestigious FDA08 Young Riemann-Liouville Award.
- 2007: Outstanding Researcher of the Year. Dept. of Electrical and Computer Engineering, Utah State University.
- 2007: Special Invited Talk. The 2nd IEEE Conference on Industrial Electronics and Applications (ICIEA 2007), 23-25 May 2007, Harbin, China.

- 2006: Achievement Award, 2nd IFAC Int. Workshop on Fractional Derivative and its Applications (FDA06), Porto, Portugal.
- 2006: Plenary Speaker, 2nd IFAC Int. Workshop on Fractional Derivative and its Applications (FDA06), Porto, Portugal.
- 2005: 2nd Place. Crossbow Smart Dust Contest, $2000 Cash Reward and $500 Travel Allowance.
- 2003: *Automatica* Outstanding Reviewer.
- 2003: Invited Tutorial Lecturer (3 hours). The 1st Int. Summer School on Iterative Learning Control. June. CSOIS, Logan, Utah.
- 1999, 2000: Many Seagate Patent Awards. 1st Seagate TEC Speaker, Seagate Core Employee Award (2000).

Institutional and Professional Service

Institutional:

- Community
    - Developer and instructor. The Da Vinci Center for Innovative Learning of SJCOE, Stockton, CA, Dr. Chen gave 4 sessions of lectures, each with 45 min. to a group of nearly 60 elementary school teachers on "The Age of Data-Drones: Wright Brothers 2.0". This outreach activity is part of the CAMSP (California Mathematics and Science Partnership) cohort 10 grant led by Glen White of Tuolumne COE under grant #13-14512-1055-00
    - Invited speaker and public lecturer on drone related issues at various occasions
    - Vice President, NTU Alumni Association US West.
    - Member, Engineering Advisory Board, Merced College
    - Member, Engineering Advisory Board, Buhach Colonial High School, Atwater
    - Judge, SpaceX Hyperloop Competition (TAMU), 2016
- School of Engineering of UC Merced
    - Staff Search Committee (Purchasing)
    - Faculty Search Committee (manufacturing, ME)
    - Founding Faculty Mentor, AIAA @ UC Merced.
    - Member, Curriculum Committee (2014-)
    - Core Member, EECS (Electrical Engineering and Computer Science)
    - Core Member, ME (Mechanical Engineering)
    - Member, UC Solar
    - Member, SNRI (Serra Nevada Research Institute)
    - Member, HSRI (Health Sciences Research Institute)
    - Chair, ME Undergraduate Program (2014-)
    - Faculty Assessment Organizer (FAO), ME Undergraduate Program (2014-)
    - Coordinator, Comprehensive Exam for ME Graduate Program (2014, 2015)
    - Founder and Faculty Mentor. Unmanned Aerial Vehicle (UAV) theme for Engineering Service Learning (ESL) program. (since 2014 Spring)
    - ME Faculty Search Committee (Ag Systems), 2015-2016.
    - UGC WASC Essay Group member (2016)
    - UC ARS Merced Faculty Director Search Committee Chair (2016)
    - UCM IT Infrastructure Director Search Committee member (2015)
    - Spring 2016 Assessment as Pedagogy and Planning (20 hours total)
- UC Merced
    - Member, Committee of Research (COR) 2013-2015
    - Member, Undergraduate Committee (UGC) 2014-2015
    - Representative of UGC: Enrollment Management Council, CRF subcommittee of UGC. Joint UGC-GC-PROC subcommittee on undergraduate program review policy and procedures.
    - Member, UROC: Undergraduate Research Opportunities Council (2015-)
    - Member, Executive Committee, SPARC (Spatial Analysis Research Center)

    - Member, Faculty-advisor-at-large, University Of California, Merced Vernal Pools and Grassland Reserve Advisory Committee
    - Member, SNRI Advisory Committee
    - Member, Library Working Group, UC Merced (2013-2014)
- UC System
    - Member, University Committee on International Education (UCIE) http://senate.universityofcalifornia.edu/committees/ucie/ (Representing UC Merced)
    - Member, Russia Program Review Committee, UC Senate Academic Review Of The CIEE St. Petersburg Programs, Tsinghua University and Taiwan programs. (Representing UCIE)
    - Participant. UCOP Innovative Learning Technologies Initiative Working Meeting April 13, 2013.
    - Judge, BIG IDEA proposal competition, 2015, 2016
- State of California
    - Invited Panelist, legislative hearing on drones. August 2013, February 2015.
    - Invited Panelist. February 17, 2015. Sacramento, CA. Oversight Hearing. "Drones: Is California Law Ready?" A Hearing of the Senate Committee on Judiciary.

Pre-UCMerced institutional services:

- Member. Dean's Associate Professor Committee for Strategic Planning, USU (2010-2011)
- Member. Senior Faculty Search Committee for USTAR in "Energy". (College of Engineering and College of Science, USU) (2010)
- Member. Faculty Senate. Utah State University (2010-2012)
- Chair, Promotion/Tenure Committee for a faculty member in ECE Dept. (2009-2012)
- Director, CSOIS Center for Self-Organizing and Intelligent Systems (http://www.csois.usu.edu) (since June 2004-2012)
- Chair, Electrical Engineering Faculty Search Committee, ECE Dept. of USU (2007),
- Chair of the Graduate Committee, ECE Dept. of USU (2008-2010)
- Member, Dept. Head Search Committee, ECE Dept. of USU (2007).
- Member, Executive Committee, ECE Dept. of USU (2007-2012).
- Member of the Electrical Engineering Faculty Search Committee, ECE Dept. of USU (2004, 2006),
- Member of the Graduate Committee, ECE Dept. of USU (2002-2008)
- Judge, USU Graduate Symposium, USU Graduate Student Senate, March 4, 2004; April 15, 2005.
- USU CSSA (Chinese Students and Scholars Association) Faculty Advisory Committee (2003).
- Faculty Mentor (2001-2002) for Vector Floor Theme Hall Program, Jones Hall, Housing and Food Service and College of Engineering.
- Faculty Mentor (2002-2003) for Theme Housing Program, Reeder Hall, Housing and Food Service and College of Engineering.
- Appreciation Letter from the late USU President Kermit L. Hall. "Student Move-in Days". Volunteer helper, for two days, 2003.

Professional:

- Associate Editor, Springer Energy Sources (Part A) (2018-)
- Associate Editor, MDPI Applied Sciences (2018-)
- Associate Editor, MDPI Sensors (2018-)
- Subject Editor, *Nonlinear Dynamics* (2018-)
- Associate Editor, *Fractional Calculus and Applied Analysis* (FCAA: ISSN 1311-0454) (2009-)
- Associate Editor. (Springer) *International Journal of Intelligent Service Robotics* (2016-)
- Topic Editor-in-Chief "Field Robotics". *International Journal of Advanced Robotic Systems* (2013-)
- Associate Editor, IFAC *Mechatronics* (2011-)

- Senior Editor, JINT Springer, Journal of Intelligent and Robotic Systems (2012-)
- Reviewer, Mathematical Reviews http://www.ams.org/mresubs/index.html (2015-)
- Associate Editor. IET *Control Theory and Applications* (2015-2018)
- Associate Editor. Cogent OA|Engineering (2014-)
- Associate Editor. PFDA (Progress in Fractional Differentiation and Applications - An Int. Journal) (2014-)
- Member of Editorial Advisory Board, *An International Journal of Optimization and Control: Theories & Applications* (IJOCTA), http://ijocta.balikesir.edu.tr (2011-)
- Associate Editor, IFAC journal *Control Engineering Practice* (CEP), (2010-2018)
- Associate Editor, *ISA Transactions* (2011-2017)
- Associate Editor, *IEEE Transactions on Control Systems Technology* (TCST) (2010-2016)
- Associate Editor, *ASME Journal of Dynamic Systems, Measurement and Control* (J-DSMC) (2009-2015)
- Founding Associate Editor, Unmanned Systems, World Scientific. (2013-2015)
- Associate Editor, *Fractional Differential Calculus* (FDC), http://fdc.ele-math.com/ (2009-)
- Associate Editor, *Acta Montanistica Slovaca* http://actamont.tuke.sk/eb.html (2009-)
- Associate Editor, ISA Review Board for American Control Conference of AACC (2004-)
- Associate Editor, IEEE Control Systems Society Conference Editorial Board (2002-)
- Associate Editor, IEEE Robotics and Automation Society Conference Editorial Board (2012-)
- Past Chair, Technical Committee of Mechatronics and Embedded Systems and Applications (MESA), ASME DED (Design Engineering Division) (2010-2011)
- Chair, Technical Committee of Mechatronics and Embedded Systems and Applications (MESA), ASME DED (Design Engineering Division) (2009-2010)
- Chair, Technical Committee of Mechatronics and Embedded Systems (MES), IEEE ITSS (Intelligent Transportation Systems Society) (2009-2010)
- External Thesis Examiner, University of Pretoria, South Africa, 2011, 2012, 2013, 2014
- Tenure/promotion external reviewer. 2011: (two US universities); 2013: one Peking University; 2015: one Khalifa University)
- AAAS review panelist for Saudi Arabia, 2011
- Luxemburg Science Foundation proposal review, 2011
- Netherlands Science Foundation proposal review, 2011, 2015
- Hong Kong GRC, Czech, Finland, Denmark, proposal reviews, 2013, 2014, 2015, 2015
- Elsevier book series proposal review and book proposal reviews, 2011
- South Africa NRF proposal review, 2010, 2012, 2014, 2015
- ARL Proposal Review, 2009
- NASA Panel Review, 2008
- NSF CISE REU Panel Review, 2009, 2010.
- NSF CAREER Panel Review, 2009.
- NSF Panel Review, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014.
- USDA SBIR proposal reviews, 2013, 2014, 2015, 2016
- Chilean NSF Proposal Review, 2008.
- Oversea Ph.D. Dissertation External Examiner, 2009, U. of Canterbury, New Zealand.
- Oversea Thesis External Examiner, 2009, Kuwait University.
- Oversea Ph.D. Dissertation External Examiner, 2006, 2014, 2015. IIT, India.
- Canada NSERC Proposal Review, 2004, 2013, 2014

2017-2019 to be updated.

2016

- Plenary Speaker. International Carpathian Control Conference 2006. Slovakia

- Steering Committee Chair, International Conference on Fractional Derivatives and Applications, 2014, 2016, Serbia.
- Member, the IEEE-USA's Committee on Transportation and Aerospace Policy (CTAP) as the representative for IEEE Robotics and Automation Society (RAS).
- Program co-Chair, ICUAS 2016, Washington DC.
- Program Committee Member, American Control Conference, Boston, MA, 2016.

2015
- Plenary Talk, FSS2015, Int. Symposium on Fractional Signals and Systems, Romania
- Co-Organizer, FDTA2015 under ASME/IEEE MESA2015 at ASME IDETC/CIE 2015, Boston, MA, USA
- Co-Organizer, SUAVTA2015 under ASME/IEEE MESA2015 at ASME IDETC/CIE 2015, Boston, MA, USA
- Member, Executive Committee, ICUAS (2012-)
- Senior IPC member, ICAR 2015

2014
- General Co-Chair. ICUAS (International Conference on Unmanned Aircraft Systems) 2014. Orlando, FL.
- Co-Organizer, SUAVTA2014 under IEEE/ASME MESA2014, Senegal, Italy.
- Co-Organizer, FDTA2014 under IEEE/MESA MESA2014, Senegal, Italy.
- Chair, Steering Committee, ICFDA. Elected at ICFDA in Catania, Italy, June 2014.

2013:
- Invited Plenary Speaker. TOK (Turkish National Control Conference). Sept. 2013.
- Program Chair. ICUAS (International Conference on Unmanned Aircraft Systems) 2013. Atlanta, GA.
- Workshop Chair. ASME IDETC/CIE 2013. Portland, OR.
- Symposium Co-Chair. “Symposium on Small UAV Technologies and Applications” ASME/IEEE MESA13, part of ASME IDETC/CIE 2013. Portland, OR.
- Symposium Co-Chair. “Symposium on Fractional Derivatives and Their Applications” ASME/IEEE MESA13, part of ASME IDETC/CIE 2013. Portland, OR.
- Organizer and Moderator. Panel Session on “Mechatronics meets fractional calculus” (100 min.), ASME/IEEE MESA13, part of ASME IDETC/CIE 2013. Portland, OR.
- Executive Committee Member, ICUAS.com (2013-)
- Grant proposal review for Hong Kong GRC. Polish NSF. Danish NSF. Canada NSERC. (2013)
- USDA ad hoc grant reviewer. (Nov. 2012)
- Invited Panelist. NSF panel review. (Feb. 2013); Invited Panelist. NSF panel review. (May 2013)
- Member of IPC for several international conferences. (CCDC2013, ICIA2013, ICAMechS 2013, RED-UAS13, etc.)

2012:
- Steering Committee, IEEE/ASME Int Conf. on Mechatronics and Embedded Systems and Applications, Suzhou, China, July 8-10, 2012; http://www.asmemesa.org
- Honors and Awards Committee Chair. The 5th IFAC Fractional Differentiation and its Applications (FDA12). Nanjing, China, May 2012; http://em.hhu.edu.cn/fda12/
- Tutorial Workshop Chair. 2012 International Conference on Unmanned Aircraft Systems (ICUAS). Philadelphia, PA, 2012 http://www.uasconferences.com/
- Invited Session Co-Chair. CCDC 2012. http://www.ccdc.neu.edu.cn/
- Symposium co-chair. 4th SUAVTA, IEEE/ASME MESA 2012 (http://www.asmemesa.org)
- Program Committee Member
    - IFAC PID12; http://pid12.ing.unibs.it/committees.html
    - IEEE ISRCS2012; IEEE ICAL12; IEEE ICNSC2012; ICINCO 2012; ISNN12; ICCC12 etc.

2011:

- Track Chair on Complex Networked Control Systems. IEEE ISRCS 2011. Boise, ID. https://secureweb.inl.gov/ISRCS2010/presentations.aspx
- Advisory Committee. 2011 International Conference on Unmanned Aircraft Systems (ICUAS). Denver Colorado USA May 24-27, 2011 http://www.uasconferences.com/
- Symposium Co-Chair/Organizer. ASME FDTA 2011 under ASME/IEEE MESA2010. https://www.asmeconferences.org/IDETC2011/
- Symposium Chair. 3rd SUAVTA under ASME/IEEE MESA2011. https://www.asmeconferences.org/IDETC2011/
- Invited Session Co-Chair. CCDC2011. The 2011 Chinese Control and Decision Conference (2011 CCDC) is the 23rd of the series, Mianyang, China in May 23-25, 2011. http://www.ccdc.neu.edu.cn
- IPC member, IEEE ISNN, 2011, Hong Kong, China, http://isnn2011.mae.cuhk.edu.hk/

2010:

- General Chair. IEEE/ASME Int. Conf. on Mechatronics and Embedded Systems and Applications (MESA2010), July 15-17, 2010, Qingdao, China, www.asmemesa.org
- Program Chair. International Program Committee. 4th IFAC Int. Workshop on Fractional Derivative and Applications (FDA2010), Spain. http://web.tuke.sk/fda10/
- Track Chair**.** Complex Networked Control Systems. International Symposium on Resilient Control Systems. August 12, 2010, Idaho Falls, ID, USA.
- Program Chair. Academic Day on Fractional Dynamics, Shanghai University, May 16-18, 2010.
- IPC member. 2010 IEEE MFI (multisensory fusion and integration), Salt Lake City, UT, USA, http://www.cs.utah.edu/mfi2010/
- IPC member. The 3rd International Symposium on Systems and Control in Aeronautics and Astronautics (ISSCAA 2010, http://www.isscaa.net/ Harbin, China, June 08-10, 2010.
- Tutorial/Workshop Chair. Organizing Committee. The 4th Annual Electrical Power and Energy Conference (EPEC 2010), Halifax, NS, Canada, August 25-27, 2010.
- IPC member. IEEE ICCA, Xiamen, China, http://www.ieee-icca.org/
- IPC Member. IEEE ICNSC, 2010, Chicago, USA. http://www.ezconf.net/icnsc10/
- IPC member. IEEE ISNN, 2010, Shanghai, China, http://isnn2010.sjtu.edu.cn/
- Invited Session Co-Chair. The 22nd CCDC2010. May 26-28, 2010, Xuzhou, China. http://www.ccdc.neu.edu.cn/
- Workshop Co-Chair. The 8th WCICA, July 6-9, 2010, Jinan, China. http://www.wcica.info/
- IPC member. 2010 International Conference on Modeling, Identification and Control, Okayama City, Japan, July 17-19, 2010. http://www.suri.sys.okayama-u.ac.jp/icmic2010
- Workshop Co-Chair. IEEE ICIA. 2010 IEEE International Conference on Information and Automation, June 20 – 23, 2010, Harbin, Heilongjiang, China. http://www.icia2010.org/
- IPC member. ICARCV 2010, Singapore. www.icarcv.org/
- IPC member. IEEE CASE 2010, http://www.case2010.org/

2009:

- Program Chair. 2009 ASME/IEEE Mechatronic and Embedded Systems and Applications (MESA), San Diego, CA, August 30-Sept. 2, 2009. http://iel.ucdavis.edu/mesa/MESA09/
- Advisory Committee member. Symposium on Learning Control at IEEE CDC 2009. December 14-15, Shanghai 2009.
- Organizing Committee. IFAC Workshop on Networked Robotics. Golden, CO, USA. http://control.mines.edu/netrob09/

- Organizer**.** Whole day workshop. "Fractional Calculus Day @ Utah State University". CSOIS. April 24, 2009. http://mechatronics.ece.usu.edu/foc/event/FOC_Day@USU/2009.html
- IPC member. IEEE CBMS. http://cvial.ece.ttu.edu/cbms2009/
- IPC member. IASTED CI 2009
- IPC member, IEEE ICCA, New Zealand, http://www.ieee-icca.org/
- IPC member. 2009 Fifth International Conference on Intelligent Sensors, Sensor Networks and Information Processing. Melbourne, Australia, http://www.issnip.org/2009/
- Symposium Co-Chair**.** The first Symp. On CPS (Cyber-Physical Systems) at MESA09, San Diego.
- Symposium Co-Chair. The first Symposium on Small Unmanned Aerial Vehicle Technologies and Applications (SUAVTA) at MESA09, San Diego.
- Organizer. Pre-Conference One-Day Workshop on "Fractional Calculus in Controls and Signal Processing", 2009 American Control Conference. (www.a2c2.org/) (cancelled)
- Organizer. Tutorial Session on "Fractional Calculus in Controls and Signal Processing" during 2009 American Control Conference. (more info: http://fractionalcalculus.googlepages.com)
- Invited Session Co-Chair. Int. Conf. on Decision and Control in China (CCDC09), Guilin, China.
- Track Chair of Mechatronics. The 4th IEEE Conference on Industrial Electronics and Applications (ICIEA 2009) Xi'an, China. (www.ieeeiciea.org)
- Tutorial/Workshop Co-Chair. IEEE ICMA2009. Changchun, China. (www.ieee-icma.org)
- IPC member. The 6th International Conference on Informatics in Control, Automation and Robotics. ICINCO 2009. Milan, Italy. http://www.icinco.org/cfp.htm
- IPC member. The 2009 IEEE Symposium on Approximate Dynamic Programming and Reinforcement Learning (ADPRL 2009) Nashville, Tennessee, USA, March 30 – April 2, 2009, as part of the SSCI 2009, http://www.ieee-ssci.org/
- IPC member. Sixth International Symposium on Neural Networks. ISNN2009. Wuhan, China. http://www.easychair.org/conferences/?conf=isnn2009

2008:

- Technical Program Chair, Members of Executive Committee.2008-2009 ASME/IEEE Mechatronic and Embedded Systems and Applications (MESA) Committee. http://iel.ucdavis.edu/mesa/
- Member, International Program Committee. 3rd IFAC Int. Workshop on Fractional Derivative and Applications (FDA08), Turkey.
- Technical Program Co-Chair. 2008 Int. Conf. on Decision and Control in China (CCDC08), Yantai, China.
- Tutorial/Workshop Co-Chair. 2008 IEEE/ASME International Conference on Advanced Intelligent Mechatronics (AIM08), Xi'an, China.
- Tutorial/Workshop Co-Chair. 2008 IEEE International Conference on Mechatronics and Automation (ICMA08), Japan.
- IPC Member. The 7th World congress on Intelligent Control and Automation (WCICA'08), Chongqing China during June 25-27, 2008.
- IPC member. 2008 IEEE Conference on Soft Computing in Industrial Applications in Muroran, Japan, June 25-27, 2008.
- Program Committee member. 2008 IEEE International Conference on Networking, Sensing and Control (IEEE ICNSC'08), Sanya, China.
- Program Committee member. IEEE ISIC (International Symposium of Intelligent Control) track of the IEEE MSC2008, San Antonio, TX, USA, October 2008.
- IPC member. NSC08 – Conference on Nonlinear Science and Complexity, July 28-31, 2008, Porto, Portugal
- Track Chair,. The 3rd IEEE Conf. on Industrial Electronics & Apps (ICIEA08) 3-5 June 2008, Singapore.
- Co-Organizer. Invited Session on Iterative Learning Control. *The 10th International Conference on Control, Automation, Robotics and Vision*, ICARCV 2008, Hanoi, Vietnam, 17 – 20 December 2008.

2007:

- Organizer**,** Whole day workshop. "Fractional Calculus Day @ Utah State Univ.". Sept. 3, 2007.
- Program Chair. ASME/IEEE Int. Conf. on Mechatronics, Embedded Systems and Applications (MESA07), 9/4-7, 2006, Las Vegas.
- Scientific Committee member. Symposium on Applied Fractional Calculus. Badajoz (Industrial Engineering School), Spain, October 15-17, 2007.
- Program Committee member. 2007 IEEE International Conference on Automation and Logistics (ICAL 2007), Jinan, Shandong, China, August 18–21, 2007.
- International Program Committee member. 8th International Carpathian Control Conference (ICCC). Hotel Patria, Štrbské Pleso, High Tatras, Slovak Republic on May 24-27, 2007.
- Technical Program Committee (TPC) member. 2007 IEEE Symposium on Computational Intelligence in Bioinformatics and Computational Biology (CIBCB 2007). Honolulu, Hawaii, USA, April 1-5, 2007.
- IPC member. 20th IEEE International Symposium on Computer-Based Medical Systems, Maribor, Slovenia, June 20-22, 2007.
- IPC member. ICINCO 2007. International Conference on Informatics in Control, Automation & Robotics
- Tutorial and Workshop Co-Chair, Member, International Program Committee. The 2007 IEEE International Conference on Robotics and
  Biomimetics (ROBIO 2007), Sanya, China, December 15 to 18, 2007.
- Track Chair of Mechatronics, 2007 IEEE International Conference on Industrial Electronics and Applications, Harbin, China.
- IPC Co-Chair, 2007 IEEE International Conference on Industrial Electronics and Applications (IEEE ICMA07), Harbin, China.
- IPC member. 2007 IEEE Int. Symposium on Approximate Dynamic Programming and Reinforcement Learning (ADPRL07), Hawaii, USA.
- IPC member. IEEE SMCia/07 workshop in Passau, Germany, on August 1 – 3, 2007.
- IPC member. The International Conference on Advanced Engineering Computing and Applications in Sciences (ADVCOMP 2007). November 4-9, 2007 – Papeete, French Polynesia (Tahiti).
- IPC member. IASTED International Conference on Computational Intelligence (CI 2007), Jul 02, 2007 to Jul 04, 2007, Banff, Canada.
- Review Co-Coordinator, 2007 ASME Int. Design Engineering Technical Conference and Computers and Information in Engineering (DETC/CIE) Conference. 6th Int. Conf. on Multibody Systems, Nonlinear Dynamics, and Control (MSNDC). MSNDC-14: Fractional Derivatives and Their Applications (FDTA07). Sept. 2007. Las Vegas, NV, USA.
- IPC member. CSI 2007. 10th Int. Conf. on Computer Science and Informatics with 8th Joint Conf. on Information Sciences (JCIS 2007) July 18 – 24, 2007, Salt Lake City, Utah.

2006:

- IPC member., The International Conference on Wireless Algorithms, Systems and Applications (WASA06), Xi'an China;
- Award Committee Chair. IEEE Mountain Workshop on Adaptive & Learning Systems (SMC/ALS06), Utah State Univ., Logan,7/24-26/2006
- Program Committee member, 2006 IEEE Symposium on Computer-Based Medical Systems, Marriott Salt Lake City – City Center, Salt Lake City, Utah, USA, June 22-23, 2006. http://CBMS2006.ece.byu.edu
- Program Committee member, IEEE Int. Conf. On Networking, Sensing & Control (ICNSC06) Ft. Lauderdale, Fl., U.S.A. April 23-25, 2006
- Tutorial and Workshops co-Chair, IEEE Int. Conf. on Information Acquisition (ICIA06), August 20 – 23, 2006, Shandong University, China.
- Program co-Chair. The 2006 IEEE Int. Conf. on Mechatronics & Automation, June 25-28, 2006 (ICMA06) Luoyang, Henan Province, China.

- IPC member, the 2nd IFAC Workshop on Fractional Differentiation and its Applications , 19-21 July, 2006, Porto, Portugal.
- IPC member. 9th Int. Conf. on Control, Automation, Robotics and Vision, ICARCV'06, Singapore, 5-8 Dec. 2006.

2005:
- Organizer**.** Whole day workshop. "Fractional Calculus Day @ Utah State University". CSOIS. April 19, 2005.
- IPC member. 7-th Computational Intelligence and Natural Computing (CINC05) with 8th Joint Conf. on Information Sciences (JCIS 2005) July 21 – 26, 2005, Salt Lake City, Utah.
- IPC member. CSI 2005. 8th Int. Conf. on Computer Science and Informatics with 8th Joint Conf. on Information Sciences (JCIS 2005) July 21 – 26, 2005, Salt Lake City, Utah.
- TPC member.Track 8: "Theory, Design and Implementation of Circuits & Systems". 2005 ICCCAS , Hong Kong, China.
- Tutorials/Workshops Co-Chair. IEEE Int. Conf. on Information Acquisition (IEEE ICIA 2005), Hong Kong/Macau, China. July 9 to 10 and the regular conference program at the Chinese University of Hong Kong from July 11 to 13, 2005.
- IPC member and Invited Session co-Chair, 2005 IEEE ICMA05, July 29-August 1, Niagara Falls, Ontario, Canada.
- Co-Chair, Special/Organized Sessions. 2005 IEEE/RSJ IROS05. August 2-6, 2005, Edmonton, Alberta, Canada.

2004:
- Reviewer Committee. IFAC Int. Workshop on Fractional Derivative and Applications (FDA04), July 19-21, 2004, Bordeaux, France.
- Technical Program Committee (TPC) member. 2004 International Conference on Communications, Circuits and Systems (ICCCAS04), June 28-June 30, 2004, Chengdu, Sichuan, China.
- IPC member. IEEE Int. Conf. Computational Cybernetics 2004 (ICCC04), Austria.
- Session Chair. Geometric and Computational Methods in Control American Control Conference 2004.

2003:
- IPC member. IEEE CIAC2003, Hong Kong, China; IEEE CIRA2003, Kobe, Japan.
- Session Chair and Session co-Chair. ASME DETC 2003. VIB. Chicago; Session co-Chair. IEEE CDC2003 (Program), Hawaii, USA.
- Founding Member of ASME subcommittee "*Fractional Dynamics*". (2003, Chicago)
- Co-organizer and Instructor. Tutorial Workshop on "Fractional order calculus in control and robotics" at IEEE CDC'02, Las Vegas, NE, USA.
- Co-organizer. Invited Sessions on "Iterative Learning Control – Design & Applications". 17th IEEE ISIC'02, Oct. 27-30, Vancouver, Canada.
- Reviewer. NSERC funding proposal, Canada, 2001. South Africa Science Foundation proposal review, 2005.
- Co-organizer. International Mini-Symposium on Iterative Learning Control, CSOIS, Utah State University, Logan, Nov. 2001.
- IPC member, IEEE CIRA 2001, July 29 – August 1, 2001, Banff, Alberta, Canada
- Panelist, "Panel discussions on iterative learning control", The 3rd Asian Control Conference, Shanghai, China, July 2000.
- Co-organizer, Multiple Invited Sessions on "Iterative Learning Control" in the ICARCV'2000. Dec. 2000, Singapore.
- Reviewers for many journals and international conferences.
- Session chair/co-chair for many international conferences.

Professional Development Activities

- June 26, 2012. Control of Power Inverters for Renewable Energy and Distributed Generation [Power Inverters] Organizer: Qing-Chang Zhong http://a2c2.org/conferences/acc2012/workshops.php
- June 26, 2012. Health Management, Fault-tolerant Control, and Cooperative Control of Unmanned Aircraft [Unmanned Aircraft] Organizers: Youmin Zhang, Camille Alain Rabbath, YangQuan Chen, Christopher Edwards, Cameron Fulford, Hugh H.-T. Liu, Liang Tang, Didier Theilliol, and Antonios Tsourdos http://a2c2.org/conferences/acc2012/workshops.php
- Dec. 11, 2011. "Traffic Modeling and Estimation at the Age of Smartphones: Leveraging Statistical Modeling and Optimal Control", full day workshop, IEEE CDC'11, Orlando, FL.
- Aug. 30-31, 2010. Invited Workshop. http://www.DDDAS.org
- Jun. 13, 2009. Workshop in honor of Professor B. Ross Barmish after American Control Conference. St. Louis, MO, USA. http://www.personal.psu.edu/cml18/barmish60th/html/talks.html
- Dec. 8, 2008, Tutorial Workshop on *Modeling, Estimation and Control in Neuroscience* Organized by Sridevi Sarma (MIT, USA), The 44th IEEE Conference on Decision and Control, Cancun, Mexico. (very gainful, techniques around Deep Brain Stimulation)
- May 19-20, 2004. 5th Annual Edison Conference and Innovation Showcase. University of Utah, SLC.
- May 3-6, 2004. "Road Scholar". USU President Hall's Road Scholars 2004 Tour. South East Utah.
- Mar. 2003. NSF Junior Faculty Travel Grant for NSF Career Workshop at Tempe, Arizona.
- Jun. 2003. Travel grant from NCAR (National Center for Atmospheric Research), Junior Faculty Forum, Boulder, CO. http://www.asp.ucar.edu/ecsa/announce.html
- Jun. 2002, Course Design & Development Workshop. Office of Instructional Support, Utah State University.
- Dec. 2001, Tutorial Workshop on *Networked Autonomous and Semi-autonomous Vehicles*, The 40th IEEE Conference on Decision and Control, Hyatt Regency Grand Cypress Resort in Orlando, Florida. (Given by UC Berkeley PATH people, interesting talks)
- Mar. 2000-July 2000, DFSS – Design for Six Sigma Green Belt Certification Training (80 hours), Seagate Technology International, Singapore.

Grants and Funding History (last updated March 2019)
(Grants in color are for UC Merced – ~ $2.278M total responsible @ UC Merced)

Year	Sponsor	PI/Co-PI	Project Title	Amount total	Amount responsible
2019-2022	SGC California	Co-PI	Mobile Biochar Production For Methane Emission Reduction And Soil Amendment	$3,088,188.00	~$500,000
2019-2023	USDA NIFA SCRI	Co-PI UCM PI	Putting Phenotypic and Genotypic Tools to Work for Improving Rootstocks	$4M	~$240,000
2019-2019	Honeywell	PI	Chemical sensing array for sUAS	funded	funded
2018-2019	NASA JPL	PI	Fixed wing methane leak detection mission and data processing	$20,000	$20,000
2019-2022	Lam	PI	Cognitive Process Control (Phase 3): Real-time Analytics, Embedded Intelligence and Edge AI	$300,000	$300,000
2019-2020	California Pistachio Research Board	Co-PI	Improving Pistachio Harvesting Machines Using a Tree-specific Feedback Loop	$77,032.00	~$20,000

2017-2018	CITRIS	coPI	ET Estimation using drones (UC Davis)	$60,000	$20,000
2017-2018	CITRIS	coPI	Consequence-aware safe drones (UC Berkeley)	$60,000	$30,000
2017-2018	JPL	PI	Integrate Methane Sniffer on UC sUASs – phase 3	$19,800	$19,800
2017-2021	USDA	coPI	USDA NIFA REEU	$275,000	$60,000
2016	JPL	PI	Integrate Methane Sniffer on UC sUASs – phase 2	$19,500	$19,500
2016-2017	CITRIS	Co-PI (PI: H. Moyes)	SmartCaveDrone as Robotic co-Archeologist	$60,000	$20,000
2015-2018	USDA	Co-PI (PI: G. Diaz)	Agriculture Waste Utilization Through Low-Cost Activated Carbon Produced From Local Biochar	$300,000	$100,000
2016-2017	NYSEARCH	PI	The methane detection device project	$150,000	$150,000
2016	JPL	PI	Integrate Methane Sniffer on UC sUASs – phase 1	$19,500	$19,500
2015	JPL	PI	Implement Methane Sniffer on UC Merced Fixed-Wing sUAS	$15,000	$15,000
2015	PG&E	PI	Applicability of Unmanned Aerial Systems for Leak Detection	$50,000	$50,000
2015-2017	Lam Research	PI	Cognitive Process Control	$200,000	$200,000
2014-2022	The Nature Conservancy	PI	Staten Island Migratory Crane Counting Using UAV-based Thermal Infrared Imaging	$18,000	$18,000
2014-2019	UC ANR	PI of UC Merced	Evaluating and extending the use of small, multi-rotor unmanned aerial vehicles (UAV's) as a crop monitoring tool	$279,580	$144,000
2014-2015	UC Merced HSRI	Co-PI	Developing autonomous airborne pathogen collection and identification capability for mapping Valley Fever risk in the San Joaquin Valley	$8,000	$4,000
2014-2015	UC CITRIS	PI	Environmental DNA (eDNA) Smart Sampling Using Unmanned Aerial Vehicles (UAV)	$60,000	$30,000
2014-2015	LAM Research	PI	Cognitive Process Control	$90,000 (Year-2)	$93,744 (Year-2)

2012-2014	NASA Subcontract via Utah State University	PI	NASA UAS2NAS "Cognitive autopilot techniques and flight evaluation for integrating low cost personal remote sensing UAVs in the national airspace system"	$300,000	$80,000
2013-2014	LAM Research	PI	Cognitive Process Control	$450,000	$90,000 (Year-1)
2011-2012	SDL USURF	PI	SDL "New fractional order maximal power point tracking controller for small satellite photovoltaic panels"	$35,000	$35,000
2011-2012	NSF	PI	NSF "RAPID: Low Cost Personal Remote Sensing for Cognitive Disaster Assessment with Enhanced Human-Machine Interface"	$49,999	$49,999
2010-2013	DOE	Co-PI	"Automatic Electric Transportation" (PI: Dr. Kevin Heaslip)	$947,000	$270,000
2011-2012	UWRL	PI	Utah Water Research Laboratory (UWRL) MLF Seed Grant: "Ultra light, High Grain UAV Fish Tracking Antennas" (year-2)	$37,085	$37,085
2011-2012	UWRL	PI	Utah Water Research Laboratory (UWRL) MLF Seed Grant: "Low Cost Vertical Take Off and Landing Personal Remote Sensing Systems for Water Engineering: AggieVTOL" (year-2)	$49,154	$49,154
2011-2012	UWRL	PI	Utah Water Research Laboratory (UWRL) MLF Seed Grant: "Multispectral UAV Collaborative Remote Sensing System for Irrigation Water Management and Ecological Assessment" (year-5)	$79,963	$79,963
2011-2014	NIDRR	Co-PI	National Institute on Disability & Rehabilitation Research. "Experimental Research on Pedestrian and Evacuation Behaviors of Individuals with Disabilities; Theory Development Necessary to Characterize Individual-Based Models" (PI: Dr. Keith Christensen)	$594,486	$200,000
2011-	NASA	PI	NASA UAS2NAS "Cognitive	$300,000	$300,000

2014			autopilot techniques and flight evaluation for integrating low cost personal remote sensing UAVs in the national airspace system"		
2010-2011	UWRL	PI	Utah Water Research Laboratory (UWRL) MLF Seed Grant: "Ultra light, High Grain UAV Fish Tracking Antennas" (year-1)	$38,000	$38,000
2011	USU	PI	AUVSI Competition travel grant from Dean's Office, College of Engineering, USU	$5,000	$5,000
2011	SDL	PI	AUVSI Competition travel grant from Space Dynamics Laboratory, USU	$2,500	$2,500
2011	Samsung	PI	"SISA-USU R&D Partnership in High TPI Harddisk Drives" (Year 1 of 5)	$20,000	$20,000
2010-2011	UWRL	PI	Utah Water Research Laboratory (UWRL) MLF Seed Grant: "Multispectral UAV Collaborative Remote Sensing System for Irrigation Water Management and Ecological Assessment" (year-4)	$102,185	$102,185
2010	Samsung	PI	"Performance Improvement Techniques in High TPI Harddisk Drives"	$79,212	$79,212
2010	Samsung	PI	"Harnessing Fractional Order Control Techniques in Harddisk Servo"	$43,371	$43,371
2009-2010	Dean's Office	PI	Postdoc Research Support. Dean's Office, College of Engineering, USU	$35,000	$35,000
2010	USU TCO USTAR	Co-PI	ARRA USTAR TCG (technology commercialization grant) "USU AggieAir: Flying Networked Sensors for Collaborative Multispectral Remote Sensing"	$49,673	$49,673
2010-2011	UWRL	PI	Postdoc support for UAV research	$35,000	$35,000
2010-2011	UWRL	PI	Utah Water Research Laboratory (UWRL) MLF Seed Grant: "Low Cost Vertical Take Off and Landing Personal Remote Sensing Systems for Water Engineering: AggieVTOL" (year-1)	$82,000	$82,000

2010	USU	PI	AUVSI Competition travel grant from Dean's Office, College of Engineering, USU	$5,000	$5,000
2009	USU	PI	AUVSI Competition travel grant from Dean's Office, College of Engineering, USU	$5,000	$5,000
2009-2010	EAFB	PI	AUVSI Competition grant from Edwards Air Force Base	$6,000	$6,000
2009-2012	NSF	PI	NSF REU Site: "Mobile Actuator and Sensor Networks"	$282,789	$282,789
2008-2009	UWRL	PI	Utah Water Research Laboratory (UWRL) MLF Seed Grant: "Multispectral UAV Collaborative Remote Sensing System for Irrigation Water Management and Ecological Assessment" (year-3)	$104,000	$104,000
2008	USU	PI	AUVSI Competition travel grant from Dean's Office, College of Engineering, USU	$5,000	$5,000
2007-2008	DOI	PI	Dept. of Interior (DOI) "Water 2025" project "Scipio water user association and irrigation management"	$30,000	$30,000
2007-2008	UWRL	PI	Utah Water Research Laboratory (UWRL) MLF Seed Grant: "Multispectral UAV Collaborative Remote Sensing System for Irrigation Water Management and Ecological Assessment" (year-2)	$88,175	$88,175
2006-2010	NASA	PI	NASA AIST "Adaptive Algorithms for Optimal Classification and Compression of Hyperspectral Images" (PI transferred from Dr Tamal Bose)	$436,710	$15,000
2006-2007	UWRL	PI	Utah Water Research Laboratory (UWRL) MLF Seed Grant: "Multispectral UAV Collaborative Remote Sensing System for Irrigation Water Management and Ecological Assessment" (year-1)	$127,451	$127,451
2006-2007	UWRL	PI	Utah Water Research Laboratory (UWRL) MLF Seed Grant: "Scipio realtime irrigation control"	$32,675	$32,675
2006-	NIH (R15)	Co-PI	NIH (R15) "Whole Cell	$214,500	$20,000

2009			Biosensing of Bacterial Chemotaxis”		
2006	NSF SBIR	PI	NSF SBIR grant subcontract from Wavelength Electronics “True Fractional Order Device: Fractor”	$15,000	$15,000
2007	NSF	PI	NSF IREE. “Optimal interlaced distributed control and distributed measurement with networked mobile actuators and sensors”	$29,000	$29,000
2006-2009	NSF	PI	NSF REU Site: “Mobile Actuator and Sensor Networks”	$229,035	$229,035
2006-2007	NSF	PI	DDDAS/SEP. “Optimal interlaced distributed control and distributed measurement with networked mobile actuators and sensors”	$42,000	$42,000
2005-2006	USU SDL	PI	USURF Space Dynamics Laboratory (SDL) Skunkworks Research Initiative Fund. “Temperature uniformity control”	$17,500	$17,500
2005-2006	USU SDL	PI	USURF Space Dynamics Laboratory (SDL) Skunkworks Research Initiative Fund. “Fractional order signal processing for bioelectrochemical sensors”	$17,500	$17,500
2005-2006	USU VPR	PI	Community and University Research Initiative (CURI) grant “Chemotaxis Behavior in Mobile Actuator and Sensor Networks for Environmental Monitoring”	$20,000	$20,000
2005	DesignJug	PI	“Vision-Based Road Detection and Tracking for an Autonomous Vehicle Platform”, DesignJug team support for DARPA Grand Challenge	$12,000	$12,000
2005	USURF TCO	PI	USU TCO Technology Bridge Grant “Fractional Order Control Tuning Methods”	$13,910	$13,910
2004	Cornice LLC	PI	“Advanced repeatable runout compensation in micro hard disk drives”	$51,000	$51,000
2004	NSF	Co-PI	US-France Workshop on Fractional Derivatives and	$16,000	$3,000

			Their Applications. NSF Workshop grant (Post IFAC FDA'04, Bordeaux, France) (PI: Dr. Om Agrawal)		
2004-2006	NSF	Co-PI	NSF NUE (Nano Undergraduate Education) Grant. (PI: Dr. Haeyang Yang)	$100,000	$20,000
2003-2004	Private	PI	Donation to further develop "RIOTS_95 package for solving general purpose optimal control problems in MATLAB."	$4,000	$4,000
2003-2004	SDL	PI	USURF Space Dynamics Laboratory (SDL) Skunkworks Research Initiative Fund. "Mobile Sensor and Actuator Networks"	$15,000	$15,000
2003-2005	NRC	PI	National Research Council Twinning Grant with Technical University of Kosice, Slovakia. "Application of fractional calculus in engineering and applied sciences"	$16,000	$16,000
2003-2004	USU FACT	PI	"Real-time Tele-lab implementation and demonstration using Quanser TeleLab"	$12,000	$12,000
2003	NCAR	PI	Travel grant from National Center for Atmospheric Research (NCAR), Junior Faculty Forum. June 2003, Boulder, CO.	$2,000	$2,000
2003	NSF	PI	NSF Junior Faculty Travel Grant for NSF Career Workshop at Tempe, Arizona.	$700	$700
2002-2003	Utah State University	PI	USU New Faculty Research Grant. "Tuning methods for fractional order PI/PID controllers"	$10,100	$10,100
			Total	~$12M	~$3.9M
			Current active funding	~$8M	~$1+M

Workshops and Short Courses Offered/Organized:

1. Blas M. Vinagre and YangQuan Chen. 2002. "*Lecture Notes for the Tutorial Workshop on Fractional Order Calculus in Control and Robotics at IEEE CDC2002 Las Vegas*". Published online. Distributed at the IEEE CDC Tutorial Workshop. Las Vegas, Dec. 2002. (316pages)
2. 06/13/2003. "Parsimonious ILC and RC: Seagate Experience" (Tutorial Lecture) at the first Iterative Learning Control International Summer School at Utah State University (See other presentations and photos here) (half

day)

3. YangQuan Chen. "*Task-Oriented Mobile Actuator and Sensor Networks*". IEEE/RSJ IROS2005 Full Day Tutorial Workshop slide set. August 2, 2005. Edmonton (with Hairong Qi and Kevin L. Moore) (A Full Day)
4. FOC Day @ USU, April 19, 2005. "*Fractional Order Calculus Day at Utah State University*". Full day workshop. http://mechatronics.ece.usu.edu/foc/event/FOC_Day@USU/
5. YangQuan Chen. Iterative Learning Control: from Academia to Industry – An expository tutorial. IEEE ICMA2005 Half Day Tutorial Workshop slide set, Niagara Falls, Canada, July 29, 2005. (with Hyosung Ahn and Kevin L. Moore) (Half day)
6. June 25, 2006. Tutorial workshop at IEEE ICMA2006, Luoyang, China. "Fractional Order Calculus and Its Applications in Mechatronic System Controls" (Half day)
7. June 25, 2006. Tutorial workshop at IEEE ICMA2006, Luoyang, China. "Cooperative Control and Consensus Building for Multiple Autonomous Vehicles" (Half day)
8. June 25, 2006. Tutorial workshop at IEEE ICMA2006, Luoyang, China. "Iterative Learning Control: Algebraic Analysis and Optimal Design" (all slides are here) (Half day)
9. Dec. 2006. IEEE CDC2006, Industrial Tutorial Session on "Iterative learning control and repetitive control in hard disk drive industry". San Diego, California, USA (2 hours)
10. December 8, 2006. Friday 9AM-5PM. International Mini-Workshop on DDDAS (Dynamic Data Driven Application Systems) "Optimal measurement and control of distributed parameter systems using mobile actuator and sensor networks". http://mechatronics.ece.usu.edu/mas-net/dddas/ Full day workshop.
11. FOC Day @ USU, Sept. 3, 2007. "*Fractional Order Calculus Day at Utah State University*". Full day workshop.
12. Tutorial Session "Applied Fractional Calculus in Controls", 2009 American Control Conference, June 10-12, 2009, St. Louis, Missouri, USA. http://fractionalcalculus.googlepages.com/
13. Pre-conference Workshop. "Applied Fractional Calculus in Controls and Signal Processing", 2009 American Control Conference, June 10-12, 2009, St. Louis, Missouri, USA. http://fractionalcalculus.googlepages.com/ (cancelled, also by IEEE CDC2009)
14. FOC Day @ USU, April 24, 2009. "*Fractional Order Calculus Day at Utah State University*". Full day workshop. (Dr. Bruce J. West's visit, 3 seminars given by Dr. West).
15. Co-Organizer and Co-Instructor. July 6, 2010. Pre-Conference Tutorial Workshop. One Full Day Workshop on "Fractional Order Dynamic Systems and Controls" at WCICA2010, Jinan, Shandong, China. Web: http://mechatronics.ece.usu.edu/foc/wcica2010tw/
16. Organizer and Co-Instructor. 12/14/2010. Pre-Conference Tutorial Workshop. One Full Day Workshop on "Applied Fractional Calculus in Controls and Signal Processing" at IEEE CDC2010, Atlanta, GA, USA. Web: http://mechatronics.ece.usu.edu/foc/cdc10tw/
17. Invited Tutorial at 2011 ICUAS (Int. Conf. on Unmanned Aerial Systems) (full day) on May 24th, 2011, Denver, CO., on "*Multi-UAV Based Multi-Spectrum Collaborative Personal Remote Sensing: Concepts, Platform & Applications*"
18. FOC Day @ USU, August 22, 2011. "*Fractional Order Calculus Day at Utah State University*". Full day workshop. (Dr. Igor Podlubny and Dr. Ivo Petras's visit). http://mechatronics.ece.usu.edu/foc/afc/
19. Invited Tutorial at 2012 ICUAS (Int. Conf. on Unmanned Aerial Systems) (full day) on June 12th, 2012, Philadelphia, PA., on "*Low-cost UAV-based precision thermal infrared (TIR) mapping - A new Personal Remote Sensing capability: UAV platform, TIR payload, in-flight calibration and applications.*"
20. June 26, 2012. Health Management, Fault-tolerant Control, and Cooperative Control of Unmanned Aircraft [Unmanned Aircraft] Organizers: Youmin Zhang, Camille Alain Rabbath, YangQuan Chen, Christopher Edwards, Cameron Fulford, Hugh H.-T. Liu, Liang Tang, Didier Theilliol, and Antonios Tsourdos http://a2c2.org/conferences/acc2012/workshops.php
21. May 28, 2013. Y.Q. Chen, Brandon Stark, A. Jenson, and C. Coopmans. *SUAS Airworthiness, Architecture, and Human Factors.* Invited Half-Day Tutorial at 2013 ICUAS, Atlanta, GA, USA.
22. June 10, 2013. YangQuan Chen. "Connections, Optimal Random Search, More Optimal Image Processing, Cross-scale Dynamics". Fractional Fractional Calculus Day @ CSOIS Utah State University. 1:00-5:30

23. June 12, 2013. YangQuan Chen. Organizer. Fractional Calculus Day @ UC Merced. (International speakers: Profs. Francesco Mainardi and Igor Podlubny) http://mechatronics.ucmerced.edu/node/68 Full day.
24. August 2, 2013. YangQuan Chen. Organizer. "Drones, Mechatronics and Fractional Calculus" –MESA LAB 2013 Mid-Summer Symposium. (International speakers: Profs. Primo Zingaretti and Malgorzata Klimek). Full day.
25. August 4, 2013. YangQuan Chen. Organizer. Half-day pre-conference workshop. "W5: Personalizing Mechatronics Education Utilizing an Open-Source Real-Time Control System Rapid Prototyping Platform". ASME IDETC/CIE 2013, Portland, Oregon Convention Center.
26. August 4, 2013. YangQuan Chen. Organizer. Half-day pre-conference workshop. "W7: Fractional Order Motion Controls: How Motion Control Can Benefit from Using Fractional Calculus?". ASME IDETC/CIE 2013, Portland, Oregon Convention Center.
27. August 4, 2013. YangQuan Chen. Organizer. Full-day pre-conference workshop. "W6: Fractional Order Mechanics — An Introduction of An Emerging Research Field". ASME IDETC/CIE 2013, Portland, Oregon Convention Center.
28. Sept. 25, 2013. YangQuan Chen. Organizer and Instructor. A Tutorial on Fractional Order Motion Control. Turkish National Meeting on Automatic Control (TOK 2013) , Sept. 25, 2013, Malatya, Turkey. (half day tutorial workshop)
29. Aug. 23, 2014. Half-Day Pre-Conference Tutorial. "Personalising Mechatronics Control Education Utilising an Open-Source Real-Time Control System Rapid Prototyping Platform". IFAC World Congress. Cape Town, South Africa. (Brandon Stark/YangQuan Chen)
30. Aug. 23, 2014. YangQuan Chen. Organizer and Instructor. Half-Day Pre-Conference Tutorial. "Fractional Order Motion Controls: How Motion Control Can Benefit from using Fractional Calculus?". IFAC World Congress. Cape Town, South Africa.
31. 05/27/14. Co-Organizer. Instructor. "Emerging sUAS Technology for Precision Agriculture Applications (AgDroneTech14)" (with Reza Ehsani) (Half-Day Pre-Conference Tutorial Workshop)
32. 05/27/14. Co-Organizer. Instructor. "Remote Sensing of Actionable Scientific Information Using sUAS" (with Drs. Cal Coopmans and Austin Jensen) (Half-Day Pre-Conference Tutorial Workshop)
33. 06/02/14. Organizer. Fractional Calculus Day at UC Merced 2014 Edition cum The Fourth AFC Workshop @ MESA LAB @ UC MERCED. Full Day.
34. 08/11/14. Organizer. Prof. Igor Podlubny Workshop. Full day.
35. 12/15-12/19/14. Instructor. SCUT Tutorial Lecture Series of Applied Fractional Calculus, Guangzhou, China. (4 modules: Introduction to Fractional Calculus: What it is and why we should all care; Fractional Order Modeling of Complex Phenomena; More Optimal Fractional Order Signal Processing; Fractional Order Mechanics: Introduction to a new course at UC Merced)
36. 12/19/14. Keynote. Fractional Calculus Day at South China University of Technology, Guangzhou, China.
37. 01/05/15. Keynote. Fractional Calculus Day at Northeastern University, Shenyang, China.
38. 06/09/15. Emerging SUAS Technology for Precision Agriculture Applications (AGDRONETECH15). Preconference Tutorial Workshop at ICUAS2015. Denver, CO, USA (Half day)
39. 07/06/2015. 2015 Fractional Calculus Day @ UCMerced. http://mechatronics.ucmerced.edu/FCDay
40. 07/07/2015. "UAV Safety and Best Practices Technical Workshop", CITRIS @ UCMERCED http://mechatronics.ucmerced.edu/DroneDMV
41. 08/02/15. Half-Day Tutorial Workshop "Fractional Order Mechanics" at ASME IDETC/CIE 2015, Boston, MA.
42. 09/30/15. "Fractional Order Mechanics – An Introduction". Half-Day Pre-conference Tutorial Workshop at Fractional Signals and Systems (FSS), Technical University of Cluj-Napoca, Romania (3 hours)
43. 2015-19 to be updated.

Invited Seminar/Talks:

- June 1999. "An overview of iterative learning control research," Dept. of Electrical Engineering, Univ. of

Alaska at Fairbanks;

- June 1999. "Aerodynamic drag curve identification: optimal dynamic fitting and iterative learning approaches," Dept. of Electrical Engineering, Univ. of Alaska at Fairbanks;
- April 2000. "Frictional force on the high precision servo control". First Seagate Singapore TEC Symposium, Singapore;
- July 2000. "Perspectives in Iterative Learning Control", 3rd Asian Control Conference, Shanghai, China.
- April 2001. "Fractional order calculus and its applications in systems control - an overview", Department of Electrical Engineering, Univ. of Alberta, Canada.
- May 2001. "Fractional order calculus and its applications in signal processing and systems control - an overview", Department of Electrical Engineering, Univ. of Calgary, Canada.
- June 14, 2001. "Iterative Learning Control": From Academia to Industry". Dept. of Electrical and Computer Engineering, The University of Windsor, Canada.
- June 14, 2001. "Fractional order calculus and its applications in systems control - an overview." Dept. of Electrical and Computer Engineering, The University of Windsor, Canada.
- Nov.6, 2003. USU Department of Mathematics Colloquium: Fractional-order Calculus, Fractional-order Filter and Fractional-order Control: An Overview & Some Recent Developments. (PDF slides)
- 06/13/2003. Parsimonious ILC and RC: Seagate Experience (Tutorial Lecture) at the first Iterative Learning Control International Summer School at Utah State University (See other presentations and photos here)
- 06/17/2003. Some Servo Patents for Low Cost High TPI Hard Disk Drives abstract/bio. The Colorado Center for Information Storage, the University of Colorado, Boulder
- 03/05/2003. USU ECE6800 Seminar by Dr YangQuan Chen on FOC. Fractional order calculus, fractional order filter and fractional order control: an over view and some recent developments. Check here for PDF slides.
- 03/28/2003. Une proposition pour la synthèse de correcteurs PI d'ordre non entier. YangQuan Chen (Utah State University, USA), Concepción A. Monje, Blas M. Vinagre (Universidad de Extremadura, Espagne). (Slides PDF) Action thématique "Les systèmes à dérivées non entières" - LAP - ENSEIRB, Bordeaux.
- 10/17/2003. Réalisation analogique de l'opérateur de dérivation non entière. C. Tricaud (ENSEIRB – Université Bordeaux 1) and YangQuan Chen (Utah State University, USA). (Slides PDF) Action thématique "Les systèmes à dérivées non entières" - LAP - ENSEIRB, Bordeaux.
- May 19, 2004. The Innovation Showcase, The Edison Conference, Univ. of Utah, SLC. (Program.pdf, see Booth #44)
- 07/22/2004. "Fractional Future?" A Panel Discussion at the 2004 NSF Sponsored Joint US-France Workshop, Bordeaux, France.
- 08/17/2004. "Mobile actuator and sensor networks for diffusion boundary determination and zone control", Invited talk (75 minutes) at the Institute of Intelligent Machines of Chinese Academy of Sciences (IIM of CAS) in Hefei, the capital city of Anhui Province, China.
- 08/19/2004. "Iterative Learning Control: from Academia to Industry". Invited Seminar (75 minutes) at the Department of Automatic Control, Southeast University, Nanjing, the capital city of Jiangsu Province, China.
- 08/20/2004. "Fractional order control" (75 minutes) Invited Seminar at Institute of Robotics and Artificial Intelligence, Northeastern University, Shenyang, capital city of Liaoning Province, China.
- 2/25/05. ECE Dept. IAC meeting, presentation of "CSOIS: Past, Present, and Future cum MAS-net". Lab tour/Demo.
- 4/5/2005. ECE6800 seminar. Task Oriented Mobile Actuator and Sensor Networks (TOMAS-net)
- 9/28/2005. Fractional Order Control. San Diego Section of IEEE Control Systems Society.
- 10/20/2005. About CSOIS. USU VPR and State of Utah UStar delegate.
- 11/4/2005. USU Dept. of Civil and Environmental Engineering, Transportation Research Seminar Series. "Task Oriented Mobile Actuator and Sensor Networks".
- March 14, 2006. "Non-Integer-Order Calculus, Dynamic Systems, Control and Signal Processing - An Introduction". The Engineering Division Seminar on Automation and Sensing, Colorado School of Mines.

- March 16, 2006. "Interlaced Distributed Control and Distributed Measurement with Mobile Actuator/Sensor Networks (MAS-net): An example of DDDAS". The Center for Automation, Robotics, and Distributed Intelligence (CARDI), Colorado School of Mines.
- June 16, 2006. “HDD servo - All smart ideas tried?!”, Seagate SHK Design Center. Minneapolis, MN. (During ACC2006)
- July 6, 2006. “"Interlaced Distributed Control and Distributed Measurement with Mobile Actuator/Sensor Networks (MAS-net): An example of DDDAS". Robotics Center, Beijing Institute of Technology, China.
- July 7, 2006. "Non-Integer-Order Calculus, Dynamic Systems, Control and Signal Processing - An Introduction". Dept. of Automatic Control, Beijing Institute of Technology, China.
- July 21, 2006. “Ubiquitous fractional order controls”. IFAC FDA06 Plenary lecture. (slides, 12 pages plenary article) Porto, Portugal.
- May 2007. Special Invited Talks. “Fractional Order Calculus and Its Applications in Mechatronics and Power Electronics - An Introduction”. The 2nd IEEE Conference on Industrial Electronics and Applications (ICIEA 2007) 23-25 May 2007, Shangri-la Hotel, Harbin, China. http://iciea2007.cipsterdesign.com/
- Fall 2007. USU ECE Colloquium. “An Overview of Fractional Order Signal Processing (FOSP) Techniques”.
- March 2008. Invited Seminar. “Mobile Actuator and Sensor Networks (MAS-net)” Worchester Polytechnic Institute.
- March 2008. Invited Seminar. “Fractional Order Thinking at The Edge - from Mechatronics to Biomechatronics to Bioengineering.” Computer Engineering Division, UC Santa Cruz.
- Sept. 2008. USU ECE Colloquium. “Mobile Actuator and Sensor Networks (MAS-net) for Cyber-Physcial Systems (CPS)”.
- Nov. 2008. Plenary Lecture “Fractional Order Signal Processing - Techniques, Applications and Urgency” 3rd IFAC Workshop on Fractional Differentiation and its Applications, Ankara, Turkey, 05 - 07 November, 2008.
- Nov. 2008. Invited Seminar. “Mobile Actuator and Sensor Networks (MAS-net) for Cyber-Physcial Systems (CPS)”. ECE Dept. of University of New Orleans, New Orleans, Louisiana, USA.
- 2009: Jan. 13. ECE 6800 Graduate Colloquium. “Fractional Order Motion Controls and Fractional Order Networked Control Systems”. Utah State University.
- 2009: March 13. UC Berkeley Invited Seminar. “Fractional order thinking: from mechatronics to biomechatronics and beyond”.
- 2009: May 27. Semi-Plenary Speaker. The 4th IEEE Conference on Industrial Electronics and Applications (ICIEA 2009), Xi’an, China.
- 5/21/2009: Invited Seminar. “Towards fractional order thinking and engineering.” Nantong University (NTU), Jiangsu Province, China.
- 5/21/2009: Invited Seminar. “Towards fractional order thinking and engineering.” Hohai University (HHU), Nanjing, China. Part of the “Mini-symposium on Fractional Dynamics” Organized by Prof. Wen Chen.
- 5/22/2009: Invited Seminar. “Towards fractional order thinking and engineering.” Nanjing Institute if Technology (NJIT), Nanjing, China.
- 5/22/2009: Invited Seminar. “Iterative Learning Control: A Tutorial and from Academia to Industry.” Nanjing Institute of Technology (NJIT), Nanjing, China.
- 5/26/2009: Invited Seminar. “Towards fractional order thinking and engineering.” Xi’an Technological University (XATU), Xi’an, China.
- 5/26/2009: Invited Seminar. “Fractional Order Signal Processing - Techniques, Applications and Urgency”. Xidian University, Xi’an, China.
- 5/28/2009. Invited Seminar. “An Overview of USU Unmanned Aerial Vehicle Research Program”. Northwestern Forest & Agriculture Univ. (NWF&AU), Yangling, Shaanxi Province, China.
- 5/28/2009. Invited Seminar. “Mobile Actuator and Sensor Networks (MAS-net) for Cyber-Physcial Systems (CPS)”. Northwestern Forest & Agriculture Univ. (NWF&AU), Yangling, Shaanxi Province, China.
- 6/1/2009: Invited Seminar. “Mobile Actuator and Sensor Networks (MAS-net) for Cyber-Physcial Systems

(CPS)". South China University of Technology (SCUT), Guangzhou, China.

- 6/3/2009. Invited Seminar. "Iterative Learning Control: A Tutorial and What's Next." Beijing Jiao Tong University (BJTU), Beijing, China.
- 6/21/2009. Invited Presentation. "YangQuan Chen, Ph.D." - King Abdullah University of Science and Technology (KAUST), Saudi Arabia.
- 7/10/2009. Invited Seminar. "Mobile Actuator and Sensor Networks (MAS-net) for Cyber-Physical Systems (CPS)". UT Dallas Erik Jonsson School of Engineering and Computer Science. http://www.ee.utdallas.edu/events/chen.html
- 11/5/2009. Invited Seminar. "Mobile Actuator and Sensor Networks (MAS-net) for Cyber-Physical Systems (CPS)". Dept. of Mechanical Engineering, University of Nevada Las Vegas.
- 7/8/2010. Invited Seminar. "Fractional Order Thinking and Engineering". Shandong University, Math Institute, Jinan, Shandong, China.
- 7/26/2010. Invited Seminar. "Fractional Order Thinking: from Controls to Signal Processing". Samsung SISA, San Jose, CA, USA.
- Invited Seminar. 02/04/2011. "Mobile Actuator and Sensor Networks (MAS-net) for Cyber-Physical Systems (CPS)". Center for New Energy Systems, University of Pretoria, South Africa.
- Invited Seminar. 03/04/2011. "Fractional Order Thinking – from control, signal processing to energy informatics and beyond". Center for New Energy Systems, University of Pretoria, South Africa.
- Invited Seminar. 04/18/2011. "Gegenbauer processes and energy informatics". Center for New Energy Systems, University of Pretoria, South Africa.
- Invited Seminar. 05/02/2011. "A Tutorial on RIOTS_95 – A MATLAB Toolbox for Solving Optimal Control Problems in General Form". Center for New Energy Systems, University of Pretoria, South Africa.
- Invited Seminar. 10/21/2011. "Fractional Order Thinking – from control, signal processing to energy informatics and beyond" UC Berkeley, Tomizuka Lab.
- EE Colloquium. 11/15/2011. "An Introduction to Fractional Order Modeling and an Application in Characterizing Complex Relaxation Processes", ECE Dept. of Utah State University.
- Invited Seminar. 2/14/2012. "Smart Mechatronics: Mobile Actuator/Sensor Networks (MAS-net) for Cyber-Physical Systems", UC Merced.
- Invited Seminar. 3/13/2012. "Cognitive Process Controls", Lam Research, California.
- EE Colloquium. 4/3/2012. "Cognitive Process Controls for Sustainable Semiconductor Manufacturing" ECE Dept. of Utah State University.
- Invited Seminar. 5/17/2012. "Fractional Order Modeling of Complex Processes", Nanjing Institute of Technology (NJIT), Nanjing, China.
- Invited Seminar. 5/21/2012. "An Introduction to Fractional Order Modeling & an Application in Characterizing Complex Relaxation Processes," Math Dept. of the School of Sciences, Shanghai University. (Talk after Francesco Mainardi)
- Invited Seminar. 5/22/2012. "Fractional Order Modeling of Complex Processes", Applied Math Dept., Donghua University, Shanghai, China
- Invited Tutorial at 2012 ICUAS (Int. Conf. on Unmanned Aerial Systems) (full day) on June 12th, 2012, Philadelphia, PA., on "*Low-cost UAV-based precision thermal infrared (TIR) mapping - A new Personal Remote Sensing capability: UAV platform, TIR payload, in-flight calibration and applications.*"
- June 26, 2012. Health Management, Fault-tolerant Control, and Cooperative Control of Unmanned Aircraft [Unmanned Aircraft] Organizers: Youmin Zhang, Camille Alain Rabbath, YangQuan Chen, Christopher Edwards, Cameron Fulford, Hugh H.-T. Liu, Liang Tang, Didier Theilliol, and Antonios Tsourdos http://a2c2.org/conferences/acc2012/workshops.php
- YangQuan Chen. Fractional Order Thinking. EECS SEMINAR. Sept. 7, 2012. Friday 12:00-13:20 COB 267
- YangQuan Chen. Fractional Order Modeling: A Tutorial Introduction and An Application in Characterizing Complex Relaxation Processes. EECS SEMINAR. Sept. 14, 2012. Friday 12:00-13:20 COB 267.
- YangQuan Chen. "Unmanned Aerial Vehicles When We Can File-n-Fly ?!" Oct. 03, 2012. Wednesday 12:30-

13:20. UC Merced SoE Professional Seminar.

- YangQuan Chen. Mechatronics for Sustainability: UAVs for Water, Environment, Renewable Energy, and Precision Agriculture. Dean's EAB Presentation. Oct. 12, 2012. Friday 2:00-2:30. SoE EAB Meeting Fall 2012. Schneider Electric, Fresno, 3500 Pelco Way, Clovis, CA 93612
- YangQuan Chen. Fractional order Mechanics why, what and when? Oct. 30, 2012. MESA LAB.
- YangQuan Chen. "Unmanned Aerial Vehicles When We Can File-n-Fly ?!" Nov. 09, 2012. Friday 7:15-7:45PM. UC Merced Robotics Society AfterShock event.
- YangQuan Chen. "A Fractional Journey". Academic Excellence Night. Student Clubs, School of Engineering, UC Merced. November 30, 2012 (Friday). Agustin Roldan agustin1825@gmail.com

2013

- YangQuan Chen. Detection, Identification and Compensation of Nonlinearities and An Experimental Verification Platform for Nonlinear Controllers. EECS SEMINAR @UCMerced, Feb. 01, 2013. 12:00-1:20PM @ COB 263
- YangQuan Chen. "MESA LAB @/4 SJV". MESA LAB Robots and Ribs Symposium. Feb. 9, 2013 Saturday. 25min.
- YangQuan Chen. The DRONE Age. Frontiers of Science and Engineering Lecture Series. Saturday Feb. 16th 2013, 10:00AM. Castle Air Museum, 5050 Santa Fe Dr. Atwater, CA.
- YangQuan Chen. All Connected via Fractional Calculus: Power Law, Scale-Free, Heavy-Tailedness, Long Range Dependence, Long Memory, and Complexity due to Fractional Dynamics. February 25, 2013. Monday 3:00PM-4:30PM. MTS (Mind, Technology and Society) Seminar Series @ UCMerced COB 110
- YangQuan Chen. "COROBOTS: HUMAN CENTRIC MESA". MESA LAB Robots and Ribs Symposium. Mar. 9, 2013 Saturday. 25min.
- YangQuan Chen. "Mobile Sensor and Actuator Networks (MAS-net)". MESA LAB Robots and Ribs Symposium. April 20, 2013 Saturday. 25min.
- Y.Q. Chen, Brandon Stark, A. Jenson, and C. Coopmans. *SUAS Airworthiness, Architecture, and Human Factors.* Invited Half-Day Tutorial at 2013 ICUAS, Atlanta, GA, (May 28, 2013)
- Y.Q. Chen, Brandon Stark. "*3D printed UAS and additive fault diagnosis and prognosis*". May 28, 2013. ICUAS2013 Tutorial T2. Fault-tolerant Control and Cooperative Control of Unmanned Aerial Systems (UAS). Organized by Dr. Youmin Zhang.
- YangQuan Chen. "When UAV meets Fractional Calculus". MESA LAB Robots and Ribs Symposium. June 1, 2013 Saturday. 25min.
- YangQuan Chen. *More Optimal Image Processing by Fractional Order Differentiation and Fractional Order Partial Differential Equations*. International Symposium on Fractional PDEs: Theory, Numerics and Applications. June 3 - 5, 2013. Salve Regina University, 100 Ochre Point Avenue, Newport RI 02840. (Single track symposium, 45 min.)
- YangQuan Chen. "Connections, Optimal Random Search, More Optimal Image Processing, Cross-scale Dynamics". Fractional Fractional Calculus Day @ CSOIS Utah State University. June 10, 2013. 1:00-1:30 (30 min)
- YangQuan Chen. "Mechatronics meets fractional calculus". Fractional Calculus Day @ UC Merced. June 12, 2013 (20 min) http://mechatronics.ucmerced.edu/node/68
- YangQuan Chen. "ME280: Fractional Order Mechanics". Fractional Calculus Day @ UC Merced. June 12, 2013 (20 min) http://mechatronics.ucmerced.edu/node/68
- YangQuan Chen. "UAS (drone) Legislation". MESA LAB Robots and Ribs Symposium. July 13, 2013 Saturday. 25min.
- YangQuan Chen. Organizer. Full-day pre-conference workshop. "Introduction and Motivations. W6: Fractional Order Mechanics — An Introduction of An Emerging Research Field". ASME IDETC/CIE 2013, Portland, Oregon Convention Center. August 4, 2013.
- YangQuan Chen. Organizer and Moderator. Panel Session. "Mechatronics meets fractional calculus - Introduction and Status Update". ASME IDETC/CIE 2013, Portland, Oregon Convention Center. August 5,

2013.

- YangQuan Chen. “SJV=Ag Drone Valley”. Regional Airport Authority Meeting Of The City Of Merced. August 20, 2013 Tuesday. 7PM. 30min.
- YangQuan Chen. “On Research Excellence”. MESA LAB Robots and Ribs Symposium. August 31, 2013 Saturday. 25min.
- YangQuan Chen. “Drones for Farmers!” MESA LAB Robots and Ribs Symposium. (10/05/13)
- YangQuan Chen. “Remote Sensing of Stress of Human and Plants”. MESA LAB Robots and Ribs Symposium. (11/01/13)
- YangQuan Chen. “UAV-Based Pest Management as a Cyber-Physical System: Part 1 and 2.” Invited Lecture for Pest Management Professionals. UCANR Cooperative Extension Merced County (2 hours total) 11/5/13 and 11/12/13.

2014

- YangQuan Chen. “Fractional Order Modeling of Complex Relaxation Dynamics.” 1/31/14. UC Merced BEST Graduate Program Invited Seminar Series.
- YangQuan Chen. “Drones as CoEcologists for Water, Dust, Land to Peat Bogs”. MESA LAB Robots and Ribs Symposium. (2/8/14)
- YangQuan Chen. “Robotic Environmental Co-Journalist for EJN”. MESA LAB Robots and Ribs Symposium. (4/4/14)
- YangQuan Chen. “The Era of Robotic Environmental Co-Journalists.” 4/30/14. Groundtruth and Airwaves: Sensor Networks and Emerging Technology for Environmental Journalism Symposium. CITRIS@UC Berkeley.
- YangQuan Chen. “Fractional order calculus and applications to heat transfer”. 5/5/14. Lam Research Invited Seminar.
- YangQuan Chen. “Optimal Stochastic Foraging: From Levy to Mittag-Leffler” 5/12/14. The First Foraging Workshop @ UC Merced. Organized by Anne S. Warlaumont.
- YangQuan Chen. “Fractional Calculus and Its Applications in Modeling and Signal Processing.” 5/23/14. Agilent Invited Seminar.
- YangQuan Chen. “Fractional Order Flight Control” MESA LAB Robots and Ribs Symposium. (7/11/14)
- YangQuan Chen. “Introduction to UC Merced’s Scientific Data Drone Research”. MESA LAB Robots and Ribs Symposium. (10/10/14) Teledyne visit.
- YangQuan Chen. “You and Your Research” – How to make your students “Publish and Flourish” 11/13/14. Publish and Flourish workshop @ FWDAF @ UC Merced invited speaker.
- YangQuan Chen. “Scientific Data Drone Research @ The MESA Lab of UC Merced” 12/1/2014. ENGR191 Professional Seminar.
- YangQuan Chen. “Scientific Data Drone Research at UC Merced”. 12/12/14. Beihang University, Beijing China. Invited Seminar.
- YangQuan Chen. “Fractional Calculus, Delay Dynamics and Networked Control Systems”. 12/12/14. Beihang University, Beijing China. Invited Seminar.
- YangQuan Chen. “Fractional Calculus for Better Understanding Extreme Phenomena.” 12/14/14. GuangDong University of Foreign Studies, China. Invited Seminar.
- YangQuan Chen. “Scientific Data Drone Research at UC Merced”. 12/18/14. Harbin Institute of Technology Shenzhen Graduate School, Shenzhen, China. Invited Seminar.
- YangQuan Chen. “Complexity as Prisma Spectrum of Fractional Order Dynamics in Nature and Man-made Systems: A New Perspective – from Inverse Power Law to Mittag-Leffler” 12/19/14. Fractional Calculus Day at South China University of Technology, Guangzhou, China.

2015

- YangQuan Chen. “Fractional Calculus for Better Understanding Extreme Phenomena.” 1/5/15. Northeastern University, Shenyang, China. Invited Seminar.

- YangQuan Chen. “Low Cost Scientific Data Drones for Enhanced Melon Productivity and Security” 1/8/15. San Diego, CA. California Melon Research Board Annual Symposium. Invited Talk.
- YangQuan Chen. “Scientific Data Drone Research @ The MESA Lab of UC Merced.” 1/22/15. FUEGO Symposium, LBNL.
- YangQuan Chen. “Scientific Data Drone Research @ The MESA Lab of UC Merced”. 2/18/15. UC ANR RECS Directors’ Meeting. Invited Presentation.
- YangQuan Chen. “Low Cost Scientific Data Drones: From Data to Decision to Action to Data.” 2/26/15. Yuma, AZ. Southwest Ag Summit (SWAG Summit). Invited Talk.
- YangQuan Chen. “*Fractional Order Data Analytics: connecting dots of Drones, Big Data, and Fractional Calculus*” MESA LAB Robots and Ribs Symposium. (3/21/15) AgriFlight visit.
- 05/20/15. “Low Cost Scientific Data Drones: From Data to Decision to Action to Data and a Call for Round-Robin Competition for Crop Water Stress Quantification”. University of California Desert Research & Extension Center. A workshop on “Geospatial Imaging / Unmanned Aerial System based Remote Sensing for Tracking Crop Health and Performances”. Invited Talk.
- 06/09/15. Emerging SUAS Technology for Precision Agriculture Applications (AGDRONETECH15). Preconference Tutorial Workshop at ICUAS2015. Denver, CO, USA (Half day)
- 08/02/15. “Fractional Order Mechanics – An Introduction”. IDETC/CIE 2015, Half-day Tutorial Workshop. Boston, Ma, USA. (4 hours)
- 09/22/15. “Towards WATERSTAR: Low Cost Scientific Data Drones for Agricultural Water Efficiency”. Invited Talk. First Summit on UAS for California Water Resources, UC Davis Conference Center Ballroom, CA
- 09/26/15. “On Research Excellence”. MESA LAB Undergraduate Safety Training Day @ UCMerced
- 09/30/15. “Fractional Order Mechanics – An Introduction”. Half-Day Pre-conference Tutorial Workshop at Fractional Signals and Systems (FSS), Technical University of Cluj-Napoca, Romania (3 hours)
- 10/01/15. “Better Understanding Complexities via Fractional Calculus: from Extreme Events to Taoism”. Invited FSS (Fractional Signals and Systems) 2015 Debate Lecture. Technical University of Cluj-Napoca, Romania (1 hour)
- 10/23/15. “Why Physicists Need Fractional Calculus?”. Physics Dept. Invited Seminar (1 hour)
- 10/28/15. “Fractional Calculus and Its Applications in Modeling and Signal Processing”. Invited Plenary Talk. 12th International Conference on Electrical Engineering, Computing Science and Automatic Control (CCE 2015)", Mexico City, Mexico. (1 hour)
- 11/04/15. “Low Cost Scientific Data Drones for Specialty Crops”. Invited Talk. CSCC (California Specialty Crops Council) Technical Committee Meeting, USDA-ARS, Parlier, CA
- 11/07/15. “On Complexities”. MESA LAB Symposium Day @ UCMerced. Robots and Ribs.
- 11/30/15. “Optimal Stochastic Foraging Beyond Lévy”. Mini Workshop on Optimization @ UC Merced Organized by Prof. Jian-Qiao Sun

2016

- 01/16/16. Invited Talk. “Low Cost Scientific Data Drones for Specialty Crops”. New York New York, Las Vegas. Western Watermelon Association. Annual Summit.
- 03/01/16. “Fractional Calculus in the Internet of Things (IoT) Age: Quantifying and Harnessing Variabilities in Complex Cyber-Physical Systems”. Applied Fractional Calculus (AFC) Workshop Series @ MESA Lab @ University of California,
- 03/02/16. Invited Talk. “Scientific Data Drones for Precision Agriculture Research at UC Merced”. CITRIS UC Merced Ag Tech Fair.
- 06/01/16. Plenary Lecture. “Better Understanding Complexities via Fractional Calculus”. ICCC2016. 17th International Carpathian Control Conference, Slovakia.

- 06/16. Emerging SUAS Technology for Precision Agriculture Applications (AGDRONETECH16). Preconference Tutorial Workshop at ICUAS2016. Washington DC, USA (Half day)
- 07/16. The First International Workshop on Applied Fractional Calculus at BJTU, Beijing Jiao Tong Univ. Full Day workshop 10 speakers. Co-organizer and Invited Speaker.

2017

- IFAC World Congress, Toulouse, France, July 8th, 2017. Pre-conference workshop. Regional Analysis of Distributed Parameter Systems (RA-DPS). Co-organizer and Instructor. http://mechatronics.ucmerced.edu/ra-dps (3.5 hours)
- 06/18. Emerging SUAS Technology for Precision Agriculture Applications (AGDRONETECH17). Preconference Tutorial Workshop at ICUAS2017. Miami, FL, USA (Half day)
- 07/17. The Second International Workshop on Applied Fractional Calculus at BJTU, Beijing Jiao Tong Univ. Full Day workshop 10 speakers. Co-organizer and Invited Speaker.

2018

- 06/18. Emerging SUAS Technology for Precision Agriculture Applications (AGDRONETECH18). Preconference Tutorial Workshop at ICUAS2018. Dallas, TX, USA (Half day)
- 07/18. The Third International Workshop on Applied Fractional Calculus at BJTU, Beijing Jiao Tong Univ. Full Day workshop 10 speakers. Co-organizer and Invited Speaker.
- 12/28/18. Workshop on "Fractional Order Mechatronics Control." Huazhong University of Science and Technology, Wuhan, China. Co-Organizer and Invited Speaker.

2019

- 01/05/19. Keynote Speaker. Advisor. Inaugural Workshop of the Technical Committee on Fractional Order Systems and Control, Chinese Association of Automation (CAA TC-FOSC). University of Science and Technology of China (USTC), Hefei, China.
- 01/11/19. Co-Chair. Full Day Event. Workshop on "Autonomous Systems and Intelligent Control." Xi'an Technological University, China.
- 01/12/19. Second International Workshop on "Fractional Calculus and Renewal Energy Informatics." CGTU, Sanxia, Yichang, China. Co-Organizer. Keynote Speaker. Full-day event.

2017-2019 (to be completely updated)

Longer-term Visiting Scholars Hosted by me at CSOIS and at UC Merced since 2002 (>100 total)

- France (9): Christophe Tricaud, Theodore Ndaza, Nicolas Monégier; Thomas SAQUER; Corentin Chéron; Youssef KOHEN, Alexis Bonnin, Mr. Sebastien Sadlo, Mr. Matthieu Loubens
- Slovakia (4): Igor Podlubny, Tomas Skovranek, Martin Podlubny, Ivo Petras
- China (32+65): Tengyun Zhao; Zhian Wang; Dr. Jinping Ni; Dr. Shengyuan Xu; Dr. Xia Zhao; Dr. Wen Chen; Yan Li; Bin Wang; Ying Luo; Yongshun Jin, Sheng Hu, Wei Sun, Yingtao Zhang, Chunyang Wang, Hongguang Sun, Xiaona Song, Dr. Changpin Li, Dr. Dingyu Xue; Yu Shang, Dr. Dali Chen, Jinlu Han, Jun Pan, Dr. Deshun Yin, Dingjin Huang, Yaojin Xu, Kexue Li, Hu Shuai, Zhuang Jiao; Chun Yin; Caibin Zeng; Bo Li, Peng Guo, Dr. Xuefeng Zhang, Dr. Kecai Cao, Dr. Aiming Ge, Dr. Zhanbing Bai, Taizhi Lyu, Dr. Jiaguo Liu, Yanan Qiu, Jianxiong Cao, Dr. GuiMei Zhang, Dr. Xiaodong Sun, Dr. Jiacai Huang, Dr. Zhigang Lian, Xiaobao Jia, Dr. Jianxin Liu, Dr. Liyan Qiao, Fudong Ge, Lu Liu, Dr. Jun Chu, Dr. Jianwu Dang, Jianhong Wang, Juan Chen, Dr. Cuihong Wang, Dr. Hua Chen, Dr. Qi Yang, Dr. Yanzhu Zhang, Yaoran Zhao, Bo Shang, Lun Zhai, Kai Liu, Dr. Libao Deng, Dr. Jun-sheng Duan, Shuo Zhang, Zhao Yao, Bo Zhuang, | Xiaohui Li, Xiaohong Wang, Yongge Yang, Binbin He, Jie Yuan, Dr. Wenjing Zhang, Dr. Shixiong Zhang, Dr. Yunning Zhang, Dr. Song Zheng, Dr. XinXin Shi, Mr. Cai, Ruiyang, Dr. Chen, Liping, Mr. Chen, Yuquan, Dr. Luo, Yongjiang, Mr. Ren, Guojian, Dr. Shen, Jie, Dr. Yuan, Liguo, Mrs. Zhao, Yang, | Mr. Panpan Gu, Ms. Lihong Guo, Ms. Tian Feng, Mr. Peng Wang, Ms. Yanan Wang, Ms. Jiamin Wei, Mr. Zhenlong Wu, Dr. Yajuan Yu, Dr. Weihua Mao, Dr. Kunhua Zhang, Dr. Yongguang Yu, Dr.

Limei Liu, Dr. Yiheng Wei

- Germany (8): Fernando Buck; Florian Zwetti; Marc Baumann; Daniel Kaplanek; Norman Wildmann, Tobias Fromm, Johannes Kaplanek, Niloufar Irannejad
- Chile (1): Dr. Norelys Aguila Camacho
- Finland (1): Sakari Kettunen
- Spain (3): Ángel Rodríguez Castaño; Concha Monje; Inés Tejado Balsera
- Poland (1): Dariusz Ucinski;
- Sweden (2): Dr. Kenneth Holmstrom; Fredrik Hellman
- Iran (1): Sara Dadras
- Czech (1): Michal Podhradsky
- Turkey (1): Mr. Abdullah Ates
- Mexico (1): Mr. Erik de la Rosa,
- India (1): Siddam, Sritej;
- Italy (1): Alberto Radici

Undergraduate Researchers Mentored:

- Currently, about 5 paid undergraduate researchers work in MESA LAB on various mechatronics and UAV projects.
- Over 100 undergraduates gained research experience from MESA Lab since 2012.
- Over 70 in total including NSF REU site participants (2006-2011)
- All ECE seniors in Capstone Design courses (Senior Design) (2007-2010) benefitted from me as Senior Design Coordinator. Some were directly sponsored and financially supported by me.
- Mentor for 6 USU URCO (Undergraduate Research and Creative Opportunities) grant projects
- Christopher Hall, "Open Source Autonomous Micro Aerial Vehicle" 2007
- Mitchel Humpherys, "Vision-Based Autonomous Navigation of Unmanned Aerial Vehicles for Remote-Sensing Applications" 2008
- Johnathan Nielsen. “Real-time Alpha-numeric Target Recognition for Unmanned Aerial Vehicles” 2009
- Montgomery Joseph. “Automatic Pattern Discovery and Classification in UAV Surveillance” 2010
- Christopher Michael Coffin. “Prognostic Health Management System for Improving Airworthiness for Personal Remote Sensing UAVs” 2011
- Jarret Bone. “Endurance Optimization for Personal Remote Sensing Unmanned Aerial Vehicles” 2012

Undergraduate Honors Thesis

- Jake Erramouspe. “Autonomous Security Patrol System” 2010, Utah State University ECE Dept.

Graduate Theses I Serve as the Major Advisor On-Going:

- 6 Ph.D. students at UC Merced in Spring 2019
  - Jairo Viola, Jose Alcala, Haoyu Niu (EECS), Guoxiang Zhang (EECS), Sina Dehghan, Derek Hollenbeck
  - Drop out Ph.D. students for startups: Brendan Smith, Garrett Johns

Graduate Theses I Served as the Major Advisor Completed at Utah State University and UC Merced:
(Total 34: 12 Ph.D. dissertations, 18 MS Plan-A theses, 4 MS Plan-B reports; * female graduate students)

1. 2005. Pengyu Chen. “Pattern Formation in Mobile Wireless Sensor Networks”, Master of Science Thesis.
2. 2005. Zhongmin Wang. “Distributed Control of Distributed Parameter Systems Using Mobile Actuator and Sensor Networks”, Master of Science Thesis.
3. 2005. Jinsong Liang. “Control of Linear Time-Invariant Disturbed Parameter Systems - From Integer Order To Fractional Order”, Master of Science Thesis.
4. 2005. Yan Shi. “An Electrochemical Chip Prototype Using Square Wave Polarography Voltammetry and a

Survey on Wireless Power Transmission", Master of Science Plan-B Report.
5. 2006. Hyo-Sung Ahn. "Robust and Adaptive Learning Control Design in the Iteration Domain" Ph.D. Dissertation.
6. 2006. Yashodhan Tarte. "Detection, Identification, and Compensation of Nonlinearities and an Experimental Verification Platform for Nonlinear Controllers", Master of Science Thesis.
7. 2006. Kenton Fife. "Vision-Based Road Detection and Tracking for an Autonomous Vehicle Platform", Master of Science Plan-B Report
8. 2007. Zhen Song. "Optimal Observation Problems Involving Wireless Sensor Networks" Ph.D. Dissertation.
9. 2007. William K. Bourgeous. "Engineering Swarms for Mobile Sensor Networks", Master of Science Thesis.
10. 2007. Rongtao Sun. "Fractional Order Signal Processing: Techniques and Applications", Master of Science Thesis.
11. 2007. Tripti Bhaskaran*. "Practical Tuning Method for Fractional Order Proportional and Integral Controllers", Master of Science Thesis.
12. 2008. Lizabeth Lee*. "Monitoring of indoor relative humidity levels in residential dwellings: a sensor network application." Master of Science Plan-B Report. http://digitalcommons.usu.edu/etd/270
13. 2008. Varsha Bhambhani*. "Optimal Fractional Order Proportional and Integral Controller for Processes with Random Time Delays." Master of Science Thesis. http://digitalcommons.usu.edu/etd/246
14. 2008. Shelley Rounds*. "Distributed Control for Robotic Swarms Using Centroidal Voronoi Tessellations," Master of Science Thesis. http://digitalcommons.usu.edu/etd/218
15. 2009. Austin Jensen. "gRAID: A Geospatial Real-Time Aerial Image Display For A Low-Cost Autonomous Multispectral Remote Sensing Platform (AggieAir)," Master of Science Thesis.
16. 2009. Han, Yiding, "An Autonomous Unmanned Aerial Vehicle-Based Imagery System Development and Remote Sensing Images Classification for Agricultural Applications" Master of Science, thesis. http://digitalcommons.usu.edu/etd/513
17. 2009. Shayok Mukhopadhyay. "Fractional Order Modeling & Control: Development of Analog Strategies for Plasma Position Control of the STOR-1M Tokamak." Master of Science Thesis. http://digitalcommons.usu.edu/etd/460
18. 2010. Adams, Joshua S., "Transmitter Localization Using Autonomous Robotic Swarms" (2010). Master of Science Thesis. http://digitalcommons.usu.edu/etd/632
19. 2010. Coopmans, Calvin, "Architecture, Inertial Navigation, and Payload Designs for Low-Cost Unmanned Aerial Vehicle-Based Personal Remote Sensing". Master of Science Thesis. http://digitalcommons.usu.edu/etd/692
20. 2010. Chao, Haiyang, "Cooperative Remote Sensing and Actuation Using Networked Unmanned Vehicles" Ph.D. Dissertation. http://digitalcommons.usu.edu/etd/597
21. 2010. Tricaud, Christophe. "Optimal Sensing & Actuation Policies for Networked Mobile Agents in a Class of Cyber-Physical Systems" Ph.D. Dissertation. http://digitalcommons.usu.edu/etd/673
22. 2010. Abraham A. Clements. "An Immersive Technology for Indoor Exercise Equipment". Master of Science Plan-B Report. http://www.ece.usu.edu/grad/reports_theses_disseratations/2010/Clements_Abraham_A/report.pdf
23. 2011. Dee Long Di. "Cognitive Formation Flight in Multi-Unmanned Aerial Vehicle-Based Personal Remote Sensing Systems." Master of Science Thesis. http://digitalcommons.usu.edu/etd/985/
24. 2013. Pooja Kavathekar*. "Cognitive Vehicle Platooning In The Era Of Automated Electric Transportation" Master of Science Thesis. http://digitalcommons.usu.edu/etd/1411/
25. 2014. Calvin Coopmans. Cyber-Physical Systems Enabled by Unmanned Aerial System-Based Personal Remote Sensing: Data Mission Quality-Centric Design Architectures. 2014. Ph.D Dissertation, Dept. of Electrical and Computer Engineering, Utah State University. http://digitalcommons.usu.edu/cgi/viewcontent.cgi?article=4560&context=etd
26. 2014. Jinlu Han. Cyber-Physical Systems With Multi-Uav Based Cooperative Source Seeking And Contour Mapping. 2014. Ph.D Dissertation, Dept. of Electrical and Computer Engineering, Utah State University. http://digitalcommons.usu.edu/cgi/viewcontent.cgi?article=5051&context=etd

27. 2014. David A. Cornelio Sosa. An Efficiency-Motivated Attack Against Vehicles in a Platoon: Local Vehicle Control, Platoon Control Strategies, and Drive Train Technologies Considerations. 2014. Master's Thesis. Dept. of Electrical and Computer Engineering, Utah State University. http://digitalcommons.usu.edu/cgi/viewcontent.cgi?article=3182&context=etd
28. 2014. Austin M. Jensen. Innovative Payloads for Small Unmanned Aerial System-Based Personal Remote Sensing and Applications. 2014. Ph.D Dissertation, Dept. of Electrical and Computer Engineering, Utah State University. http://digitalcommons.usu.edu/cgi/viewcontent.cgi?article=3158&context=etd
29. 2014. Hadi Malek. Control of Grid-Connected Photovoltaic Systems Using Fractional Order Operators. 2014. Ph.D Dissertation, Dept. of Electrical and Computer Engineering, Utah State University. http://digitalcommons.usu.edu/cgi/viewcontent.cgi?article=3193&context=etd
30. 2015. Marwin Ko. Applications of Long Range Dependence Characterization in Thermal Imaging & Heart Rate Variability, Master's thesis, Mechanical Engineering, UC Merced. http://escholarship.org/uc/item/4hx087tj
31. 2015. Zhuo Li. Fractional order modeling and control of multi-input-multi-output processes. Ph.D Dissertation, Electrical Engineering and Computer Science, UC Merced. http://escholarship.org/uc/item/49x9x167
32. 2016. Daniel Stuart. Microscopic modeling of crowds involving individuals with Physical disability: exploring social force interaction. Ph.D Dissertation, Dept. of Electrical and Computer Engineering, Utah State University. http://www.ece.usu.edu/grad/reports_theses_disseratations/2015/Stuart_Daniel_S/dissertation.pdf
33. 2017 Brandon Stark. Optimal Remote Sensing with Small Unmanned Aircraft Systems and Risk Management. Ph.D Dissertation, Electrical Engineering and Computer Science, UC Merced. https://escholarship.org/content/qt83v8v082/qt83v8v082.pdf
34. 2018 Tiebiao Zhao. Remote Sensing Of Water Stress In Almond Trees Using Unmanned Aerial Vehicles. Ph.D Dissertation, Mechanical Engineering, UC Merced.

Publications

Citation summaries:

- http://www.researcherid.com/rid/A-2301-2008 (254 total papers, ISI H-index 49; ISI citations: 10085, top ISI cited article: 724 citations)
- http://scholar.google.com/citations?hl=en&user=RDEIRbcAAAAJ (H-index 77; i10-index: 409; total citations 29661, top cited article: 1723 citations) (Last 5 years: H-index 61; i10-index: 273; total citations 17242)
- http://www.scopus.com/authid/detail.url?authorId=7601439185 702 Documents. Cited by 10481 documents. 150 co-authors. 18107 total citations. H-index: 62.

(***** indicates corresponding author, + student coauthor)

Theses:

1. Yangquan Chen, "High-order Iterative Learning Control: Convergence, Robustness and Applications," Ph.D. Dissertation, December 1997. School of Electrical and Electronic Engineering, Nanyang Technological University (NTU), Singapore.
2. Yangquan Chen, "Flying Vehicle Simulation Studies and Identification of Aerodynamic Coefficients From Range Test Data," Master of Engineering Thesis, April 1988. Department of Automatic Control, Beijing Institute of Technology (BIT), Beijing, China.
3. Yangquan Chen, "Special Purpose Microcomputer Hardware Design for Industrial Process Control", Bachelor of Engineering Thesis. June 1985. Department of Automation, University of Science and Technology of Beijing (USTB), Beijing, China.

Monographs and Textbooks:

1. Kecai Cao and YangQuan Chen. 2018. “Fractional Order Crowd Dynamics: Cyber-Human Systems Modeling and Control” (Invited book project. Volume #4 of the De Gryuter Monograph Series “Fractional Calculus in Applied Sciences and Engineering”) ISBN 978-3-11-047398-8 https://www.degruyter.com/viewbooktoc/product/469813
2. Fudong Ge, YangQuan Chen and Chunhai Kou. 2018. “Regional Analysis of Time-Fractional Order Diffusion Processes” 2018 Springer. ISBN 978-3-319-72895-7 https://doi.org/10.1007/978-3-319-72896-4
3. Dingyu Xue and YangQuan Chen. “Scientific Computing with MATLAB, Second Edition”. March 1, 2016. Chapman and Hall/CRC. Textbook - 586 Pages - 259 B/W Illustrations ISBN 9781498757775 - CAT# K27591. https://www.crcpress.com/Scientific-Computing-with-MATLAB-Second-Edition/Xue-Chen/9781498757775
4. Dingyu Xue and YangQuan Chen. "Modeling, Analysis and Design of Control Systems in MATLAB and Simulink" (World Scientific 2014) http://www.worldscientific.com/worldscibooks/10.1142/9260 580pp Nov 2014. ISBN: 978-981-4618-45-8 (hardcover)
5. Dingyu Xue and YangQuan Chen. "System Simulation Techniques with MATLAB® and Simulink®". 2013. John Wiley & Sons, Ltd. ISBN: 978-1-118-64792-9. (468 pages) http://www.wiley.com/go/xue
6. Ying Luo+ and YangQuan Chen*. “*Fractional Order Motion Controls*” John-Wiley and Sons, Inc., 2012 (Online Oct. 2012, 424 pages) **ISBN:** 978-1119944553. DOI: 10.1002/9781118387726
7. Zhuang Jiao+, YangQuan Chen* and Igor Podlubny. “*Distributed-Order Dynamic Systems: Stability, Simulation, Applications and Perspectives*” SpringerBrief, Springer-Verlag, Feb. 2012, 103 pages, **ISBN-13:** 978-1447128519 http://www.springer.com/engineering/control/book/978-1-4471-2851-9
8. Haiyang Chao+ and YangQuan Chen*. “*Remote Sensing and Actuation Using Unmanned Vehicles*” Wiley-IEEE Press, Aug. 2012 **ISBN-13:** 978-1118122761 (IEEE Press Series on Systems Science and Engineering) http://www.wiley.com/WileyCDA/WileyTitle/productCd-1118122763.html
9. Christophe Tricaud+ and YangQuan Chen*. “*Optimal Mobile Sensing and Actuation Policies in Cyber-physical Systems*”. Springer. ISBN 978-1-4471-2261-6. 2012. (170 pages) http://www.springer.com/engineering/robotics/book/978-1-4471-2261-6
10. Sheng, Hu+, Chen, YangQuan* and Qiu, TianShuang. “*Fractional Processes and Fractional-Order Signal Processing***”** Springer. Series: Signals and Communication Technology**,** 2012. 295 pages. ISBN 978-1-4471-2232-6 http://www.springer.com/engineering/signals/book/978-1-4471-2232-6
11. Concepción A. Monje*+, YangQuan Chen, Blas Vinagre, Dingyu Xue and Vicente Feliu (2010). “*Fractional Order Systems and Controls - Fundamentals and Applications*.” Advanced Industrial Control Series, Springer-Verlag http://www.springer.com/engineering/book/978-1-84996-334-3 (1st Edition, 2010, XXVI, 415 p. 223 illus., 19 in color. Hardcover ISBN: 978-1-84996-334-3)
12. Zheng Song+, YangQuan Chen*, Chellury Ram Sastry and Nazif Cihan Tas (2009). “*Optimal Observation for Cyber-Physical Systems: A Fisher Information Matrix Based Approach*.” Springer-Verlag, 2009. (ISBN: 978-1-84882-655-7, July 2009, 170 pages) http://www.springer.com/engineering/control/book/978-1-84882-655-7
13. Dingyu Xue* and YangQuan Chen (2008). “*Solving Applied Mathematical Problems with MATLAB*”. (ISBN: 978-1420082500) Chapman & Hall/CRC Press. Nov. 2008. (448 pages) http://www.crcpress.com/product/isbn/9781420082500
14. Hyo-Sung Ahn+, Kevin L. Moore*, and YangQuan Chen (2007). “*Iterative Learning Control: Robustness and Monotonic Convergence in the Iteration Domain*”. Springer-Verlag, Communications and Control Engineering Series, ISBN: 978-1-84628-846-3. (203 pages) http://www.springer.com/mathematics/applications/book/978-1-84628-846-3
15. Dingyu Xue, YangQuan Chen* and Derek Atherton (2007). “*Linear Feedback Control – Analysis and Design with Matlab*”. SIAM Press, 2007, ISBN: 978-0-898716-38-2. (348 pages) (Book review in IEEE Control Systems Magazine, Jan. issue of 2009) http://epubs.siam.org/doi/abs/10.1137/1.9780898718621.fm
16. Dingyu Xue* and YangQuan Chen (2007). “*Solving Control Related Mathematical Problems Using*

Matlab". (ISBN: 9787302152972) Tsinghua University Press, Beijing, China, 2007. (474 pages in Chinese, http://www.china-pub.com/computers/common/info.asp?id=37025)

17. Dingyu Xue* and YangQuan Chen (2004). "*Solving Advanced Applied Mathematical Problems Using Matlab*". (ISBN 7-302-09311-3/O.392) Tsinghua University Press, Beijing, China, August 2004. (419 pages in Chinese). Second edition**:** ISBN 978-7302186182, Tsinghua University Press, Beijing, China, Oct. 2008**.** (442 pages in Chinese). Third edition**:** ISBN tbd, Tsinghua University Press, Beijing, China, August. 2013**.** (468 pages in Chinese).
18. Dingyu Xue* and YangQuan Chen (2002). "*System Simulation Techniques and Applications Based on MATLAB/Simulink*". Tsinghua University Press. 2002. (ISBN7-302-05341-3/TP3137) (www.tup.tsinghua.edu.cn) (435 pages in Chinese). Second edition: ISBN 978-7302238805, March 2011. (412 pages in Chinese)
19. Yangquan Chen* and Changyun Wen (1999), "*Iterative Learning Control: Convergence, Robustness and Applications*," Springer-Verlag, Lecture Notes Series on Control and Information Science, vol. LNCIS-248, 1999, 199 pages, ISBN: 1-85233-190-9.
20. Yonggao Shi* and Yangquan Chen (1995), "*Plastic Belt for Projectiles*," Science & Technology Press of Shaanxi Provinc**e,** 1995, in Chinese, 162 pages, ISBN 7-5369-2277-9.

Edited Books:

1. Praveen Agarwal, Dumitru Baleanu, YangQuan Chen, Shaher Momani, and José António Tenreiro Machado, editors. *Advanced Theory and Applications of Fractional Calculus - ICFDA 2018, Amman, Jordan*, July, 16-18. Springer, to appear late 2019.
2. Igor Podlubny, Blas M. Vinagre Jara, YangQuan Chen, Vicente Feliu Batlle and Inés Tejado Balsera (2010). Proceedings of the 4-th IFAC International Workshop on Fractional Derivatives and Applications**.** ISBN: 978-80-553-0487-8. University of Extremadura, Badajoz, Spain, October 18-20, 2010. [*Book of Abstracts of FDA10, ISBN: 978-80-553-0488-5*] http://web.tuke.sk/fda10/
3. Chen, XQ, Chen, YQ and Chase, JG (2009). "*Mobile Robots: State of the Art in Land, Sea, Air, and Collaborative Missions*," I-Tech Publishing, Vienna, Austria, ISBN 978-953-307-001-8, 335 pages, Publishing date: May 2009. http://sciyo.com/books/show/title/mobile-robots-state-of-the-art-in-land-sea-air-and-collaborative-missions
4. Blas M Vinagre* and YangQuan Chen (2002). "*Fractional Calculus Applications in Automatic Control and Robotics*". Lecture Notes Prepared for The Tutorial Workshop at the IEEE International Conference on Decision and Control (CDC), Dec. 9 2002, Las Vegas, USA. (316 PDF pages) http://mechatronics.ece.usu.edu/foc/cdc02tw/cdrom/Lectures/book.pdf.

Refereed Book Chapters and Book Chapter Papers:

1. Brandon Stark and YangQuan Chen. (2016) "Remote Sensing Methodology for Unmanned Aerial Systems" (Wiley) **Encyclopedia of Aerospace Engineering – UAS** edited by Richard Blockley and Wei Shyy. (accepted to appear 2016)
2. Brandon Stark, Calvin Coopmans and YangQuan Chen. (2015) "*Concept Of Operations Of Small Unmanned Aerial Systems: Basis For Airworthiness Towards Personal Remote Sensing*" a chapter in Handbook of Unmanned Aerial Vehicles, Valavanis, Kimon P.; Vachtsevanos, George J (Eds.) http://www.springer.com/engineering/robotics/book/978-90-481-9708-8
3. Calvin Coopmans, Brandon Stark, Austin Jensen, YangQuan Chen, Mac McKee. (2015) "*Cyber-Physical Systems Enabled By Small Unmanned Aerial Vehicles*" a chapter in Handbook of Unmanned Aerial Vehicles, Valavanis, Kimon P.; Vachtsevanos, George J (Eds.) http://www.springer.com/engineering/robotics/book/978-90-481-9708-8
4. YangQuan Chen, Kevin L. Moore and Hyo-Sung Ahn. "Iterative Learning Control" in Encyclopedia of the Sciences of Learning Editor: Norbert M. Seel. Springer Science+Business Media, LLC 2012, Part 9, pp. 1648-1652, DOI: 10.1007/978-1-4419-1428-6_65
5. Brandon Stark, YangQuan Chen and Mac KcKee (2012). "*AggieVTOL: A Vertical Take Off and Landing*

Unmanned Aerial Vehicle Platform for Personal Remote Sensing". IGI Global Press. A chapter in "Prototyping of Robotic Systems: Applications of Design and Implementation." Editors: Dr. Tarek Sobh & Dr. Xingguo Xiong, Univ. of Bridgeport, Connecticut, USA, 2012. 35 pages. http://www.igi-global.com/chapter/aggievtol-vertical-take-off-landing/63532

6. Christophe Tricaud+ and YangQuan Chen* (2012). "*Data-Driven Parameter Estimation of Distributed Systems Using Networked Mobile Sensors.*" DDDAS book chapter. Invited and Accepted. Springer-Verlag. Editor: Dr. Darema, Frederica (www.dddas.org) (pending, 2012)
7. Haiyang Chao, Austin M. Jensen, Yiding Han, YangQuan Chen and Mac McKee (2009). AggieAir: Towards Low-cost Cooperative Multispectral Remote Sensing Using Small Unmanned Aircraft Systems, Advances in Geoscience and Remote Sensing, Gary Jedlovec (Ed.), ISBN: 978-953-307-005-6, INTECH, Available from: http://sciyo.com/articles/show/title/aggieair-towards-low-cost-cooperative-multispectral-remote-sensing-using-small-unmanned-aircraft-sys Pages: 463-490.
8. Yan Li+* and YangQuan Chen (2009). "*Stability analysis of fractional order universal adaptive stabilization*". A chapter in "New Trends in Nanotechnology and Fractional Calculus Applications", Springer, 2009. Part 5, 357-368, DOI: 10.1007/978-90-481-3293-5_31
9. Ying Luo+, YangQuan Chen* and Hyo-Sung Ahn (2009). "*Fractional Order Adaptive Control for Cogging Effect Compensation*" A chapter in "New Trends in Nanotechnology and Fractional Calculus Applications", Springer, 2009. pp. 393-409. Part 5, 393-409, DOI: 10.1007/978-90-481-3293-5_34
10. Christophe Tricaud+ and YangQuan Chen* (2009). "*Optimal Real-Time Strategies for Estimation of Distributed Parameter Systems Using Networked Mobile Sensors and Actuators*" Chapter-10 of "Mobile Robots: State of the Art in Land, Sea, Air, and Collaborative Missions," Edited by X.Q. Chen, Y.Q. Chen, and J.G. Chase**,** I-Tech Publishing, Vienna, Austria, ISBN 978-3-902613-39-4. (2009) http://sciyo.com/articles/show/title/optimal-real-time-estimation-strategies-for-a-class-of-cyber-physical-systems-using-networked-mobile
11. X.Q. Chen*, Y.Q. Chen, and J.G. Chase (2009). "*Mobiles Robots – Past, Present and Future*". Chapter-1 of "Mobile Robots: State of the Art in Land, Sea, Air, and Collaborative Missions," Edited by X.Q. Chen, Y.Q. Chen, and J.G. Chase, I-Tech Publishing, Vienna, Austria, ISBN 978-3-902613-39-4. (2009) Available from: http://sciyo.com/articles/show/title/mobiles-robots-past-present-and-future
12. YangQuan Chen (2008).* "*Robustness of Networked Boundary Control of Damped Wave Equations*", a Chapter in "*Networked Control Systems: Theory and Applications*", Fei-Yue Wang and Derong Liu editors, Springer, ISBN: 1848002149, 2008. Pp. 261-273, DOI: 10.1007/978-1-84800-215-9_9
13. Jinsong Liang+, Weiwei Zhang, YangQuan Chen*, Igor Podlubny (2007). "*Robustness of Fractional Order Boundary Control of Time-Fractional Wave Equations with Delayed Boundary Measurement Using the Smith Predictor*". In "*Advances in Fractional Calculus: Theoretical Developments and Applications in Physics and Engineering*." J. Sabatier, J. Machado and O. Agrawal Editors. Springer-Verlag**.** August 2007. ISBN: 978-1402060410. pages: 61-76. (552 pages in total)
14. Dingyu Xue, YangQuan Chen* (2007). "*Sub-Optimum H2 Pseudo-Rational Approximations to Fractional Order Linear Time Invariant Systems*". In "*Advances in Fractional Calculus: Theoretical Developments and Applications in Physics and Engineering."* J. Sabatier, J. Machado and O. Agrawal Editors. Springer-Verlag. August 2007. ISBN: 978-1402060410. pages: 543-552. (552 pages in total)
15. Jinsong Liang+, YangQuan Chen*, Blas M. Vinagre and Igor Podlubny (2005). "*Identifying Diffusion-Wave Constant, Fractional Order and Boundary Profile Of A Time-Fractional Diffusion-Wave Equation From Noisy Boundary Measurements*". a chapter in "*Fractional Derivatives an Their Applications. Part 3: Systems analysis, implementation and simulation, systems identification and control*." Editors: A. Le Mehauté, J. A. Tenreiro Machado, J. C. Trigeassou and J. Sabatier. UBooks, Augsburg, Germany, 2005. pp. 517-532. ISBN 3-86608-026-3.
16. YangQuan Chen*, Kevin L. Moore, Blas M. Vinagre and Igor Podlubny (2005). "*Robust PID Controller Autotuning with A Phase Shaper* ". A chapter in "*Fractional Derivatives an Their Applications . Part. 3: Systems analysis, implementation and simulation, systems identification and control*." Editors: A. Le Mehauté, J. A. Tenreiro Machado, J. C. Trigeassou and J. Sabatier. UBooks, Augsburg, Germany, 2005. pp. 687-706. ISBN 3-86608-026-3.

17. Jinsong Liang+, YangQuan Chen*, Blas M. Vinagre and Igor Podlubny (2005). "*Fractional Order Boundary Stabilization Of A Time-Fractional Wave Equation* ". A chapter in "*Fractional Derivatives an Their Applications . Part. 3: Systems analysis, implementation and simulation, systems identification and control*." Editors: A. Le Mehauté, J. A. Tenreiro Machado, J. C. Trigeassou and J. Sabatier. UBooks, Augsburg, Germany, 2005. pp. 597-614. ISBN 3-86608-026-3.
18. C. A. Monje, B. M. Vinagre*, Y.Q. Chen, V. Feliu, P. Lanusse and J. Sabatier (2005). "*Optimal tunings for fractional PI$^\lambda$D$^\mu$* ". A chapter in "*Fractional Derivatives an Their Applications. Part. 3: Systems analysis, implementation and simulation, systems identification and control*." Editors: A. Le Mehauté, J. A. Tenreiro Machado, J. C. Trigeassou and J. Sabatier. UBooks, Augsburg, Germany, 2005. pp. 675-686. ISBN 3-86608-026-3.
19. Dingy\"u Xue and YangQuan Chen* (2005). "*Iterative Learning Control of Uncertain Discrete-time Nonlinear Feedback Systems With A Control Saturater*". A chapter in ``*Intelligent Systems at the Service of Mankind''*, Volume 2, Editors: Wilfried Elmenreich, J. Tenreiro Machado, Imre J. Rudas. UBooks, Augsburg, Germany, 2005. ISBN 978-3866080522.
20. J. Ignacio Suarez, Blas M. Vinagre*, José Eugenio Naranjo and YangQuan Chen (2005). "*Validation of the Model of an Unmanned Autonomous Vehicle Used in Path-Tracking Tasks*". A chapter in ``*Intelligent Systems at the Service of Mankind*", Volume 2, Editors: Wilfried Elmenreich, J. Tenreiro Machado, Imre J. Rudas. UBooks, Augsburg, Germany, 2005. ISBN 978-3866080522.
21. Zhen Song+, Pranav Sukthankar+, YangQuan Chen*, Jason Gu (2005). "*Control of Two Coupled Inverted Penduli by Progressive Fuzzy Logic Fusion* ". A chapter in ``*Intelligent Systems at the Service of Mankind''*, Volume 2, Editors: Wilfried Elmenreich, J. Tenreiro Machado, Imre J. Rudas. UBooks , Augsburg, Germany, 2005. ISBN 978-3866080522.
22. Ivo Petr\'a\v{s}, YangQuan Chen* and Blas M. Vinagre (2004). "*Robust stability test for interval fractional order linear systems*". Chapter 53, in Vincent D. Blondel and Alexander Megretski (Editors). "*Unsolved problems in the mathematics of systems and control"*. Princeton University Press. Jul. 2004. Problem 6.5, Chapter 6, pp. 208-210. ISBN: 978-0-691-11748-5.
23. J. I. Su\'{a}rez, B. M. Vinagre*, A. J. Calder\'{o}n, C. A. Monje and Y. Q. Chen (2003). "*Using Fractional Calculus for Lateral and Longitudinal Control of Autonomous Vehicles*". Chapter in the Lecture Notes in Computer Science (LNCS). Springer Verlag. Vol.. 2809: Franz R. Pichler, Moreno-Diaz, R. et al. (Eds.) Part - Autonomous and Control System "*Computer Aided Systems Theory- EUROCAST 2003*". Feb. 2003. pp. 337-348. ISBN 978-3-540-20221-9.
24. YangQuan Chen* and Adam L. Schwartz (2002). "*RIOTS_95 -- a MATLAB Toolbox for Solving General Optimal Control Problems and Its Applications to Chemical Processes*". Chapter in Rein Luus Editor, "*Recent Developments in Optimization and Optimal Control in Chemical Engineering*", Transworld Research Publishers. 2002. pp. 229-252. ISBN 81-7736-088-4.
25. J.-X. Xu*, T. H. Lee and Yangquan Chen (2000). "*Knowledge learning techniques and applications in discrete time control systems,*" in vol. III, Chapter 30, pp. 943-976, C. T. Leondes, (ed.), "*Knowledge Based Systems Techniques and Applications***,"** Academic Press, 2000. ISBN: 978-0124438750.
26. J.-X. Xu*, T. H. Lee, C. C. Hang and Yangquan Chen (1999). "*Developments in Learning Control Systems,*" M. M. Gupta and N. K. Sinha (ed.), "*Soft Computing and Intelligent Systems: Theory and Practice,*" Chapter 10, pp. 217-253, IEEE Press, 1999. ISBN 978-0126464900.
27. Huifang Dou, Zhaoying Zhou, Yangquan Chen*, Jian-Xin Xu and Jimmy J. Abbas (1998). "*Robust Control of Functional Neuromuscular Stimulation System by Discrete-time Iterative Learning,*" in Z. Bien and Jian-Xin Xu (ed.), "*Iterative Learning Control - Analysis, Design, Integration and Applications,*" pp. 351-370, Kluwer Academic Press, 1998. ISBN: 978-0792382133.
28. Yangquan Chen*, Jian-Xin Xu and Tong Heng Lee (1998). "*High-order Iterative Learning Control of Discrete-time Uncertain Nonlinear Systems Using Current Iteration Tracking Error,*" in Z. Bien and Jian-Xin Xu (ed.), "*Iterative Learning Control - Analysis, Design, Integration and Applications,*" pp. 83-103**,** **Kluwer Academic Press**, 1998. ISBN: 978-0792382133.

Refereed Book Reviews and Guest Editorials/Journal Special Issues Edited

1. YangQuan Chen* and Yi Zhang. Book review on "*Computational Intelligence in Control Engineering*", Robert E. King, Marcel Dekker Inc., NY, 1999, 295pp. *International Journal of Robust and Nonlinear Control*. Vol. 14, No. 12, pp. 1081-1083. August 2004.
2. Y. Q. Chen*, "Book Review: *Iterative Dynamic Programming* by Rein Luus", the book was published on January 27, 2000 by CRC Press, ISBN: 1584881488, Hardcover, 344 pages. *The International Journal of Robust and Nonlinear Control*, vol. 11. no. 14, pp.1397-1398, 2001.
3. Changpin Li*, YangQuan Chen, Igor Polubny and Blas Vinagre. "*Introduction to Special Issue: Fractional Dynamics and Control*" **International Journal of Bifurcation Chaos**, Special Issue on "Fractional Dynamics and Control", April issue of 2012. (4 pages) DOI: 10.1142/S0218127412020026
4. Editorial. Guest – Editors: Virginia Kiryakova, Yury Luchko, Francesco Mainardi, Blas Vinagre, Igor Podlubny, YangQuan Chen. *Special Issue Dedicated to 80th Anniversary of Professor Rudolf Gorenflo*. **Fractional Calculus and Applied Analysis**. Volume 14 / 2011 DOI: 10.2478/s13540-011-0001-0.
5. Li, Changpin; Chen, YangQuan; Kurths, Juergen. *Fractional calculus and its applications*. **Philosophical Transactions of the Royal Society a-Mathematical Physical and Engineering Sciences** Volume: 371 Issue: 1990 Published: MAY 13 2013. DOI: 10.1098/rsta.2013.0037
6. Clara M. Ionescu, Riccardo Caponetto, YangQuan Chen. Special Issue ""Fractional Order Modelling and Control in Mechatronic Applications". **Mechatronics**, Volume 23, Issue 7, October 2013, Editorial. Pages 739-740. http://dx.doi.org/10.1016/j.mechatronics.2013.10.004
7. Chen, YangQuan, Dingyu Xue and Antonio Visioli. Editorial. Special Issue on "Fractional Order Systems and Control". **IEEE/CAA Automatica Sinica.** Vol 3. No. 3, July 2016. http://mechatronics.ucmerced.edu/jas-si-fosc https://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=7508799
8. Chen, YangQuan, Dingyu Xue and Antonio Visioli. Editorial. Special Issue on "Fractional Order Systems and Control". **IEEE/CAA Automatica Sinica**. Vol. 3, Issue 4, 2016. http://mechatronics.ucmerced.edu/jas-si-fosc https://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=7589486
9. Chen, YangQuan and Clara-Mihaela Ionescu. Editorial. Special Issue on "Applied Fractional Calculus in Modeling, Analysis and Design of Control Systems". **International Journal of Control.** Vol. 90 no. 6, 2017. pp. 1155–1156 https://doi.org/10.1080/00207179.2017.1315242
10. Xiaohua Xia and YangQuan Chen Guest Editors. **CONTROL ENGINERING of CHINA**, vol. 23, no. 12, (Monthly) Dec. 20, 2016. Editorial: Special Issue on "Control Systems Engineering". http://mechatronics.ucmerced.edu/sites/mechatronics.ucmerced.edu/files/page/documents/czgc-covertocpreface-of-editorial.pdf and http://mechatronics.ucmerced.edu/KZGC
11. Issue Editors: YangQuan Chen, Fulvia Quagliotti, YOUMIN ZHANG, Kimon P. Valavanis. **Journal of Intelligent & Robotic Systems**. Volume 84, Issue 1-4, December 2016 Special Issue: Unmanned Aircraft Systems. https://link.springer.com/content/pdf/10.1007%2Fs10846-017-0565-y.pdf
12. Issue Editors: Kimon P. Valavanis, Yang Quan Chen, Fulvia Quagliotti, Didier Theilliol, Antonios Tsourdos, Youmin Zhang. **Journal of Intelligent & Robotic Systems.** Volume 88, Issue 2-4, December 2017. Special Issue: Unmanned Aircraft Systems, Part I https://link.springer.com/article/10.1007/s10846-017-0565-y
13. **ISA Trans.** Special Issue on "Fractional Order Signals, Systems, and Controls: Theory and Application". Edited by Igor Podlubny, Blas Vinagre, Mohammad Saleh Tavazoei, Dingyu Xue, YangQuan Chen, Mohammad Haeri. Volume 82, Pages 1-232 (November 2018) https://www.sciencedirect.com/journal/isa-transactions/vol/82/suppl/C and Editorial: https://doi.org/10.1016/j.isatra.2018.11.007
14. Issue Editors: Kimon P. Valavanis, Yang Quan Chen, Fulvia Quagliotti, Didier Theilliol, Antonios Tsourdos, Youmin Zhang. **Journal of Intelligent & Robotic Systems.** Volume 93, Issue 1-2, February

2019, Special Issue: Unmanned Aircraft Systems, Part II https://link.springer.com/journal/10846/93/1

Refereed Journal Papers:

2019

1. Stuart, Daniel S.; Sharifi, Mohammad Sadra; Christensen, Keith M.; et al. "Crowds involving individuals with disabilities: Modeling heterogeneity using Fractional Order Potential Fields and the Social Force Model." **Physica a-Statistical Mechanics and Its Applications** Volume: 514 Pages: 244-258 JAN 15 2019, DOI: 10.1016/j.physa.2018.08.174
2. Ge, Fudong; Chen, YangQuan. "Event-triggered boundary feedback control for networked reaction-subdiffusion processes with input uncertainties" **Information Sciences** Volume: 476 Pages: 239-255 FEB 2019. DOI: 10.1016/j.ins.2018.10.023

2018

3. Liu, Lu; Tian, Siyuan; Xue, Dingyu; Zhang, Tao; Chen, YangQuan; "Industrial feedforward control technology: a review". **Journal of Intelligent Manufacturing**. 15-Jan 2018 Springer US https://doi.org/10.1007/s10845-018-1399-6
4. Sun, HongGuang; Zhang, Yong; Baleanu, Dumitru; et al. "A new collection of real world applications of fractional calculus in science and engineering" **Communications in Nonlinear Science and Numerical Simulation** Volume: 64 Pages: 213-231 NOV 2018. DOI: 10.1016/j.cnsns.2018.04.019
5. Liu, Kai; Chen, YangQuan; Domanski, Pawel D.; et al. "A Novel Method for Control Performance Assessment with Fractional Order Signal Processing and Its Application to Semiconductor Manufacturing" **Algorithms** Volume: 11 Issue: 7 JUL 2018. DOI: 10.3390/a11070090
6. Liu, Kai; Chen, YangQuan; Zhang, Tao; et al. "A survey of run-to-run control for batch processes" **ISA Transactions** Volume: 83 Pages: 107-125 DEC 2018. DOI: 10.1016/j.isatra.2018.09.005
7. Zhang, Xuefeng; Chen, YangQuan. "Admissibility and robust stabilization of continuous linear singular fractional order systems with the fractional order alpha: The 0 < alpha < 1 case". **ISA Transactions** Volume: 82 Pages: 42-50 NOV 2018. DOI: 10.1016/j.isatra.2017.03.008
8. Shi, Xinxin; Chen, YangQuan; Huang, Jiacai. "Application of fractional-order active disturbance rejection controller on linear motion system". **Control Engineering Practice** Volume: 81 Pages: 207-214 DEC 2018. DOI: 10.1016/j.conengprac.2018.09.014
9. He, Bin-Bin; Zhou, Hua-Cheng; Chen, YangQuan; et al. "Asymptotical stability of fractional order systems with time delay via an integral inequality" **IET Control Theory and Applications** Volume: 12 Issue: 12 Pages: 1748-1754 AUG 14 2018. DOI: 10.1049/iet-cta.2017.1144
10. Chen, Juan; Cui, Baotong; Chen, YangQuan. "Backstepping-based boundary control design for a fractional reaction diffusion system with a space-dependent diffusion coefficient". **ISA Transactions** Volume: 80 Pages: 203-211 SEP 2018. DOI: 10.1016/j.isatra.2018.04.013
11. Yang, Yong-Ge; Xu, Wei; Chen, YangQuan; et al. "Bifurcation Analysis of a Vibro-Impact Viscoelastic Oscillator with Fractional Derivative Element". **International Journal of Bifurcation and Chaos** Volume: 28 Issue: 14 DEC 30 2018. DOI: 10.1142/S0218127418501705
12. Liu, Lu; Tian, Siyuan; Xue, Dingyu; Zhang, Tao; Chen, YangQuan. "Continuous fractional-order Zero Phase Error Tracking Control" **ISA Transactions** Volume: 75 Pages: 226-235 APR 2018. DOI: 10.1016/j.isatra.2018.01.025
13. Chen, Juan; Zhuang, Bo; Chen, YangQuan; et al. "Diffusion control for a tempered anomalous diffusion

system using fractional-order PI controllers" **ISA Transactions** Volume: 82 Pages: 94-106 NOV 2018. DOI: 10.1016/j.isatra.2017.04.005

14. Liu, Kai; Zhang, Xi; Chen, YangQuan. "Extraction of Coal and Gangue Geometric Features with Multifractal Detrending Fluctuation Analysis" **Applied Sciences** Volume: 8 Issue: 3 MAR 2018. DOI: 10.3390/app8030463
15. Espinoza-Fraire, A. T.; Chen, YangQuan; Dzul, A.; et al. "Fixed-Wing MAV Adaptive PD Control Based on a Modified MIT Rule with Sliding-Mode Control" **Journal of Intelligent & Robotic Systems** Volume: 91 Issue: 1 Pages: 101-114 JUL 2018. DOI: 10.1007/s10846-018-0856-y
16. Wang, Jing; Shao, Changfeng; Chen, Yang-Quan. "Fractional order sliding mode control via disturbance observer for a class of fractional order systems with mismatched disturbance". **Mechatronics** Volume: 53 Pages: 8-19 AUG 2018. DOI: 10.1016/j.mechatronics.2018.05.006
17. Liu, Lu; Zhang, Shuo; Xue, Dingyu; et al. "General robustness analysis and robust fractional-order PD controller design for fractional-order plants" **IET Control Theory and Applications** Volume: 12 Issue: 12 Pages: 1730-1736 AUG 14 2018. DOI: 10.1049/iet-cta.2017.1145
18. Zheng, Weijia; Luo, Ying; Pi, Youguo; Chen, YangQuan. "Improved frequency-domain design method for the fractional order proportional-integral-derivative controller optimal design: a case study of permanent magnet synchronous motor speed control" **IET Control Theory and Applications** Volume: 12 Issue: 18 Pages: 2478-2487 DEC 18 2018. DOI: 10.1049/iet-cta.2018.5829
19. Ge, Fudong; Meurer, Thomas; Chen, YangQuan. "Mittag-Leffler convergent backstepping observers for coupled semilinear subdiffusion systems with spatially varying parameters" **Systems & Control Letters** Volume: 122 Pages: 86-92 DEC 2018. DOI: 10.1016/j.sysconle.2018.10.009
20. He, Bin-Bin; Zhou, Hua-Cheng; Kou, Chun-Hai; Chen, YangQuan. "New integral inequalities and asymptotic stability of fractional-order systems with unbounded time delay". **Nonlinear Dynamics** Volume: 94 Issue: 2 Pages: 1523-1534 OCT 2018. DOI: 10.1007/s11071-018-4439-z
21. Chen, Juan; Cui, Baotong; Chen, Yang Quan. "Observer-based output feedback control for a boundary controlled fractional reaction diffusion system with spatially-varying diffusivity". **IET Control Theory and Applications** Volume: 12 Issue: 11 Pages: 1561-1572 JUL 24 2018. DOI: 10.1049/iet-cta.2017.1352
22. Chen, Yuquan; Hollenbeck, Derek; Wang, Yong; Chen, YangQuan. "On Optimal Tempered Levy Flight Foraging" **Frontiers in Physics** Volume: 6 OCT 4 2018. DOI: 10.3389/fphy.2018.00111
23. Yang, Qi; Zhang, Yanzhu; Zhao, Tiebiao; Chen, YangQuan. "Single image super-resolution using self-optimizing mask via fractional-order gradient interpolation and reconstruction". **ISA Transactions** Volume: 82 Pages: 163-171 NOV 2018. DOI: 10.1016/j.isatra.2017.03.001

2017

24. Sharifi, M. S.; Christensen, K.; Chen, A.; et al. "A large-scale controlled experiment on pedestrian walking behavior involving individuals with disabilities". **Travel Behaviour and Society** Volume: 8 Pages: 14-25 2017. DOI: 10.1016/j.tbs.2017.03.003
25. Zhao, H. R.; Zhang, J. C.; Qiao, L. Y.; Chen, YangQuan. "A multichannel compressed sampling method for fractional bandlimited signals". **Signal Processing** Volume: 134 Pages: 139-148 2017. DOI: 10.1016/j.sigpro.2016.11.023
26. Li, Z.; Liu, L.; Dehghan, S.; Chen, YangQuan; Xue, Dingyu. "A review and evaluation of numerical tools for fractional calculus and fractional order controls". **International Journal of Contro**l Volume: 90 Issue: 6 Pages: 1165-1181 2017. DOI: 10.1080/00207179.2015.1124290
27. Zhang, Xuefeng; Chen, YangQuan. "A solid criterion based on strict LMI without invoking equality constraint for stabilization of continuous singular systems". **ISA Transactions** Volume: 71 Pages: 272-279 NOV 2017. DOI: 10.1016/j.isatra.2017.08.022
28. Ge, F. D.; Chen, Y. Q.; Kou, C. H. "Actuator characterisations to achieve approximate controllability for

a class of fractional sub-diffusion equations". **International Journal of Control** Volume: 90 Issue: 6 Pages: 1212-1220 2017. DOI: 10.1080/00207179.2016.1163619
29. Zhang, Xuefeng; Chen, YangQuan. "Admissibility and robust stabilization of continuous linear singular fractional order systems with the fractional order alpha: The 0<alpha<1 case." **ISA transactions** 2017-Apr-03, DOI: 10.1016/j.isatra.2017.03.008
30. Liu, K.; Chen, Y. Q.; Zhang, X. "An Evaluation of ARFIMA (Autoregressive Fractional Integral Moving Average) Programs" **Axioms** Volume: 6 Issue: 2 2017. DOI: 10.3390/axioms6020016
31. Zhao, Yang; Li, Yan; Zhou, Fengyu; Chen, YangQuan. "An Iterative Learning Approach to Identify Fractional Order KiBaM Model". **IEEE-CAA Journal of Automatica Sinica** Volume: 4 Issue: 2 Pages: 322-331 APR 2017. DOI: 10.1109/JAS.2017.7510358
32. Chen, Juan; Zhuang, Bo; Chen, YangQuan; et al. "Backstepping-based boundary feedback control for a fractional reaction diffusion system with mixed or Robin boundary conditions". **IET Control Theory and Applications** Volume: 11 Issue: 17 Pages: 2964-2976 NOV 24 2017. DOI: 10.1049/iet-cta.2017.0227
33. Zhao, Tiebiao; Stark, Brandon; Chen, YangQuan; et al. "Challenges in Water Stress Quantification Using Small Unmanned Aerial System (sUAS): Lessons from a Growing Season of Almond". **Journal of Intelligent & Robotic Systems** Volume: 88 Issue: 2-4 Pages: 721-735 DEC 2017. DOI: 10.1007/s10846-017-0513-x
34. Juan Chen; Zhuang, Bo; Chen, YangQuan; et al. "Diffusion control for a tempered anomalous diffusion system using fractional-order PI controllers." **ISA Transactions** 2017-May-09. DOI: 10.1016/j.isatra.2017.04.005
35. Ge, F. D.; Chen, Y. Q. "Extended Luenberger-type observer for a class of semilinear time fractional diffusion systems". **Chaos Solitons & Fractals** Volume: 102 Pages: 229-235 2017. DOI: 10.1016/j.chaos.2017.05.011
36. Wang, Jianhong; Qiao, Liyan; Ye, Yongqiang; Chen, YangQuan. "Fractional Envelope Analysis for Rolling Element Bearing Weak Fault Feature Extraction". **IEEE-CAA Journal of Automatica Sinica** Volume: 4 Issue: 2 Pages: 353-360 APR 2017. DOI: 10.1109/JAS.2016.7510166
37. Zheng, W. J.; Luo, Y.; Wang, X. H.; et al. "Fractional order (PID mu)-D-lambda controller design for satisfying time and frequency domain specifications simultaneously". **ISA Transactions** Volume: 68 Pages: 212-222 2017. DOI: 10.1016/j.isatra.2017.02.016
38. Yin, C.; Huang, X. G.; Chen, Y. Q.; et al. "Fractional-order exponential switching technique to enhance sliding mode control". **Applied Mathematical Modelling** Volume: 44 Pages: 705-726 2017. DOI: 10.1016/j.apm.2017.02.034
39. Liu, Jianxin; Zhao, Tiebiao; Chen, YangQuan. "Maximum Power Point Tracking With Fractional Order High Pass Filter for Proton Exchange Membrane Fuel Cell". **IEEE-CAA Journal of Automatica Sinica** Volume: 4 Issue: 1 Pages: 70-79 JAN 2017. DOI: 10.1109/JAS.2017.7510328
40. Duan, Jun-Sheng; Chen, YangQuan. "Mechanical response and simulation for constitutive equations with distributed order derivatives". **International Journal of Modeling Simulation and Scientific Computing** Volume: 8 Issue: 4 DEC 2017. DOI: 10.1142/S1793962317500404
41. Yu, Jian; Cao, Junyi; Liao, Wei-Hsin; et al. "Multivariate Multiscale Symbolic Entropy Analysis of Human Gait Signals". **Entropy** Volume: 19 Issue: 10 OCT 2017. DOI: 10.3390/e19100557
42. Ge, Fudong; Chen, YangQuan; Kou, Chunhai. "Regional boundary controllability of time fractional diffusion processes". **IMA Journal of Mathematical Control and Information** Volume: 34 Issue: 3 Pages: 871-888 SEP 2017. DOI: 10.1093/imamci/dnw001
43. Ge, F. D.; Chen, Y. Q.; Kou, C. H. "Regional controllability analysis of fractional diffusion equations with Riemann-Liouville time fractional derivatives". **Automatica** Volume: 76 Pages: 193-199 2017. DOI: 10.1016/j.automatica.2016.10.018

44. Li, Yan; Chen, YangQuan; Podlubny, Igor. Reply to "Comments on Mittag-Leffler stability of fractional order nonlinear dynamic systems' [Automatica 45(8) (2009) 1965-1969]" **Automatica** Volume: 75 Pages: 330 JAN 2017. DOI: 10.1016/j.automatica.2016.09.026
45. Hogan, S. D.; Kelly, M.; Stark, B.; Chen, YangQuan. "Unmanned aerial systems for agriculture and natural resources". **California Agriculture** Volume: 71 Issue: 1 Pages: 5-7 2017. http://calag.ucanr.edu/Archive/?article=ca.2017a0002

2016

46. Kecai Cao; Yangquan Chen; Stuart, D. "A fractional micro-macro model for crowds of pedestrians based on fractional mean field games". **IEEE/CAA Journal of Automatica Sinica** Volume: 3 Issue: 3 Pages: 261-70 10 July 2016. DOI: 10.1109/JAS.2016.7508801
47. Sharifi, Mohammad Sadra; Stuart, Daniel; Christensen, Keith; et al. "Analysis of Walking Speeds Involving Individuals with Disabilities in Different Indoor Walking Environments". **Journal of Urban Planning and Development** Volume: 142 Issue: 1 MAR 2016. DOI: 10.1061/(ASCE)UP.1943-5444.0000288
48. Zeng, Caibin; Yang, Qigui; Chen, YangQuan. "Bifurcation dynamics of the tempered fractional Langevin equation". **Chaos** Volume: 26 Issue: 8 AUG 2016. DOI: 10.1063/1.4959533
49. Ge, F. D.; Chen, Y. Q.; Kou, C. H. "Boundary feedback stabilisation for the time fractional-order anomalous diffusion system". **IET Control Theory and Applications** Volume: 10 Issue: 11 Pages: 1250-1257 2016. DOI: 10.1049/iet-cta.2015.0882 http://digital-library.theiet.org/content/journals/10.1049/iet-cta.2015.0882
50. Yang, Qi; Chen, Dali; Zhao, Tiebiao; Chen, YangQuan. "FRACTIONAL CALCULUS IN IMAGE PROCESSING: A REVIEW". **Fractional Calculus and Applied Analysis** Volume: 19 Issue: 5 Pages: 1222-1249 OCT 2016. DOI: 10.1515/fca-2016-0063
51. Malek, H.; Dadras, S.; Chen, Y. Q. "Fractional order equivalent series resistance modelling of electrolytic capacitor and fractional order failure prediction with application to predictive maintenance". **IET Power Electronics** Volume: 9 Issue: 8 Pages: 1608-1613 2016. DOI: 10.1049/iet-pel.2015.0636
52. Malek, H.; Chen, Y. Q. "Fractional Order Extremum Seeking Control: Performance and Stability Analysis". **IEEE/ASME Transactions on Mechatronics** Volume: 21 Issue: 3 Pages: 1620-1628 2016. DOI: 10.1109/tmech.2016.2517621
53. Huang, Jiacai; Chen, YangQuan; Li, Haibin; et al. "Fractional Order Modeling of Human Operator Behavior with Second Order Controlled Plant and Experiment Research". **IEEE/CAA Journal of Automatica Sinica** Volume: 3 Issue: 3 Pages: 271-280 JUL 2016. https://ieeexplore.ieee.org/document/7508802/
54. Chen, Hua; Chen, YangQuan. "Fractional-order Generalized Principle of Self-support (FOGPSS) in Control System Design". **IEEE/CAA Journal of Automatica Sinica** Volume: 3 Issue: 4 Pages: 430-441 OCT 2016. https://ieeexplore.ieee.org/document/7589490/
55. Yu, Wei; Luo, Ying; Chen, YangQuan; et al. "Frequency domain modelling and control of fractional-order system for permanent magnet synchronous motor velocity servo system". **IET Control Theory and Applications** Volume: 10 Issue: 2 Pages: 136-143 JAN 19 2016. DOI: 10.1049/iet-cta.2014.1296
56. Wang, Cuihong; Li, Huanhuan; Chen, YangQuan. "H-infinity Output Feedback Control of Linear Time-invariant Fractional-order Systems over Finite Frequency Range". **IEEE/CAA Journal of Automatica Sinica** Volume: 3 Issue: 3 Pages: 304-310 JUL 2016. https://ieeexplore.ieee.org/document/7508806/
57. Ge, Fudong; Chen, YangQuan; Kou, Chunhai; et al. "ON THE REGIONAL CONTROLLABILITY OF THE SUB-DIFFUSION PROCESS WITH CAPUTO FRACTIONAL DERIVATIVE". **Fractional Calculus and Applied Analysis** Volume: 19 Issue: 5 Pages: 1262-1281 OCT 2016. DOI: 10.1515/fca-2016-0065

58. Ge, F. D.; Chen, Y. Q.; Kou, C. H. "On the regional gradient observability of time fractional diffusion processes". **Automatica** Volume: 74 Pages: 1-9 2016. DOI: 10.1016/j.automatica.2016.07.023
59. Ge, Fudong; Chen, YangQuan; Kou, Chunhai. "Regional gradient controllability of sub-diffusion processes". **Journal of Mathematical Analysis and Applications** Volume: 440 Issue: 2 Pages: 865-884 AUG 15 2016. DOI: 10.1016/j.jmaa.2016.03.051 http://dx.doi.org/10.1016/j.jmaa.2016.03.051

2015:

60. C Zeng, YQ Chen. Global Padé approximations of the generalized Mittag-Leffler function and its inverse. **Fractional Calculus and Applied Analysis**, Dec. 2015, vol. 18, no. 6, pp. 1492-1506. http://dx.doi.org/10.1515/fca-2015-0086
61. Fudong Ge; YangQuan Chen; Chunhai Kou. "Cyber-physical systems as general distributed parameter systems: three types of fractional order models and emerging research opportunities" **IEEE/CAA Journal of Automatica Sinica** (Volume:2 , Issue: 4), Oct. 2015. Page(s):353- 357. http://ieeexplore.ieee.org/xpl/articleDetails.jsp?arnumber=7296529&
62. Yanan Qiu, Xiaogeng Liang, Zhiyong Dai, Jianxiong Cao, YangQuan Chen. "Backstepping Dynamic Surface Control for Nonlinear Systems with Time-varying Output Constraints." **IET Control Theory and Applications**. Volume 9, Issue 15, October 2015, p. 2312 – 2319. http://dx.doi.org/10.1049/iet-cta.2015.0019
63. C Yin, Y Cheng, YQ Chen, B Stark, S Zhong. "Adaptive fractional-order switching-type control method design for 3D fractional-order nonlinear systems" **Nonlinear Dynamics,** Oct. 2015. Vol. 82, issue 1-2, pages 39-52. http://link.springer.com/article/10.1007/s11071-015-2136-8
64. Kecai Cao; YangQuan Chen; Dan Stuart; Dong Yue. "Cyber-physical modeling and control of crowd of pedestrians: a review and new framework" **IEEE/CAA Journal of Automatica Sinica.** Year: July 2015, Volume: 2, Issue: 3, Pages: 334 – 344. http://ieeexplore.ieee.org/xpl/articleDetails.jsp?arnumber=7152668
65. Mohammad Sadra Sharifi, Daniel Stuart, Keith Christensen, Anthony Chen, Yong Seog Kim, YangQuan Chen. "Analysis of Walking Speeds Involving Individuals with Disabilities in Different Indoor Walking Environments." **J. Urban Plann. Dev.**, Volume 142, Issue 1 (March 2016) http://www.doi.org/10.1061/(ASCE)UP.1943-5444.0000288, 04015010.
66. Jianxiong Cao, Changpin Li, YangQuan Chen. "High-order approximation to Caputo derivatives and Caputo-type advection-diffusion equations (ii)" **Fractional Calculus and Applied Analysis.** 2015, 18(3): 735-761. http://dx.doi.org/10.1515/fca-2015-0045
67. Yousef Naranjani, Yousef Sardahi, YangQuan Chen, Jian-Qiao Sun. "Multi-objective optimization of distributed-order fractional damping" **Communications in Nonlinear Science and Numerical Simulation**, Volume 24, Issues 1–3, July 2015, Pages 159-168. http://www.sciencedirect.com/science/article/pii/S1007570414005723
68. Hengfei Ding, Changpin Li, YangQuan Chen. "High-order algorithms for Riesz derivative and their applications (II)" **Journal of Computational Physics**, Volume 293, 15 July 2015, Pages 218-237. http://www.sciencedirect.com/science/article/pii/S0021999114004148
69. J Cao, A Syta, G Litak, S Zhou, DJ Inman, Y Chen. "Regular and chaotic vibration in a piezoelectric energy harvester with fractional damping" **The European Physical Journal Plus** 130 (6), 1-11 (June 02, 2015) http://link.springer.com/article/10.1140/epjp/i2015-15103-8
70. J Cao, S Zhou, DJ Inman, Y Chen. "Chaos in the fractionally damped broadband piezoelectric energy generator" **Nonlinear Dynamics**. June 2015, Volume 80, Issue 4, pp 1705-1719 http://link.springer.com/article/10.1007/s11071-014-1320-6. First online: 09 March 2014
71. WJ Zheng, Y Luo, YQ Chen, YG Pi. "Fractional-order modeling of permanent magnet synchronous motor speed servo system" **Journal of Vibration and Control,** May 26, 2015, doi: http://www.doi.org/10.1177/1077546315586504
72. T Lv, Y Chen, M Ko. "An Online Heart Rate Variability Analysis Method Based on Sliding Window

Hurst Series" **Journal of Fiber Bioengineering and Informatics**. 8(2), 391-400. http://www.doi.org/10.3993/jfbim00130

73. Ying Luo, Tao Zhang, Li Zhou, YangQuan Chen. "Pre-filtering and head-dependent adaptive feed-forward compensation for translation vibration in hard-disc-drive." **Mechatronics**, In Press, Corrected Proof, Available online 6 March 2015 http://www.sciencedirect.com/science/article/pii/S0957415815000124
74. D Chen, YQ Chen, D Xue. "Fractional-order total variation image denoising based on proximity algorithm." **Applied Mathematics and Computation** 257, 537-545 http://www.sciencedirect.com/science/article/pii/S0096300315000260 (April 2015)
75. Y Xu, YP Tian, YQ Chen. "Output consensus for multiple non-holonomic systems under directed communication topology." **International Journal of Systems Science** 46 (3), 451-463. March 2015. DOI: (online April 2013) http://dx.doi.org/10.1080/00207721.2013.784821
76. C Yin, B Stark, YQ Chen, S Zhong, E Lau. "Fractional-order adaptive minimum energy cognitive lighting control strategy for the hybrid lighting system." **Energy and Buildings** 87, 176-184 http://www.sciencedirect.com/science/article/pii/S0378778814009670 (Jan. 2015)

2014:

77. C Yin, YQ Chen, S Zhong. "Fractional-order sliding mode based extremum seeking control of a class of nonlinear systems." **Automatica** 50 (12), 3173-3181 http://www.sciencedirect.com/science/article/pii/S0005109814004087 (Dec. 2014)
78. Z Bai, YQ Chen, H Lian, S Sun. "On the existence of blow up solutions for a class of fractional differential equations." **Fractional Calculus and Applied Analysis** 17 (4), 1175-1187 http://link.springer.com/article/10.2478/s13540-014-0220-2 (Dec. 2014)
79. SC Lee, Y Li, YQ Chen, HS Ahn. "H∞ and Sliding Mode Observers for Linear Time-Invariant Fractional-Order Dynamic Systems With Initial Memory Effect." **Journal of Dynamic Systems, Measurement, and Control** 136 (5), 2014. doi: http://dx.doi.org/10.1115/1.4027289 (Sept. 2014)
80. Z Bai, S Sun, YQ Chen. "The Existence and Uniqueness of a Class of Fractional Differential Equations". **Abstract and Applied Analysis.** Volume 2014 (2014), Article ID 486040, 6 pages. http://dx.doi.org/10.1155/2014/486040
81. NV Hoffer, C Coopmans, AM Jensen, YQ Chen. "A survey and categorization of small low-cost unmanned aerial vehicle system identification". **Journal of Intelligent & Robotic Systems** 74 (1-2), 129-145 http://link.springer.com/article/10.1007/s10846-013-9931-6
82. AM Jensen, DK Geller, YQ Chen. "Monte Carlo Simulation Analysis of Tagged Fish Radio Tracking Performance by Swarming Unmanned Aerial Vehicles in Fractional Order Potential Fields." **Journal of Intelligent & Robotic Systems** 74 (1-2), 287-307 http://link.springer.com/article/10.1007/s10846-013-9949-9
83. J Han, YQ Chen. "Multiple UAV formations for cooperative source seeking and contour mapping of a radiative signal field." **Journal of Intelligent & Robotic Systems** 74 (1-2), 323-332 http://link.springer.com/article/10.1007/s10846-013-9897-4
84. J Cao, C Li, YQ Chen. "Compact difference method for solving the fractional reaction–subdiffusion equation with Neumann boundary value condition." **International Journal of Computer Mathematics**, Volume 92, Issue 1, 2015. DOI: http://dx.doi.org/10.1080/00207160.2014.887702 (April 2014 online)
85. C Zeng, Q Yang, YQ Chen. "Lyapunov techniques for stochastic differential equations driven by fractional Brownian motion." **Abstract and Applied Analysis**. Volume 2014 (2014), Article ID 292653, 9 pages. http://dx.doi.org/10.1155/2014/292653
86. YD Ma, JG Lu, WD Chen, YQ Chen. "Robust stability bounds of uncertain fractional-order systems." **Fractional Calculus and Applied Analysis** 17 (1), 136-153. http://link.springer.com/article/10.2478/s13540-014-0159-3 (March 2014)
87. H Malek, YQ Chen. "BICO MPPT: A Faster Maximum Power Point Tracker and Its Application for Photovoltaic Panels." **International Journal of Photoenergy**. Volume 2014 (2014), Article ID 586503, 9 pages http://dx.doi.org/10.1155/2014/586503

88. J Cao, S Zhou, DJ Inman, Y Chen. "Chaos in the fractionally damped broadband piezoelectric energy generator." **Nonlinear Dynamics**, 1-15 http://link.springer.com/article/10.1007/s11071-014-1320-6 (March 2014)
89. Caibin Zeng, YangQuan Chen. "Optimal random search, fractional dynamics and fractional calculus." **Fractional Calculus and Applied Analysis**. June 2014, Volume 17, Issue 2, pp 321-332 http://www.degruyter.com/view/j/fca.2014.17.issue-2/s13540-014-0171-7/s13540-014-0171-7.xml?format=INT
90. J Han, L Di, C Coopmans, YQ Chen. "Pitch Loop Control of a VTOL UAV Using Fractional Order Controller." **Journal of Intelligent & Robotic Systems** 73 (1-4), 187-195 http://link.springer.com/article/10.1007/s10846-013-9912-9 (Jan. 2014)
91. C Coopmans, AM Jensen, YQ Chen. "Fractional-Order Complementary Filters for Small Unmanned Aerial System Navigation." **Journal of Intelligent & Robotic Systems** 73 (1-4), 429-453 http://link.springer.com/article/10.1007/s10846-013-9915-6 (Jan. 2014)

2013:

92. D Chen, YQ Chen, D Xue. "Three fractional-order TV-L2 models for image denoising". **Journal of Computational Information Systems**. Volume 9, Issue 12, 15 June 2013, Pages 4773-4780. DOI: http://dx.doi.org/10.12733/jcis6159
93. Chen, D.-L., Zheng, C.-R., Xue, D.-Y., Chen, Y.-Q. "Non-local fractional differential-based approach for image enhancement." **Research Journal of Applied Sciences, Engineering and Technology**. Volume 6, Issue 17, 2013, Pages 3244-3250. http://maxwellsci.com/print/rjaset/v6-3244-3250.pdf
94. D Chen, D Xue, YQ Chen. "A fractional differential-based approach for edge detection." **Journal of Computational Information Systems**. Volume 9, Issue 23, 1 December 2013, Pages 9515-9522. DOI: http://dx.doi.org/10.12733/jcis7819
95. D Chen, YQ Chen, D Xue. "Fractional-Order Total Variation Image Restoration Based on Primal-Dual Algorithm." **Abstract and Applied Analysis** 2013. Volume 2013 (2013), Article ID 585310, 10 pages http://dx.doi.org/10.1155/2013/585310
96. J Li, JG Lu, Y Chen. "Robust decentralized control of perturbed fractional-order linear interconnected systems." **Computers & Mathematics with Applications** 66 (5), 844-859. http://www.sciencedirect.com/science/article/pii/S0898122113004021
97. J Cao, S Xue, J Lin, Y Q Chen. "Nonlinear dynamic analysis of a cracked rotor-bearing system with fractional order damping". **Journal of Computational and Nonlinear Dynamics**. 8 (3), 031008. doi: http://dx.doi.org/10.1115/1.4023010

July 2012- July 2013:

98. Dali Chen, Shenshen Sun, Congrong Zhang, YangQuan Chen, Dingyu Xue. "Fractional-order TV-L2 model for image denoising." **Central European Journal of Physics**. May 2013. http://rd.springer.com/article/10.2478%2Fs11534-013-0241-1
99. Sun Hong-Guang; Sheng Hu; Chen Yang-Quan; Chen, Wen and Yu, Zhong-Bo. "A Dynamic-Order Fractional Dynamic System." **Chinese Physics Letters** Volume: 30 Issue: 4 Published: APR 2013. DOI: http://dx.doi.org/10.1088/0256-307X/30/4/046601
100. Li, Yan; Chen, YangQuan; Ahn, Hyo-Sung; Guohui Tian. "A Survey on Fractional-Order Iterative Learning Control." **Journal of Optimization Theory and Applications** Volume: 156 Issue: 1 Pages: 127-140 Published: JAN 2013. DOI: http://dx.doi.org/10.1007/s10957-012-0229-9
101. Zeng, Caibin; Chen, YangQuan; Yang, Qigui. "Almost sure and moment stability properties of fractional order Black-Scholes model." **Fractional Calculus and Applied Analysis** Volume: 16 Issue: 2 Pages: 317-331 Published: JUN 2013. DOI: http://dx.doi.org/10.2478/s13540-013-0020-0
102. Stark, Brandon; Coopmans, Calvin; Chen, YangQuan. "Concept of Operations for Personal Remote Sensing Unmanned Aerial Systems." **Journal of Intelligent & Robotic Systems** Volume: 69 Issue: 1-4 Pages: 5-20 Published: JAN 2013. DOI: http://dx.doi.org/10.1007/s10846-012-9710-9

103. Yin, Chun; Dadras, Sara; Zhong, Shou-ming; Chen, YangQuan. “Control of a novel class of fractional-order chaotic systems via adaptive sliding mode control approach.” **Applied Mathematical Modelling** Volume: 37 Issue: 4 Pages: 2469-2483 Published: FEB 15 2013. DOI: http://dx.doi.org/10.1016/j.apm.2012.06.002
104. Zhou, Fengyu; Zhao, Yang; Li, Yan; Chen, YangQuan. “Design, implementation and application of distributed order PI control.” **ISA Transactions** Volume: 52 Issue: 3 Pages: 429-437 Published: MAY 2013 DOI: http://dx.doi.org/10.1016/j.isatra.2012.12.004
105. Li, Zhuo; Hoffer, Nathan; Stark, Brandon; Chen, YangQuan. “Design, Modeling and Validation of a T-Tail Unmanned Aerial Vehicle.” **Journal of Intelligent & Robotic Systems** Volume: 69 Issue: 1-4 Pages: 91-107 Published: JAN 2013. DOI: http://dx.doi.org/10.1007/s10846-012-9726-1
106. Chen, Dali; Sheng, Hu; Chen, YangQuan; Xue, Dingyu. “Fractional-order variational optical flow model for motion estimation.” **Philosophical Transactions of the Royal Society a-Mathematical Physical and Engineering Sciences** Volume: 371 Issue: 1990 Published: MAY 13 2013. DOI: http://dx.doi.org/10.1098/rsta.2012.0148
107. Zhou, Shengxi; Cao, Junyi; Chen, YangQuan. “Genetic Algorithm-Based Identification of Fractional-Order Systems.” **Entropy** Volume: 15 Issue: 5 Pages: 1624-1642 Published: MAY 2013. DOI: http://dx.doi.org/10.3390/e15051624
108. Han, Jinlu; Xu, Yaojin; Di, Long; Chen, YangQuan. “Low-cost Multi-UAV Technologies for Contour Mapping of Nuclear Radiation Field.” **Journal of Intelligent & Robotic Systems** Volume: 70 Issue: 1-4 Pages: 401-410 Published: APR 2013. DOI: http://dx.doi.org/10.1007/s10846-012-9722-5
109. Podlubny, Igor; Skovranek, Tomas; Vinagre Jara, Blas M.; Ivo Petras; Viktor Verbitsky; and YangQuan Chen. “Matrix approach to discrete fractional calculus III: non-equidistant grids, variable step length and distributed orders.” **Philosophical Transactions of the Royal Society a-Mathematical Physical and Engineering Sciences** Volume: 371 Issue: 1990 Published: MAY 13 2013. DOI: http://dx.doi.org/10.1098/rsta.2012.0153
110. Guo, Peng; Zeng, Caibin; Li, Changpin; Chen, YangQuan. “Numerics for the fractional Langevin equation driven by the fractional Brownian motion.” **Fractional Calculus and Applied Analysis** Volume: 16 Issue: 1 Pages: 123-141 Published: MAR 2013. DOI: http://dx.doi.org/10.2478/s13540-013-0009-8
111. Jiao, Zhuang; Chen, YangQuan; Zhong, Yisheng. “Stability Analysis of Linear Time-Invariant Distributed-Order Systems.” **Asian Journal of Control**. Volume: 15 Issue: 3 Pages: 640-647 Published: MAY 2013. DOI: http://dx.doi.org/10.1002/asjc.578
112. Lu, Jun-Guo; Chen, YangQuan. “Stability and stabilization of fractional-order linear systems with convex polytopic uncertainties.” **Fractional Calculus and Applied Analysis** Volume: 16 Issue: 1 Pages: 142-157 Published: MAR 2013. DOI: http://dx.doi.org/10.2478/s13540-013-0010-2
113. Chen, Dali; Chen, YangQuan; Xue, Dingyu. “1-D and 2-D digital fractional-order Savitzky-Golay differentiator.” **Signal Image and Video Processing** Volume: 6 Issue: 3 Pages: 503-511 Published: SEP 2012. DOI: http://dx.doi.org/10.1007/s11760-012-0334-0
114. Lili Cao, Yan Li, Guohui Tian, Baodong Liu, YangQuan Chen. “Time domain analysis of the fractional order weighted distributed parameter Maxwell model.” **Computers & Mathematics with Applications**. Available online 2 January 2013. http://dx.doi.org/10.1016/j.camwa.2012.12.002
115. Zhuang Jiao, Yang Quan Chen. “Stability of fractional-order linear time-invariant systems with multiple noncommensurate orders.” **Computers & Mathematics with Applications**, *Volume 64, Issue 10, November 2012, Pages 3053-3058 http://dx.doi.org/10.1016/j.camwa.2011.10.014*
116. Wen Chen, Yang-Quan Chen, Chih-Ping Yeh. “Robust iterative learning control via continuous sliding-mode technique with validation on an SRV02 rotary plant.” **Mechatronics**, *Volume 22, Issue 5, August 2012, Pages 588-593 http://dx.doi.org/10.1016/j.mechatronics.2011.12.005*
117. Inés Tejado, S. Hassan HosseinNia, Blas M. Vinagre, YangQuan Chen. “Efficient control of a SmartWheel via Internet with compensation of variable delays.” **Mechatronics**, *Available online 21 May 2013 http://dx.doi.org/10.1016/j.mechatronics.2013.04.007*
118. Ying Luo, Tao Zhang, BongJin Lee, Changik Kang, YangQuan Chen. “Disturbance observer design with

Bode's ideal cut-off filter in hard-disc-drive servo system." **Mechatronics**, *Available online 28 March 2013 http://dx.doi.org/10.1016/j.mechatronics.2013.02.007*

119. Jun-Guo Lu, Yangquan Chen, Weidong Chen. "Robust asymptotical stability of fractional-order linear systems with structured perturbations." **Computers & Mathematics with Applications,** *Available online 27 March 2013 http://dx.doi.org/10.1016/j.camwa.2013.03.001*

120. Hadi Malek, Ying Luo, YangQuan Chen. "Identification and tuning fractional order proportional integral controllers for time delayed systems with a fractional pole." **Mechatronics**, *Available online 19 March 2013 http://dx.doi.org/10.1016/j.mechatronics.2013.02.005*

121. Yin Luo; Zhang, T. ; Lee, B. ; Kang, C. ; Chen, Y. Q. "Fractional-Order Proportional Derivative Controller Synthesis and Implementation for Hard-Disk-Drive Servo System." **IEEE Transactions on Control Systems Technology**, http://dx.doi.org/10.1109/TCST.2013.2239111 Date of Publication: 12 February 2013. vol.22, no.1, pp.281-289, Jan. 2014

122. Yin, Deshun; Wu, Hao; Cheng, Chen; Chen, YangQuan. "Fractional order constitutive model of geomaterials under thecondition of triaxial test." International Journal For Numerical And Analytical Methods In Geomechanics. Volume: 37 Issue: 8 Pages: 961-972 DOI: http://dx.doi.org/10.1002/nag.2139 Published: JUN 10 2013.

123. Huang, Jiacai; Li, Hongsheng; Chen, YangQuan; Xu, Qinghong. "Robust Position Control of PMSM Using Fractional-Order Sliding Mode Controller." **Abstract and Applied Analysis**. Article Number: 512703 DOI: http://dx.doi.org/10.1155/2012/512703 Published: 2012

124. X. Ye, X. Xia, J. Zhang, Y. Chen. "Effects of trends and seasonalities on robustness of the Hurst parameter estimators." **IET Signal Processing**, Volume: 6 , Issue: 9, Page(s): 849 – 856. Date of Current Version: 10 January 2013. doi: http://dx.doi.org/10.1049/iet-spr.2012.0050

125. Ying Luo* and YangQuan Chen, "Stabilizing and Robust FOPI Controller Synthesis for First Order Plus Time Delay Systems." **Automatica**. Vol. 48, no. 9, pages: 2159–2167. Published Sept. 2012. http://dx.doi.org/doi:10.1016/j.automatica.2012.05.072

126. Ming Li, YangQuan Chen, Jia-Yue Li, and Wei Zhao. "Hölder Scales of Sea Level." **Mathematical Problems in Engineering** Volume 2012 (2012), Article ID 863707, 22 pages http://dx.doi.org/10.1155/2012/863707

127. Ying Luo* and YangQuan Chen. "Fractional Order Adaptive Feed-Forward Cancellation for Disturbances." **Asian Journal of Control**. Special Issue: Advances in Fractional Order Control and Estimation. Volume 15, Issue 3, pages 751–763, May 2013 DOI: http://dx.doi.org/10.1002/asjc.601

128. Caibin Zeng, YangQuan Chen and Qigui Yang. "The fBm-driven Ornstein-Uhlenbeck process: Probability density function and anomalous diffusion," **Fractional Calculus and Applied Analysis**. Volume 15, Number 3 (2012), 479-492, DOI: http://dx.doi.org/10.2478/s13540-012-0034-z

129. Chen, D., Xue, D., Chen, Y. "Fractional differential-based approach for CT image enhancement." **Advanced Materials Research** 634-638 (1), pp. 3962-3965 DOI: http://dx.doi.org/10.4028/www.scientific.net/AMR.634-638.3962

130. Chen, D., Xue, D., Chen, Y. "Nonlinear diffusion model for fabric image denoising." 2013 **Advanced Materials Research** 627, pp. 484-488. DOI: http://dx.doi.org/10.4028/www.scientific.net/AMR.627.484

131. Cao, K.-C., Jiang, B., Chen, Y.Q. "Cooperative control design for non-holonomic chained-form systems." **International Journal of Systems Science**, 2013, (online published, DOI: http://dx.doi.org/10.1080/00207721.2013.809615)

Before July 1, 2012:

132. Hu Sheng+, YangQuan Chen* and Tianshuang Qiu. "Tracking Performance and Robustness Analysis of Hurst Estimators for Multifractional Processes." **IET Signal Processing**. Vol 6., no. 3, pp. 213–226, May 2012; doi: http://dx.doi.org/10.1049/iet-spr.2010.0170

133. Li, Y., Chen, Y.-Q., Ahn, H.-S. "Convergence analysis of fractional-order iterative learning control." Aug. 2012. **Kongzhi Lilun Yu Yingyong/Control Theory and Applications** 29 (8), pp. 1031-1037.

134. Xue, S., Cao, J., Lin, J., Chen, Y. "Influences of fractional order damping on nonlinear dynamics of

cracked rotor." Jan. 2012. **Hsi-An Chiao Tung Ta Hsueh/Journal of Xi'an Jiaotong University** 46 (1) , pp. 76-80.

135. Di, Long; Fromm, Tobias; Chen, YangQuan. "A Data Fusion System for Attitude Estimation of Low-cost Miniature UAVs," **Journal of Intelligent & Robotic Systems**, Volume: 65 Issue: 1-4 Pages: 621-635 JAN 2012; DOI: http://dx.doi.org/10.1007/s10846-011-9569-1
136. Li, Yan; Chen, YangQuan. "A Fractional Order Universal High Gain Adaptive Stabilizer," **International Journal of Bifurcation and Chaos,** Volume: 22 Issue: 4; APR 2012; DOI: http://dx.doi.org/10.1142/S0218127412500812
137. Ahn, Hyo-Sung; Kim, Young-Soo; Chen, YangQuan. "An Interval Kalman Filtering With Minimal Conservatism," **Applied Mathematics and Computation**, Volume: 218 Issue: 18 Pages: 9563-9570 Published: MAY 15 2012, DOI: http://dx.doi.org/10.1016/j.amc.2012.02.050
138. Tejado, Ines; Hassan Hosseinnia, S.; Vinagre, Blas M.; Chen, YangQuan. "Dealing With Fractional Dynamics of IP Network Delays," **International Journal of Bifurcation and Chaos**, Volume: 22 Issue: 4, APR 2012, DOI: http://dx.doi.org/10.1142/S0218127412500897
139. Tejado, Ines; Vinagre, Blas M.; Romero, Miguel; Chen, YangQuan. "Experiences On An Internet Link Characterization And Networked Control Of A Smart Wheel." **International Journal of Bifurcation and Chaos**, Volume: 22 Issue: 4, APR 2012, DOI: http://dx.doi.org/10.1142/S0218127412300157
140. Sun, Hongguang; Chen, Wen; Li, Changpin; Chen, YangQuan. "Finite Difference Schemes For Variable-Order Time Fractional Diffusion Equation," **International Journal of Bifurcation and Chaos** Volume: 22 Issue: 4 Published: APR 2012, DOI: http://dx.doi.org/10.1142/S021812741250085X
141. Olivier, L. E.; Craig, I. K.; Chen, Y. Q. "Fractional order and BICO disturbance observers for a run-of-mine ore milling circuit." **Journal of Process Control** Volume: 22 Issue: 1 Pages: 3-10 Published: JAN 2012 DOI: http://dx.doi.org/10.1016/j.jprocont.2011.11.001
142. Luo, Ying; Chen, Yang Quan; Ahn, Hyo-Sung; Pi, Youguo. "Fractional Order Periodic Adaptive Learning Compensation for State-Dependent Periodic Disturbance." **IEEE Transactions on Control Systems Technology** Volume: 20 Issue: 2 Pages: 465-472 Published: MAR 2012 DOI: http://dx.doi.org/10.1109/TCST.2011.2117426
143. Jiao, Zhuang; Chen, YangQuan. "Impulse Response Of A Generalized Fractional Second Order Filter," Fractional Calculus and Applied Analysis Volume: 15 Issue: 1 Pages: 97-116 Published: MAR 2012 DOI: http://dx.doi.org/10.2478/s13540-012-0007-2
144. Sheng, Hu; Chen, Yangquan; Qiu, Tianshuang. "Multifractional Property Analysis Of Human Sleep EEG Signals." **International Journal of Bifurcation and Chaos** Volume: 22 Issue: 4 Published: APR 2012 DOI: http://dx.doi.org/10.1142/S0218127412500800
145. Zeng, Caibin; Yang, Qigui; Chen, Yang Quan. "Solving nonlinear stochastic differential equations with fractional Brownian motion using reducibility approach." **Nonlinear Dynamics** Volume: 67 Issue: 4 Pages: 2719-2726 Published: MAR 2012 DOI: http://dx.doi.org/10.1007/s11071-011-0183-3

2011

146. Dali Chen, YangQuan Chen* and Dingyu Xue. "Digital Fractional Order Savitzky-Golay Differentiator." **IEEE Trans. Circuit and Systems II,** Volume: 58 Issue: 11 Pages: 758-762 Published: NOV 2011, DOI: http://dx.doi.org/10.1109/TCSII.2011.2168022
147. Ying Luo*, YangQuan Chen, Youguo Pi. "Experimental study of fractional order proportional derivative controller synthesis for fractional order systems." **Mechatronics**, *Volume 21, Issue 1, February 2011, Pages 204-214 http://www.sciencedirect.com/science/article/pii/S0957415810001844*
148. Ying Luo*, YangQuan Chen, Youguo Pi. "Fractional order ultra low-speed position servo: Improved performance via describing function analysis." **ISA Transactions**, *Volume 50, Issue 1, January 2011, Pages 53-60* DOI: http://dx.doi.org/10.1016/j.isatra.2010.09.003
149. Ying Luo*, YangQuan Chen, Hyo-Sung Ahn, YouGuo Pi, "Dynamic high order periodic adaptive learning compensator for Cogging effect in permanent magnet synchronous motor servo system." **IET Control Theory & Applications**, Vol. 5, No. 5, pp. 669-680, 2011. doi: http://dx.doi.org/10.1049/iet-cta.2009.0544

150. Ying Luo*, YangQuan Chen, YouGuo Pi, Concepción A. Monje, Blas M. Vinagre. "Optimized fractional order conditional integrator." **Journal of Process Control**, *Volume 21, Issue 6, July 2011, Pages 960-966 http://www.sciencedirect.com/science/article/pii/S095915241100028X*
151. Ying Luo*, Haiyang Chao+, Di Long+ and YangQuan Chen. "Lateral Channel Fractional Order [PI]^\alpha Control of A Small Flying-Wing UAV: Controller Design and Flight Tests." **IET Control Theory and Applications.** (accepted on 6/2/2011) doi: http://dx.doi.org/10.1049/iet-cta.2010.0314
152. Hu Sheng+, YangQuan Chen* and Tianshuang Qiu. "Heavy-Tailed Distribution And Local Long Memory In Time Series Of Molecular Motion On The Cell Membrane**." Fluctuation and Noise Letters,** Vol. 10, No. 1 (2011) 93–119. DOI: http://dx.doi.org/10.1142/S0219477511000429
153. Hu Sheng+, YangQuan Chen* and Tianshuang Qiu. "On the Robustness of Hurst Estimators." **IET Signal Processing**, 2011, Volume: 5 , Issue: 2 Page(s): 209 – 225, http://dx.doi.org/10.1049/iet-spr.2009.0241
154. Hu Sheng+, Hongguang Sun+, YangQuan Chen*, TianShuang Qiu, "Synthesis of multifractional Gaussian noises based on variable-order fractional operators." **Signal Processing**, *Volume 91, Issue 7, July 2011, Pages 1645-1650 http://www.sciencedirect.com/science/article/pii/S0165168411000259*
155. Hu Sheng+, Yan Li, YangQuan Chen*. "Application of numerical inverse Laplace transform algorithms in fractional calculus." **Journal of the Franklin Institute**, *Volume 348, Issue 2, March 2011, Pages 315-330 http://www.sciencedirect.com/science/article/pii/S0016003210002711*
156. Hu Sheng+, YangQuan Chen*, "FARIMA with stable innovations model of Great Salt Lake elevation time series." **Signal Processing**, *Volume 91, Issue 3, March 2011, Pages 553-561 http://www.sciencedirect.com/science/article/pii/S016516841000040X*
157. Yan Li*, YangQuan Chen, Hyo-Sung Ahn, "Fractional-order iterative learning control for fractional-order linear systems," **Asian Journal of Control** (Special issue on iterative learning control), Vol. 13 pp. 54-63, 2011 DOI: http://dx.doi.org/10.1002/asjc.253
158. Yan Li, Hu Sheng+, YangQuan Chen*. "Analytical impulse response of a fractional second order filter and its impulse response invariant discretization". **Signal Processing**, Volume 91, Issue 3, March 2011, Pages 498-507 http://www.sciencedirect.com/science/article/pii/S0165168410000320
159. Yan Li, Hu Sheng+, Yang Quan Chen*. "On distributed order integrator/differentiator." **Signal Processing,** Volume 91, Issue 5, May 2011, Pages 1079-1084 http://www.sciencedirect.com/science/article/pii/S0165168410003804
160. Changpin Li*, Zhengang Zhao+, YangQuan Chen. "Numerical approximation of nonlinear fractional differential equations with subdiffusion and superdiffusion." **Computers & Mathematics with Applications,** Volume 62, Issue 3, August 2011, Pages 855-875 http://www.sciencedirect.com/science/article/pii/S0898122111001441
161. HongGuang Sun+, YangQuan Chen*, Wen Chen. "Random-order fractional differential equation models." **Signal Processing**, Volume 91, Issue 3, March 2011, Pages 525-530 http://www.sciencedirect.com/science/article/pii/S0165168410000447
162. Zhuang Jiao+, Yang Quan Chen*, "Stability of fractional-order linear time-invariant systems with multiple noncommensurate orders." **Computers & Mathematics with Applications**, Volume 64, Issue 10, November 2012, Pages 3053–3058 http://www.sciencedirect.com/science/article/pii/S0898122111008789
163. Zhuang Jiao+ and YangQuan Chen*. "Stability analysis of fractional-order systems with double noncommensurate orders for matrix case." **Fract. Calc. Appl. Anal.,** Vol. 14, No 3 (2011), pp. 436–453; DOI: 10.2478/s13540-011-0027-3 http://www.springerlink.com/content/1311-0454/14/3/
164. Wei Sun*+, Yan Li, Changpin Li and YangQuan Chen. "Convergence speed of a fractional order consensus algorithm over undirected scale-free networks." **Asian Journal of Control**. Article first published online : 9 MAY 2011, DOI: http://dx.doi.org/10.1002/asjc.390
165. Yingtao Zhang*+, H. D. Cheng, YangQuan Chen and Jianhua Huang. "A novel noise removal method based on fractional anisotropic diffusion and subpixel approach." **New Mathematics and Natural Computation** http://www.worldscinet.com/nmnc/ Vol. 7, No. 1 (2011) 173-185. DOI: http://dx.doi.org/10.1142/S1793005711001871

166. Yongshun Jin+, YangQuan Chen*, Dingyu Xue. “The time-constant robustness analysis of a fractional order [proportional derivative] controller.” **IET Control Theory & Applications**. http://dx.doi.org/10.1049/iet-cta.2009.0543 vol. 5, no. 1, 2011, pp. 164 – 172.
167. Caibin Zeng+, Qigui Yang and YangQuan Chen*. “Solving nonlinear stochastic differential equations with fractional Brownian motion using reducibility approach.” Nonlinear Dynamics. DOI http://dx.doi.org/10.1007/s11071-011-0183-3. (online published 9/1/2011)
168. H. Sheng+, H.G. Sun+, C. Coopmans+, Y.Q. Chen* and G.W. Bohannan. “A Physical experimental study of variable-order fractional integrator and differentiator.” p. 93, Published online: 4 April 2011 DOI: http://dx.doi.org/10.1140/epjst/e2011-01384-4 **The European Physical Journal Special Topics**. Vol. 193 (March I 2011). Perspectives on Fractional Dynamics and Control
169. H.G. Sun*+, W. Chen, H. Wei and Y.Q. Chen. “A comparative study of constant-order and variable-order fractional models in characterizing memory property of systems.” p. 185, Published online: 4 April 2011, DOI: http://dx.doi.org/10.1140/epjst/e2011-01390-6 **The European Physical Journal Special Topics** Vol. 193 (March 2011). Perspectives on Fractional Dynamics and Control.
170. Changpin Li*, Deliang Qian+, and YangQuan Chen. “On Riemann-Liouville and Caputo Derivatives,” **Discrete Dynamics in Nature and Society**, Volume 2011 (2011), Article ID 562494, 15 pages; doi: http://dx.doi.org/10.1155/2011/562494
171. Fengrong Zhang+, Changpin Li*, and YangQuan Chen. “Asymptotical Stability of Nonlinear Fractional Differential System with Caputo Derivative,” **International Journal of Differential Equations**, Volume 2011 (2011), Article ID 635165, 12 pages. doi: http://dx.doi.org/10.1155/2011/635165
172. LU, JG; CHEN, YQ. “Robust Stability and Stabilization of Fractional-Order Interval Systems with the Fractional Order alpha: The 0 < alpha < 1 Case” **IEEE Transactions on Automatic Control** Volume: 55 Issue: 1 Pages: 152-158 Published: 2010; DOI: http://dx.doi.org/10.1109/TAC.2009.2033738
173. LI, HS; LUO, Y; CHEN, YQ. “A Fractional Order Proportional and Derivative (FOPD) Motion Controller: Tuning Rule and Experiments”. **IEEE Transactions on Control Systems Technology**. Volume: 18 Issue: 2 Pages: 516-520 Published: 2010; DOI: http://dx.doi.org/10.1109/TCST.2009.2019120
174. Ying Luo+*, YangQuan Chen and YouGuo Pi. “Cogging effect minimization in PMSM position servo system using dual high-order periodic adaptive learning compensation”. **ISA Transactions**. doi: http://dx.doi.org/10.1016/j.isatra.2010.05.003 Volume 49, Issue 4, October 2010, Pages 479-488
175. Ying Luo+*, Yang Quan Chen, Chun Yang Wang+, You Guo Pi. “Tuning fractional order proportional integral controllers for fractional order systems.” **Journal of Process Control**, Volume 20, Issue 7, August 2010, Pages 823-831. doi: http://dx.doi.org/10.1016/j.jprocont.2010.04.011
176. Haiyang Chao+, Ying Luo+, Long Di+, YangQuan Chen*. “Roll-Channel Fractional Order Controller Design for a Small Fixed-Wing Unmanned Aerial Vehicle.” IFAC J. **Control Engineering Practice**, Volume 18, Issue 7, July 2010, Pages 761-772. doi: http://dx.doi.org/10.1016/j.conengprac.2010.02.003
177. Ying Luo+, YangQuan Chen*, Hyo-Sung Ahn, YouGuo Pi. “Fractional order robust control for cogging effect compensation in PMSM position servo systems: Stability analysis and experiments.” **Control Engineering Practice**, Volume 18, Issue 9, September 2010, Pages 1022-1036. doi: http://dx.doi.org/10.1016/j.conengprac.2010.05.005
178. CAO, YC; LI, Y; REN, W; CHEN, YQ. “Distributed Coordination of Networked Fractional-Order Systems” **IEEE Transactions on Systems Man and Cybernetics Part B-Cybernetics**. Volume: 40 Issue: 2 Pages: 362-370 Published: 2010; DOI: http://dx.doi.org/10.1109/TSMCB.2009.2024647
179. AHN, HS; CHEN, YQ. “Periodic adaptive learning compensation of state-dependent disturbance.” **IET Control Theory and Applications** Volume: 4 Issue: 4 Pages: 529-538 Published: 2010. DOI: http://dx.doi.org/10.1049/iet-cta.2008.0417
180. HaiYang Chao+*, YongCan Cao+, and YangQuan Chen. “Autopilots for Small Unmanned Aerial Vehicles: A Survey.” **International Journal of Control, Automation, and Systems** (2010) 8(1):36-44. DOI http://dx.doi.org/10.1007/s12555-010-0105-z
181. Hongguang Sun*+, Wen Chen, Changpin Li, YangQuan Chen. “Fractional differential models for

anomalous diffusion." **Physica A: Statistical Mechanics and its Applications**, Volume 389, Issue 14, 15 July 2010, Pages 2719-2724. http://dx.doi.org/doi:10.1016/j.physa.2010.02.030

182. Sun, HG; Chen, W; Sheng, H; Chen, YQ. "On mean square displacement behaviors of anomalous diffusions with variable and random orders." **Physics Letters A** Volume: 374 Issue: 7 Pages: 906-910 Published: 2010; DOI: http://dx.doi.org/10.1016/j.physleta.2009.12.021
183. Changpin Li*+, Ziqing Gong, Deliang Qian and YangQuan Chen. "On the bound of the Lyapunov exponents for fractional differential systems." **Chaos: An Interdisciplinary Journal of Nonlinear Science**. doi:10.1063/1.3314277. vol. 20, issue 1. Pages: http://dx.doi.org/013127-1 to 013127-6.
184. Christophe Tricaud+* and YangQuan Chen. "Time-Optimal Control of Systems with Fractional Dynamics." **International Journal of Differential Equations**, *Volume 2010 (2010), Article ID 461048, 16 pages, doi:10.1155/2010/461048* http://www.hindawi.com/journals/ijde/2010/461048.html
185. Christophe Tricaud+* and YangQuan Chen. "An approximate method for numerically solving fractional order optimal control problems of general form." **Computers and Mathematics with Applications** 59 (2010) 1644-1655 doi: http://dx.doi.org/10.1016/j.camwa.2009.08.006
186. Li, Y; Chen, YQ; Podlubny, I. "Stability of fractional-order nonlinear dynamic systems: Lyapunov direct method and generalized Mittag-Leffler stability." **Computers & Mathematics with Applications** Volume: 59 Issue: 5 Pages: 1810-1821 Computers & Mathematics with Applications Published: MAR 2010. Computers & Mathematics with Applications DOI: http://dx.doi.org/10.1016/j.camwa.2009.08.019
187. Chao, HY; Chen, YQ. "Cooperative Sensing and Distributed Control of a Diffusion Process Using Centroidal Voronoi Tessellations." **Numerical Mathematics-Theory Methods and Applications**. Volume: 3 Issue: 2 Pages: 162-177, 2010. DOI: http://dx.doi.org/10.4208/nmtma.2010.32s.3 http://www.global-sci.org/nmtma/volumes/v3n2/index.html
188. Bhambhani, V; Han, YD; Mukhopadhyay, S; Luo, Y; Chen, YQ. "Hardware-in-the-loop experimental study on a fractional order networked control system testbed." **Communications in Nonlinear Science and Numerical Simulation** Volume: 15 Issue: 9 Pages: 2486-2496, 2010. DOI: http://dx.doi.org/10.1016/j.cnsns.2009.10.010
189. CHEN, YQ; SUN, RT; ZHOU, AH. "An improved Hurst parameter estimator based on fractional Fourier transform." **Telecommunication Systems**. Volume: 43 Issue: 3-4 Pages: 197-206 Published: 2010; DOI: http://dx.doi.org/10.1007/s11235-009-9207-4
190. Hyo-Sung Ahn, Kevin L. Moore and YangQuan Chen. "Trajectory-keeping in satellite formation flying via robust periodic learning control." **Int. J. Robust Nonlinear Control**. Sept. 2010. Vol. 20, issue 14, pages: 1655-1666, DOI: http://dx.doi.org/10.1002/rnc.1538
191. YangQuan Chen* and Yin Luo+. "Discussion on the paper `Simple Fractional Order Model Structures and Their Applications in Control System Design' by Mahsan Tavakoli-Kakhki, Mohammad Haeri, and Mohammad Saleh Tavazoei." **European Journal of Control,** vol. 16, no. 6, 2010 (invited EJC discussion article) pp.695-699.
192. Yan Li+ and YangQuan Chen*. "*When Is A Mittag-Leffler Function A Nussbaum Function*?" **Automatica**. Volume 45, Issue 8, August 2009, Pages 1957-1959. doi: http://dx.doi.org/10.1016/j.automatica.2009.03.020
193. Yan Li+, YangQuan Chen* and Igor Podlubny. "*Mittag-Leffler Stability of Fractional Order Nonlinear Dynamic Systems.*" **Automatica.** Volume 45, Issue 8, August 2009, Pages 1965-1969. doi: http://dx.doi.org/10.1016/j.automatica.2009.04.003
194. Ying Luo+ and YangQuan Chen. "*Fractional-order [Proportional Derivative] Controller for A Class of Fractional Order Systems.*"**Automatica.** Volume 45, Issue 10, October 2009, Pages 2446-2450. doi: http://dx.doi.org/10.1016/j.automatica.2009.06.022
195. Hongguang Sun+*, Wen Chen and YangQuan Chen. "*Variable-order differential operator in anomalous diffusion modeling.*" **Physica A**. Volume 388, Issue 21, 1 November 2009, Pages 4586-4592. doi: http://dx.doi.org/10.1016/j.physa.2009.07.024
196. Podlubny*, A. Chechkin, T. Skovranek, Y. Q. Chen, B. M. Vinagre Jara, "*Matrix approach to discrete fractional calculus II: partial fractional differential equations.*" **Journal of Computational Physics**.

Volume 228, Issue 8, 1 May 2009, Pages 3137-3153. http://dx.doi.org/10.1016/j.jcp.2009.01.014 (preprint: http://arxiv.org/abs/0811.1355).

197. Hyo-Sung Ahn* and YangQuan Chen. "*State-dependent friction force compensation using periodic adaptive learning control.*" (IFAC Journal) **Mechatronics**. Volume 19, Issue 6, September 2009, Pages 896-904. doi: http://dx.doi.org/10.1016/j.mechatronics.2009.05.007
198. Hyo-Sung Ahn*, Varsha Bhambhani and YangQuan Chen. "*Fractional-order Integral and Derivative Controller for Temperature Profile Tracking.*" **Sadhana - Academy Proceedings in Engineering Science**. Vol. 34, Part 5, October 2009, pp. 833–850. http://www.ias.ac.in/sadhana/Pdf2009Oct/833.pdf
199. Hyo-Sung Ahn, YangQuan Chen. "Necessary and sufficient stability condition of fractional-order interval linear systems" **Automatica**, Volume 44, Issue 11, November 2008, Pages 2985-2988 http://www.sciencedirect.com/science/article/pii/S0005109808002562
200. YangQuan Chen*, Kevin Moore, Jie Yu, Tao Zhang. "Iterative learning control and repetitive control in harddisk drive industry - a tutorial". **Int. J. of Adaptive Control and Signal Processing**, Volume 22, Issue 4, Date: May 2008, Pages: 325-343. DOI: http://dx.doi.org/10.1002/acs.1003
201. YangQuan Chen*, Tripti Bhaskaran+, and Dingyu Xue. "Practical Tuning Rule Development for Fractional Order Proportional and Integral Controllers". ASME **Journal of Computational and Nonlinear Dynamics.** April 2008 -- Volume 3, Issue 2, pages 021403-1 to 021403-8 (8 pages) DOI: http://dx.doi.org/10.1115/1.2833934
202. Abdollah Shafieezadeh+, Keri Ryan and YangQuan Chen*. "Fractional Order Filter Enhanced LQR for Seismic Protection of Civil Structures". ASME **Journal of Computational and Nonlinear Dynamics**. April 2008 -- Volume 3, Issue 2, 021404 (7 pages). DOI: http://dx.doi.org/10.1115/1.2833947
203. Concepción A. Monje*, Blas M. Vinagre, Vicente Feliu, and YangQuan Chen. "Tuning and Auto-Tuning of Fractional Order Controllers for Industry Applications". IFAC journal **Control Engineering Practice** (CEP), 16 (2008) 798–812. doi: http://dx.doi.org/10.1016/j.conengprac.2007.08.006 (IFAC World Congress 2011 Best CEP journal paper award)
204. Kevin L. Moore*, Hyo-Sung Ahn+, and YangQuan Chen. "Iteration Domain H_∞-Optimal Iterative Learning Controller Design". (Wiley) **International Journal of Nonlinear and Robust Control.** Volume 18, Issue 10, Date: 10 July 2008, Pages: 1001-1017 DOI: http://dx.doi.org/10.1002/rnc.1231
205. YangQuan Chen*, Anhong Zhou, Rongtao Sun+ and Nikita Zaveri+. "Fractional Order Signal Processing of Electrochemical Noises". Journal of Vibration and Control. Vol. 14, No. 9-10, 1443-1456 (2008) DOI: http://dx.doi.org/10.1177/1077546307087438
206. José I. Suárez, Blas M. Vinagre* and YangQuan Chen. "A Fractional Adaptation Scheme for Lateral Control of an AGV" **Journal of Vibration and Control**. Vol. 14, No. 9-10, 1499-1511 (2008) DOI: http://dx.doi.org/10.1177/1077546307087434
207. Wei Ren*, Haiyang Chao+, William Bourgeous+, Nathan Sorensen+, and YangQuan Chen, "Experimental Validation of Consensus Algorithms for Multi-vehicle Cooperative Control", **IEEE Transactions on Control Systems Technology**, 2008, VOL. 16, NO. 4, JULY 2008. pp. 745-752. http://dx.doi.org/10.1109/TCST.2007.912239
208. Bharath Ramaswamy+, YangQuan Chen*, and Kevin L. Moore. "Omni-directional Robotic Wheel - A Mobile Real-Time Control Systems Laboratory". **International Journal of Engineering Education** (IJEE). Vol. 24, No. 1, pp. 92-100, 2008. http://www.ingentaconnect.com/content/intjee/ijee/2008/00000024/00000001/art00014
209. Yan Shi+, Huifang Dou, Anhong Zhou* and YangQuan Chen. "Design and fabrication of a miniaturized electrochemical instrument and its preliminary evaluation" **Sensors & Actuators: B**. Chemical. 131 (2008) 516–524 doi: http://dx.doi.org/10.1016/j.snb.2007.12.053
210. Ahn, Hyosung+ and Chen, YangQuan*. "Exact maximum singular value calculation of an interval matrix," **IEEE Trans. on Automatic Control,** Volume 52, Issue 3, March 2007 Page(s):510 – 514 http://dx.doi.org/10.1109/TAC.2006.890475
211. Hyo-Sung Ahn+, Kevin L. Moore and YangQuan Chen*. "Stability analysis of iterative learning control

system with interval uncertainty," **Automatica,** vol. 43, no. 5, pp. 892-902, May, 2007. http://www.sciencedirect.com/science/article/pii/S0005109807000258
212. Ahn, Hyosung+; Chen, YangQuan*; Moore, Kevin. "Iterative learning control: Brief survey and categorization," **IEEE Transactions on Systems, Man, and Cybernetics--Part C: Applications and Reviews.** Volume: 37 Issue: 6 Pages: 1099-1121 Published: NOV 2007. http://dx.doi.org/10.1109/TSMCC.2007.905759
213. Ping Jiang*, Leon C. A. Bamfortha , Zuren Feng, John Barucha and YangQuan Chen. "Indirect Iterative Learning Control for Discrete Visual Servo without a Camera-robot Model," **IEEE Transactions on Systems, Man, and Cybernetics--Part B: Cybernetics**, VOL. 37, NO. 4, August 2007. Digital Object Identifier: http://dx.doi.org/10.1109/TSMCB.2007.895355. Page(s):863 – 876.
214. H.-S. Ahn*+ and Y.Q. Chen. "State-dependent periodic adaptive disturbance compensation," **IET Control Theory & Applications**. Volume 1, Issue 4, 2007, p. 1008-1014.
215. Nikita Zaveri+, Rongtao Sun+, Nephi Zufelt+, Anhong Zhou* and YangQuan Chen*. "Evaluation of microbially influenced corrosion with electrochemical noise analysis and signal processing," **Electrochimica Acta**, 52 (2007) 5795–5807.
216. YangQuan Chen*, Zhongmin Wang+ and Jinsong Liang+. "Optimal Dynamic Actuator Location in Distributed Feedback Control of A Diffusion Process," **International Journal of Sensor Networks**. Volume 2 - Issue 3/4 – 2007, pp. 169 - 178
217. Zhen Song+, YangQuan Chen*, JinSong Liang+ and Dariusz Ucinski. "Optimal Mobile Sensor Motion Planning Under Nonholonomic Constraints for Parameter Estimation of Distributed Systems." **Int. J. Intelligent System Tech. and Applications,** Vol. 3, Nos. 3/4, 2007, pp. 277-295.
218. Hyo-Sung Ahn*+, YangQuan Chen, and Wonpil Yu. "Periodic Adaptive Compensation of State-dependent Disturbance in a Digital Servo Motor System," **International Journal of Control, Automation, and Systems,** vol. 5, no. 3, pp. 343-348, June 2007.
219. Kevin L. Moore*, Mohua Ghosh+, and YangQuan Chen. "Spatial-Based ILC for Motion Control Applications," **Meccanica**, (Springer) DOI http://dx.doi.org/10.1007/s11012-006-9035-5. Volume 42, Number 2 / April, 2007. pp. 167-175.
220. Ahn, Hyosung+; Chen, YangQuan*, and Igor Podlubny. "Robust stability checking of a class of linear interval fractional order systems using Lyapunov inequality," (Elsevier) **Applied Mathematics and Computation**, 187 (2007) 27–34.
221. Wei Ren*, Kevin L. Moore, and YangQuan Chen, "High-Order and Model Reference Consensus Algorithms in Cooperative Control of Multi-Vehicle Systems", ASME **Journal of Dynamic Systems, Measurement, and Control,** 2007, vol. 129, no. 5, pp. 678-688.
222. Hyo-Sung Ahn+, Kevin L. Moore, YangQuan Chen*, "Monotonic Convergent Iterative Learning Controller Design based on Interval Model Conversion," **IEEE Trans. on Automatic Control,** vol. 51, no. 2, pp. 366- 371.
223. Lili Ma*+, YangQuan Chen, Kevin L. Moore. "Analytical Piecewise Radial Distortion Model for Precision Camera Calibration," **IEE Proceedings on Vision, Image & Signal Processing** *(UK)*. Vol. 153, no. 4, pp. 468- 474, 2006.
224. YangQuan Chen*, Hyo-Sung Ahn+ and Dingyu Xue, ``Robust Controllability of Interval Fractional Order Linear Time Invariant Systems,'' *(Elsevier)* **Signal Processing** , Special Issue on Fractional Signal Processing and Applications. Vol. 86 (2006) 2794–2802.
225. YangQuan Chen*, Hyo-Sung Ahn+ and Igor Podlubny, "Robust stability check of fractional order linear time invariant systems with interval uncertainties," *(Elsevier)* **Signal Processing**, Special Issue on Fractional Signal Processing and Applications. Vol. 86 (2006) 2611–2618.
226. Seppo J. Ovaska*, Akimoto Kamiya, and YangQuan Chen. "Fusion of Soft Computing and Hard Computing: Categorization of Computational Structures," **IEEE Transactions on Systems, Man, and Cybernetics-Part C**. Vol. 36, no. 3, MAY 2006, pp. 439-448.
227. Jinsong Liang+ and YangQuan Chen*. "Hybrid Symbolic and Numerical Simulation Studies of Time-fractional Order Wave-Diffusion Systems," **International Journal of Control**. Special Issue on the Use

of Computer Algebra Systems for Computer Aided Control System Design. Vol. 79, No. 11, November 2006, 1462–1470.

228. Zhen Song+, YangQuan Chen*, Kevin Moore and Lili Ma. “Applications of the Sparse Hough Transform for Laser Data Line Fitting and Segmentation,” **Int. J. of Robot and Automation**. Vol. 21, no. 3. pp. 157-164.
229. Haiyang Chao+, YangQuan Chen*, and Wei Ren. “A Study of Grouping Effect On Mobile Actuator Sensor Networks for Distributed Feedback Control of Diffusion Process Using Central Voronoi Tessellations”. **The International Journal of Intelligent Control and Systems**. Volume 11, Number 3, September 2006, pp. 185- 190.
230. P. Jiang and YangQuan Chen*. "A Repetitive Segmented Training Neural Network Controller with Applications to Robot Visual Servoing," **Control and Intelligent Systems**, vol. 33, no. 3, 2005. pp. 210-221.
231. Hysung Ahn+, YangQuan Chen* and Huifang Dou. "State-Periodic Adaptive Compensation of Cogging and Coulomb Friction in Permanent Magnet Linear Motors," **IEEE Transactions on Magnetics**, vol. 41, no. 1, pp. 90-98.
232. YangQuan Chen* and Kevin L. Moore. "Relay Feedback Tuning of Robust PID Controllers with Iso-Damping Property," **IEEE Transactions on Systems, Man, and Cybernetics, Part-B**, vol. 31, no.1, pp. 23-31.
233. Dan Stormont+ and YangQuan Chen*. “Using Mobile Robots for Controls and Mechatronics Education,” **Int. J. of Engineering Education,** vol. 21, no. 6, 2005.
234. Lili Ma*, YangQuan Chen and Kevin L. Moore. “Range identification for perspective dynamic systems with single output," **Int. J. of Applied Mathematics and Computer Science**, vol. 15, no. 1, pp. 63-72, 2005.
235. Kevin. L. Moore, YangQuan Chen* and Vikas Bahl+. “Monotonically Convergent Iterative Learning Control for Linear Discrete-Time Systems,” **Automatica**, Volume 41, Issue 9, pp. 1529-1537.
236. Joshua Hacker[1], James Hansen[2], Judith Berner[3], YangQuan Chen[4], Gidon Eshel[5], Gregory Hakim[6], Steven Lazarus[7], Sharanya Majumdar[8], Rebecca Morss[9], Andrew Poje[10], Vitalii Sheremet[11], Youmin Tang[12], and Colleen Webb[13] “Predictability”. **Bulletin of the American Meteorological Society**, Article: pp. 1733–1737, Volume 86, Issue 12 (December 2005).
237. David Gochis[1], Bruce Anderson[2], Ana Barros[3], Andrew Gettelman[4], Junhong (June) Wang[4], John Braun[5], Will Cantrell[6], YangQuan Chen[7], Neil Fox[8], Bart Geerts[9], Weiqing Han[10], Michael Herzog[11], Paul Kucera[12], Robert Kursinski[13], Arlene Laing[14], Changhai Liu[15], Eric D. Maloney[16], Steve Margulis[17], David Schultz[18], Steven Sherwood[19], Adam Sobel[20], Holger Vömel[21], and Zhien Wang[22]. “The Water Cycle across Scales”. **Bulletin of the American Meteorological Society**, Article: pp. 1743–1746, Volume 86, Issue 12 (December 2005).
238. J. Liang+, Y. Q. Chen* and B-Z Guo. "A Hybrid Symbolic-Numerical Simulation Method for Some Typical Boundary Control Problems," **SIMULATION: Transactions of The Society for Modeling and Simulation International**. Vol. 80, No. 11, Nov. 2004.
239. YangQuan Chen*, Kevin L. Moore, and Vikas Bahl+. "Learning Feedforward Control Using a Dilated B-Spline Network: Frequency Domain Analysis and Design," **IEEE Transactions on Neural Networks**. Vol. 15, no. 2, 2004. pp. 355 – 366.
240. Rein Luus and YangQuan Chen*. "Optimal Switching Control via Direct Search Optimization," **Asian Journal of Control**, vol. 6, no. 2, pp. 302-306, 2004.
241. YangQuan Chen*, Blas M. Vinagre and Igor Podlubny. "Fractional order disturbance observer for vibration suppression," (Kluwer) **Nonlinear Dynamics**, Vol. 38, Nos. 1-4, December 2004, pp. 355-367.
242. YangQuan Chen*, Blas M. Vinagre and Igor Podlubny. "Continued Fraction Expansion Approaches to Discretizing Fractional Order Derivatives—an Expository Review," (Kluwer) **Nonlinear Dynamics**, Vol. 38, Nos. 1-4, December 2004, pp. 155-170.
243. Jinsong Liang+, YangQuan Chen* and Rees Fullmer, "Boundary Stabilization and Disturbance Rejection for Fractional Diffusion-Wave Equation," (Kluwer) **Nonlinear Dynamics**, Vol. 38, Nos. 1-4, December 2004, pp. 339-354.

244. C. A. Monje, B. M. Vinagre*, Y. Q. Chen, and V. Feliu, "Some Tuning Rules for PI^a Controllers Robust to Gain or Time Constant Changes," (Kluwer), **Nonlinear Dynamics**, Vol. 38, Nos. 1-4, December 2004, pp. 369-381.
245. Ping Jiang*, Ziyu Li and YangQuan Chen. "Iterative Learning Neural Network Control for Robot Learning by Demonstration". **Control Theory and Applications**, vol. 21, no. 3, pp. 447-452, 2004. ISSN 1000-8152.
246. Lili Ma+, YangQuan Chen* and Kevin L. Moore. "Rational Radial Distortion Models of Camera Lenses with Analytical Solution for Distortion Correction," **International Journal of Information Acquisition** (World Scientific), vol. 1, no.2, pp. 135-147, 2004.
247. Igor Podlubny, Ivo Petr\'a\v{s}, Blas M. Vinagre, YangQuan Chen, Paul O'Leary and Lubormir Dorcak. "Realization of Fractional Order Controllers," **Acta Montanistica Slovaca**, vol. 8, no. 4, pp. 233-235. 2003, ISSN:1335-1788.
248. YangQuan Chen*, Dingyu Xue and Jason Gu. "Analytic and Numerical Computation of Stability Bound for A Class of Linear Delay Differential Equations Using Lambert Function". **Journal of Dynamics of Continuous, Discrete and Impulsive Systems, Series B: Applications and Algorithms**. pp. 489-494 Suppl. S, 2003. Watam Press, Waterloo, ISSN 1492-8760.
249. Jinsong Liang+ and YangQuan Chen*. "Optimization of A Fed-batch Fermentation Process Control Competition Problem Using NEOS," **Proceedings of Inst. of Mechanical Engineers , Part-I (UK). Journal of Systems and Control Engineering,** vol. 217, Part-I, pp427-432. 2003.
250. YangQuan Chen* and Blas M. Vinagre. "A New IIR-Type digital fractional order differentiator," **Signal Processing**. (Elsevier). Vol. 83, no. 11, pp. 2359-2365, 2003.
251. Blas M. Vinagre, YangQuan Chen* and Ivo Petr\'a\v{s}. "Two Direct Tustin Discretization Methods for Fractional-order Differentiator/Integrator," **Journal of The Franklin Institute**, Pages 349-362. Volume 340, Issue 5, August 2003.
252. B. M. Vinagre*, I. Petras, I. Podlubny and Y. Chen, "Using Fractional-Order Adjustment Rules and Fractional Order Reference Models in Model Reference Adaptive Control". **Nonlinear Dynamics**, Vol. 29, pp. 269-279. 2002.
253. Y. Q. Chen* and K. L. Moore, ``Analytical stability bound for a class of delayed fractional-order dynamic systems," **Nonlinear Dynamics**, Vol. 29, pp. 191-200. 2002.
254. Y. Q. Chen* and K. L. Moore, ``Analytical stability bound for delayed second order systems with repeating poles using Lambert function *W*," **Automatica**, vol. 38, no. 5 (May 2002), pp. 891-895.
255. Y. Q. Chen* and K. L. Moore, ``Discretization Schemes for Fractional Order Differentiators and Integrators," **IEEE Transactions on Circuits and Systems I: Fundamental Theory and Applications**, vol 49, no. 3, March 2002, pp. 363-367.
256. Y. Q. Chen* and K. L. Moore, 2002, ``A Practical Iterative Learning Path-Following Control of an Omni-Directional Vehicle," **Asian Journal of Control**, vol. 4, no. 1, 2002, pp. 90-98.
257. Y. Q. Chen*, H. F. Dou and K. K. Tan, 2001, ``Iterative Learning Control via Weighted Local-Symmetrical-Integration", **Asian Journal of Control**, vol. 3, no. 4, 2001, pp. 352-356.
258. K. K. Tan, H. F. Dou, Y. Q. Chen* and T. H. Lee, 2001, ``High Precision Linear Motor Control Via Relay-Tuned Iterative Learning Based On Zero-Phase Filtering," **IEEE Transactions on Control Systems Technology**, vol. 9, no. 2, pp. 244-253, 2001.
259. Y. Chen, C. Wen*, and M. Sun, 2000, ``A High-order Iterative Learning Controller with Initial State Learning," **IMA Journal of Mathematical Control and Information**, Volume 17, Issue 2, pp. 111-121, 2000.
260. Y. Chen*, H. F. Dou and K. K. Tan, 2000, ``Local-Symmetrical-Integral-type Iterative Learning Control", **Control Theory and Applications**, vol. 17, no. 3, pp. 347-352, 2000.
261. Y. Chen, C. Wen*, Z. Gong, and M. Sun, 1999, ``An iterative learning controller with initial state learning," **IEEE Trans. on Automatic Control**, vol. 44, no. 2, pp. 371-376, 1999.
262. J.-X. Xu, Y. Q. Chen*, T.H. Lee and S. Yamamoto, 1999, ``Terminal Iterative Learning Control with an Application to RTPCVD Thickness Control," **Automatica,** vol. 35, no. 9, pp. 1535-1542, 1999.

263. Y. Chen, Z. Gong, C. Wen*, 1998, ``Analysis of a high order iterative learning control algorithm for uncertain nonlinear systems with state delays," **Automatica**, vol. 34, no. 3, 1998, pp. 345-353.
264. Y. Chen, C. Wen*, J.-X. Xu and M. Sun, 1998, ``High-order Iterative Learning Identification of Projectile's Aerodynamic Drag Coefficient Curve from Radar Measured Velocity Data,' **IEEE Trans. on Control Systems Technology**, vol. 6, no. 4, pp. 563-570, 1998.
265. Y. Chen, C. Wen* and M. Sun, 1998, ``Identifying Aero-bomb's Aerodynamic Drag Coefficient Curve Using Optimal Dynamic Fitting Method," **AIAA Journal of Aircraft**, vol. 35, no. 6, pp. 971-975, Nov.-Dec. issue, 1998.
266. Y. Chen, J.-X. Xu and C. Wen*, 1998, ``Iterative Learning Based Extraction of Aero-bomb Drag". **AIAA Journal of Spacecraft and Rockets**, vol. 35, no. 1, March-April, 1998, pp. 237-240.
267. Y. Chen, C. Wen*, Z. Gong and M. Sun, 1997, ``Projectile's Aerodynamic Drag Coefficient Curve Identification from Radar Measured Velocity Data: Optimal Dynamic Fitting Approach," IFAC Journal of **Control Engineering Practice**, vol. 5, no. 5, pp. 627-636, 1997.
268. Y. Chen, C. Wen*, and M. Sun, 1997, ``A robust high-order P-type iterative learning controller using current iteration tracking error," **International Journal of Control**, vol. 68, no. 2, pp. 331-342, Sept. 1997.
269. Y. Chen, C. Wen*, H. Dou and M. Sun, 1997, ``Iterative Learning Identification of Aerodynamic Drag Curve from Tracking Radar Measurements," **IFAC journal of Control Engineering Practice**, vol. 5, no. 11, pp. 1543-1554, Nov. 1997.
270. Y. Zhang*, Y. Chen and M. J. Chen, 1997, ``Software design for measuring and controlling the parameters of a weapon system", **Microcomputer Information**, vol. 13, no. 6, pp 28-29. (in Chinese)
271. Y. Chen and Y. Zhang*, 1995, ``Color hardcopy to a color dot-matrix printers with arbitrary enlargement factors", **China PC WORLD Magazine**. pp. 117-117, May issue, 1995.(in Chinese)
272. Y. Shi* and Y. Chen, 1995, ``Experimental study on the effect of plastic belt in decreasing initial disturbance", **Journal of Ballistics**, vol. 7, no. 2, pp. 74-77. (in Chinese)
273. M. Sun*, Y. Chen, and B. Huang, 1994, ``Robust Higher Order Iterative Learning Control Algorithm for Tracking Control of Delayed Repetitive Systems", **Acta Automatica Sinica**, vol. 20, no. 3, pp. 360-365. (in Chinese)
274. Chen, Y.* and Dou, H., 1994, ``Time Varying Multi-delay Bilinear System Analysis via Taylor Series", **Journal of Xi'an Institute of Technology**, vol. 14, no. 3, 1994. (in Chinese)
275. Chen, Y.* and Hu Jianzhong, 1993, ``Direct sub-optimal Design of Finite Time LQR with Partial State Feedback", **Journal of Xi'an Institute of Technology**, vol. 13, no. 4, pp. 264-272. (in Chinese)
276. Zhang, Yani, Li, Jingyu and Chen, Yangquan*, 1993,``AutoCAD .SHX File Format Analysis, Modification and Application", **Journal of Xi'an Institute of Technology**, vol. 13, no. 4, pp. 323-325. (in Chinese)
277. Dou, Huifang and Chen, Y.*, 1993, ``Sub-optimal Solution of a Class of Optimal Tracking Control Problem and Its Application", **Journal of Xi'an Institute of Technology**, vol. 13, no. 4, pp. 264-272, 1993. (in Chinese)
278. Chen, Y.* and Dou, Huifang, 1993, `` Researches on the Optimal Control Solution of Identifying Fitting Drag Coefficient Curve from Radar Measured Velocity Data", **Aerodynamic Experiment and Measurement Control,** no. 1993(2), pp. 81-89, 1993. (in Chinese)
279. Chen, Y.* and Wang, Gaoliang, 1993, ``Direct Parameterized Description Method For Determining The Optimal Temperature Profile of A Chemical Reactor Tube", **Journal of Xi'an Institute of Technology**, vol. 13, no. 3, pp. 176-182. (in Chinese)
280. Chen, Yangquan* and Wang, Gaoliang, 1992, ``Direct Parametric Description Method for Solution of an Optimal Control Problem", **System Engineering and Electronic Techniques**, 1992(7), pp. 68-72. (in Chinese)
281. Chen, Yangquan*, Lu, Deye, Qing Yingxiao and Shi Yonggao, 1992, ``Optimal Fitting Drag Coefficient Curve Identification of Aeronautical Bomb From 3-Dimensional Theodolite Film Data", **Journal of Xi'an Institute of Technology**, vol. 12, no. 2, pp. 34-42. (in Chinese)

282. Chen, Yangquan* and Dou, Huifang, 1991, ``Taylor Series Analysis For Time-variant Multi-delay Systems," **Journal of Xi'an Institute of Technology**, vol. 11, no. 4, pp. 10-17, 1991. (in Chinese)
283. Chen, Yangquan* and Dou, Huifang, 1991, ``Constrained Multi-staged Polynomial Data Fitting Algorithm and Software", **Aerodynamic Experiment and Measurement Control**, no. 1991(3), pp. 78-86, 1991. (in Chinese)
284. Chen, Yangquan*, 1991, ``Nonlinear Yaw Card Data Reduction", **System Engineering and Electronic Techniques,** 1991(3), pp. 53-58. (in Chinese)
285. Chen, Yangquan*, 1991, ``Researches on Trajectory Prediction Models and Software For Spin-stabilized Projectiles (III): A New Rigid Body 6-DOF Model For Trajectory Prediction of Unguided Spin Missiles", **Projectile and Rocket Fascicule of Acta Armamentarii**, 1991(1), pp. 1-10. (in Chinese)
286. Chen, Yangquan*, 1990, ``Researches on Trajectory Prediction Models and Software For Spin-stabilized Projectiles (II): Studies On Trajectory Prediction Model Reduction", **Projectile and Rocket Fascicule of Acta Armamentarii,** 1990(4), pp. 1-11. (in Chinese)
287. Chen, Yangquan*, 1990, ``Researches on Trajectory Prediction Models and Software For Spin-stabilized Projectiles (I): Automatic Model-Switching Trajectory Prediction Method", **Projectile and Rocket Fascicule of Acta Armamentarii,** 1990(3), pp. 1-7. (in Chinese)
288. Chen, Yangquan*, 1990, ``A Fast 4-DOF Model For Trajectory Calculation of Spin-stabilized Projectiles", **Journal of Xi'an Institute of Technology**, vol. 10, no. 3-4, pp. 57-62. (in Chinese)
289. Chen, Yangquan*, 1990, ``A New Rigid Body Six Degree of Freedom Model And Rigid Body Five Degree of Freedom Model For Trajectory Prediction of Spin-stabilized Projectiles", **Journal of Xi'an Institute of Technology**, vol. 10, no. 3-4, pp. 63-73. (in Chinese)
290. Dou, Huifang and Chen, Y.*, 1990 ``Time Domain Analytical Solution of Generalized Systems", **System Engineering and Electronic Techniques**, no. 1990(5), pp. 35-40, 1990. (in Chinese)
291. Sun, Mingxuan* and Chen, Y., 1990, ``A Dynamic Programming Model With A Probability Criterion", **Journal of Xi'an Institute of Technology**, vol. 10, no. 2, pp. 34-39. (in Chinese)
292. Chen, Yangquan* and Sun, Mingxuan, 1990, ``Algorithms For Determining Solving-matrices of MIMO Linear Time Invariant Singular Systems", **Journal of Beijing Institute of Technology,** vol. 10, no. S2, pp. 39-47. (in Chinese)
293. Chen, Y.*, 1989, ``An N-Order Convergence Iteration Scheme For Solving Algebraic Riccati Equation (ARE)", **Journal of Xi'an Institute of Technology**, vol. 9, no. 1, pp. 34-42. (in Chinese)
294. Chen, Yangquan*, 1989, ``A Computer Program For Coordinate System Transformation Matrix and Geometric Equation Generation", **Journal of Xi'an Institute of Technology**, vol. 9, no. 3, pp. 16-23. (in Chinese)

Refereed Conference Papers

pending

- IEEE CDC Dec. 2019, Nice, France (to contribute)
- IEEE ICMA Aug. 2019 Tianjin, China (to contribute)
- ICUAS2019 papers (under review)
- ASME/IEEE MESA papers (under review) – three symposia
  - http://mechatronics.ucmerced.edu/FDTA2019
  - http://mechatronics.ucmerced.edu/AIET-for-MESA
  - http://mechatronics.ucmerced.edu/SUAVTA

2019

1. Fudong Ge and YangQuan Chen. Optimal control to achieve regional approximate controllability for parabolic systems with the fractional Laplacian. Proc. of the American Control Conference. Miami, FL, USA, Dec. 2019

2. C. Ding, J. Cao, Y. Chen. “Fractional-order model and experimental verification for broadband hysteresis in piezoelectric actuators”. NODYCON 2019. First Int. Conf. on Nonlinear Dynamics, Rome, Italy, Feb. 18-20, 2019.
3. K. Liu, Y. Chen, P. Domanski. “Control performance assessment of the disturbance with fractional order dynamics.” NODYCON 2019. First Int. Conf. on Nonlinear Dynamics, Rome, Italy, Feb. 18-20, 2019.
4. J. Yuan, Y. Chen, S. Fei. “Compensation strategies for rate limit effect on first-order plus time-delay systems.” NODYCON 2019. First Int. Conf. on Nonlinear Dynamics, Rome, Italy, Feb. 18-20, 2019.
5. X. Chen, L. Xi, Y. Zhang, Y. Chen. “Fractional techniques to characterize non-solid aluminium electrolyte capacitors for power electronics applications”. NODYCON 2019. First Int. Conf. on Nonlinear Dynamics, Rome, Italy, Feb. 18-20, 2019.
6. F. Ge, Y. Chen. “Distributed event-triggered output feedback control for semilinear time fractional diffusion systems”. NODYCON 2019. First Int. Conf. on Nonlinear Dynamics, Rome, Italy, Feb. 18-20, 2019.

2018:

7. Zhao, Tiebiao; Niu, Haoyu; Anderson, Andreas; Chen, YangQuan; Viers, Joshua; “A detailed study on accuracy of uncooled thermal cameras by exploring the data collection workflow”. Autonomous Air and Ground Sensing Systems for Agricultural Optimization and Phenotyping III. 10664-106640F, 2018. International Society for Optics and Photonics
8. Zheng, Weijia; Luo, Ying; Chen, Yangquan; Pi, Youguo; Yu, Wei; “An Improved Frequency-domain Method for the Fractional Order PI λ D μ Controller Optimal Design” IFAC-PapersOnLine. 51(4): 681-686. 2018. Elsevier.
9. Ge, Fudong; Chen, YangQuan; “Event-driven boundary control for time fractional diffusion systems under time-varying input disturbance”. 2018 Annual American Control Conference (ACC). Pp. 140-145. 2018. IEEE.
10. Malek, Hadi; Dadras, Sara; Yin, Chun; Chen, YangQuan; “Fractional Order Proportional-Resonant Controller”. 2018 Annual American Control Conference (ACC). Pp. 3086-3091. 2018. IEEE
11. Yuan, Jie; Chen, YangQuan; Fei, Shumin; “Fractional Order Zero Phase Error Tracking Control for Continuous Time Non-minimum Phase Processes”. 2018 Annual American Control Conference (ACC). Pp. 1256-1261. 2018. IEEE
12. Hollenbeck, Derek; Nunez, Gregorio; Christensen, Lance E; Chen, YangQuan; “Wind Measurement and Estimation with Small Unmanned Aerial Systems (sUAS) Using On-Board Mini Ultrasonic Anemometers”. 2018 International Conference on Unmanned Aircraft Systems (ICUAS). Pp. 285-292. 2018. IEEE
13. Zhao, Tiebiao; Currier, Chris; Bonnin, Alexis; Mellos, Gregory; Martinez, Noe; Chen, YangQuan; “Low Cost Autonomous Battery Replacement System for Quadrotor Small Unmanned Aerial Systems (sUAS) using 3D Printing Components”. 2018 International Conference on Unmanned Aircraft Systems (ICUAS). 103-107. 2018. IEEE
14. Wang, Xiaohong; Pan, Zhifeng; Hoang, Thi Thu Giang; Tian, Lianfang; Chen, Yangquan; “New Repetitive Current Controller for PWM Rectifier” IFAC-PapersOnLine 51(4): 154-159. 2018. Elsevier
15. Ge, Fudong; Chen, YangQuan; “Optimal sensor placement for time fractional diffusion system via eigenvalue identification”. 2018 37th Chinese Control Conference (CCC). Pp: 10152-10157. 2018. IEEE
16. Wang, Xiaohong; Hoang, Thi Thu Giang; Pan, Zhifeng; Chen, Yangquan; “Fractional-order modelling and control for two parallel PWM rectifiers”. IFAC-PapersOnLine 51(4):54-59, 2018. Elsevier
17. Zhao, Tiebiao; Yang, Yonghuan; Niu, Haoyu; Wang, Dong; Chen, YangQuan; “Comparing U-Net convolutional network with mask R-CNN in the performances of pomegranate tree canopy segmentation”.

Multispectral, Hyperspectral, and Ultraspectral Remote Sensing Technology, Techniques and Applications VII. Pp: 10780-107801J. 2018. International Society for Optics and Photonics

18. Zhao, Tiebiao; Koumis, Alexander; Niu, Haoyu; Wang, Dong; Chen, YangQuan; "Onion irrigation treatment inference using a low-cost hyperspectral scanner". Multispectral, Hyperspectral, and Ultraspectral Remote Sensing Technology, Techniques and Applications VII. Pp. 10780-107800D. 2018. International Society for Optics and Photonics
19. Yuan, Jie; Chen, YangQuan; Fei, Shumin; "Analysis of Actuator Rate Limit Effects on First-Order Plus Time-Delay Systems under Fractional-Order Proportional-Integral Control". IFAC-PapersOnLine, 51(4):37-42. 2018. Elsevier
20. Ren, Guojian; Yu, Yongguang; Chen, Yang Quan; "Fractional Dynamics for Coupled CTRW Optimal Random Search Algorithm". Available at SSRN 3277341. 2018
21. Ge, Fudong; Chen, Yang Quan; "Observer Design for Semilinear Time Fractional Diffusion Systems with Spatially Varying Parameters". Available at SSRN 3281639. 2018
22. Ates, Abdullah; Yeroglu, Celaleddin; Yuan, Jie; Chen, Yang Quan; Ethem Hamamci, Serdar; "Optimization of the FO [PI] Controller for MTDS Using MAPO with Multi Objective Function". Available at SSRN 3274043. 2018
23. Cai, Ruiyang; Ge, Fudong; Chen, Yang Quan; Kou, Chunhai; "On the Regional Controllability for Hadamard-Caputo Fractional Ultra-Slow Diffusion Processes". Available at SSRN 3282725. 2018 http://ssrn.com/abstract=3282725
24. Wang, Renming; Lin, Hao; Zhang, YunNing; Chen, Yang Quan; "Fuzzy Neural Network Sliding Mode Control Based Chaos Synchronization for a Class of Fractional Order Chaotic System". Available at SSRN 3299374. 2018.
25. Chen, Yuquan; Wei, Yiheng; Wang, Yong; Chen, Yang Quan; "Optimal Lévy-Flight Foraging with a Finite Flight Distance". Available at SSRN 3301866. 2018
26. Chen, Yuquan; Zhao, Tiebiao; Wang, Yong; Chen, Yang Quan; "Optimal Searching Strategies for Different Target Distributions". Available at SSRN 3301868. 2018

2017:

27. Smith, Brendan J; John, Garrett; Christensen, Lance E; Chen, YangQuan; "Fugitive methane leak detection using sUAS and miniature laser spectrometer payload: system, application and groundtruthing tests". 2017 International Conference on Unmanned Aircraft Systems (ICUAS). Pp. 369-374. 2017. IEEE
28. Zhao, Tiebiao; Doll, David; Wang, Dong; Chen, YangQuan; "A new framework for UAV-based remote sensing data processing and its application in almond water stress quantification". 2017 International Conference on Unmanned Aircraft Systems (ICUAS). Pp. 1794-1799. 2017. IEEE
29. Ge, Fudong; Chen, YangQuan; Kou, Chunhai; "Regional detection of unknown sources for the sub-diffusion process". 2017 American Control Conference (ACC). Pp. 3237-3242. 2017. IEEE
30. Stark, Brandon; Smith, Brendan; Anderson, Andreas; Viers, Joshua H; Chen, YangQuan; Kelsey, Rodd; "Precision Counting of Sandhill Cranes in Staten Island by FAA Approved Small Unmanned Aerial System Night Missions". World Environmental and Water Resources Congress 2017. Pp. 109-123. 2017
31. Fraire, AT Espinoza; Chen, YangQuan; Dzul, A; Lozano, R; "Fixed-wing MAV adaptive PD control based on a modified MIT rule with sliding-mode control". 2017 International Conference on Unmanned Aircraft Systems (ICUAS). Pp. 1647-1656. 2017. IEEE
32. Lian, Zhigang; Lu, Lihua; Chen, Yangquan; "A New Cuckoo Search". International Conference on Intelligence Science. Pp. 75-83. 2017. Springer, Cham

33. Shang, Bo; Wu, Chengdong; Zhang, Yunzhou; Chen, YangQuan; “Analysis of maximum possible sampling period for a real-time vision-based control system”. ASME 2017 International Design Engineering Technical Conferences and Computers and Information in Engineering Conference. Pp. V003T01A008-V003T01A008. 2017. American Society of Mechanical Engineers
34. Zhao, Tiebiao; Chen, YangQuan; Ray, Andrew; Doll, David; “Quantifying almond water stress using unmanned aerial vehicles (uavs): correlation of stem water potential and higher order moments of non-normalized canopy distribution”. ASME 2017 International Design Engineering Technical Conferences and Computers and Information in Engineering Conference. Pp. V009T07A058-V009T07A058. 2017. American Society of Mechanical Engineers
35. Zhang, Guoxiang; Shang, Bo; Chen, YangQuan; Moyes, Holley; “SmartCaveDrone: 3D cave mapping using UAVs as robotic co-archaeologists”. 2017 International Conference on Unmanned Aircraft Systems (ICUAS). Pp. 1052-1057. 2017. IEEE
36. He, Bin-Bin; Chen, YangQuan; Kou, Chun-Hai; “On the Controllability of Distributed-Order Fractional Systems With Distributed Delays”. ASME 2017 International Design Engineering Technical Conferences and Computers and Information in Engineering Conference. Pp. V009T07A030-V009T07A030. 2017. American Society of Mechanical Engineers
37. Zhang, Shuo; Chen, YangQuan; Yu, Yongguang; “A survey of fractional-order neural networks”. ASME 2017 International Design Engineering Technical Conferences and Computers and Information in Engineering Conference. Pp. V009T07A024-V009T07A024. 2017. American Society of Mechanical Engineers
38. Zhang, Guimei; Zhu, Yangang; Liu, Jianxin; Chen, YangQuan; “Image segmentation based on fractional differentiation and RSF model”. ASME 2017 International Design Engineering Technical Conferences and Computers and Information in Engineering Conference. Pp. V009T07A023-V009T07A023. 2017. American Society of Mechanical Engineers
39. Liu, Kai; Zhang, Xi; Chen, YangQuan; “Energy informatics and fractional calculus”. ASME 2017 International Design Engineering Technical Conferences and Computers and Information in Engineering Conference. V009T07A028-V009T07A028. 2017. American Society of Mechanical Engineers
40. He, Bin-Bin; Chen, YangQuan; Kou, Chun-Hai; “On the Existence of Regional Optimal Control for a Class of Fractional Order Differential Inclusion”. ASME 2017 International Design Engineering Technical Conferences and Computers and Information in Engineering Conference. Pp. V009T07A031-V009T07A031. 2017. American Society of Mechanical Engineers
41. Zhang, XueFeng; Chen, YangQuan; “Further Remarks on the Existence of Periodic Solutions of Linear Time Varying Periodic Fractional Order Systems”. ASME 2017 International Design Engineering Technical Conferences and Computers and Information in Engineering Conference. Pp. V009T07A032-V009T07A032. 2017. American Society of Mechanical Engineers
42. Liu, Kai; Chen, Yangquan; Zhang, Xi; “An Application of the Seasonal Fractional ARIMA Model to the Semiconductor Manufacturing”. IFAC-PapersOnLine. 50(10):8097-8102. 2017. Elsevier
43. Pan, Zhifeng; Wang, Xiaohong; Hoang, Thi Thu Giang; Luo, Ying; Chen, Yangquan; Tian, Lianfang; “Design and Application of Fractional Order PIλDμ Controller in Grid-Connected Inverter System”. ASME 2017 International Design Engineering Technical Conferences and Computers and Information in Engineering Conference. Pp. V009T07A001-V009T07A001. 2017. American Society of Mechanical Engineers
44. Dadras, Sara; Dadras, Soodeh; Malek, Hadi; Chen, YangQuan; “A note on the lyapunov stability of fractional-order nonlinear systems”. ASME 2017 International Design Engineering Technical Conferences

and Computers and Information in Engineering Conference. Pp. V009T07A033-V009T07A033. 2017. American Society of Mechanical Engineers

45. Zhao, Tiebiao; Wang, Zhongdao; Yang, Qi; Chen, YangQuan; “Melon yield prediction using small unmanned aerial vehicles”. Autonomous Air and Ground Sensing Systems for Agricultural Optimization and Phenotyping II. Pp. 10218-1021808. 2017. International Society for Optics and Photonics
46. hang, Shuo; Chen, YangQuan; Yu, Yongguang; “Fractional-order extreme learning machine with Lévy flight” IFAC-PapersOnLine. 50(1):8109-8114. 2017. Elsevier
47. Liu, Kai; Zhang, Xi; Chen, YangQuan; “An evaluation of ARFIMA programs”. ASME 2017 International Design Engineering Technical Conferences and Computers and Information in Engineering Conference”. Pp. V009T07A027-V009T07A027. 2017. American Society of Mechanical Engineers
48. Cao, Ke-cai; Zeng, CaiBin; Chen, YangQuan; Yue, Dong; “Fractional Decision Making Model for Crowds of Pedestrians in Two-Alternative Choice Evacuation”. IFAC-PapersOnLine. 50(1): 11764-11769. 2017. Elsevier
49. Chen, Juan; Cui, Baotong; Chen, YangQuan; Mao, Li; “Backstepping-based observer for output feedback stabilization of a boundary controlled fractional reaction diffusion system”. 2017 11th Asian Control Conference (ASCC). Pp. 2435-2440. 2017. IEEE
50. Sun, Lei; Chen, Hua; Chen, YangQuan; “A shared control architecture based on electrooculogram signal and global vision for smart assistive robots”. 2017 IEEE International Conference on Unmanned Systems (ICUS). Pp. 146-149. 2017. IEEE
51. Zhao, Tiebiao; Doll, David; Chen, YangQuan; “Better almond water stress monitoring using fractional-order moments of non-normalized difference vegetation index”. 2017 ASABE Annual International Meeting. 2017. American Society of Agricultural and Biological Engineers
52. Ates, Abdullah; Alagoz, Baris Baykant; Yeroglu, Celaleddin; Yuan, Jie; Chen, YangQuan; “Disturbance rejection FOPID control of rotor by multi-objective BB-BC optimization algorithm”. ASME 2017 International Design Engineering Technical Conferences and Computers and Information in Engineering Conference. Pp. V009T07A025-V009T07A025. 2017. American Society of Mechanical Engineers

2016:

53. Zhao, Haoran; Qiao, Liyan; Chen, Yangquan; “Modulated wideband convertor for α-bandlimited signals in fractional Fourier domain”. 2016 17th International Carpathian Control Conference (ICCC). Pp. 831-835. 2016. IEEE
54. Smith, Brendan; John, Garrett; Stark, Brandon; Christensen, Lance E; Chen, YangQuan; “Applicability of unmanned aerial systems for leak detection”. 2016 International Conference on Unmanned Aircraft Systems (ICUAS)”. Pp. 1220-1227. 2016. IEEE
55. Shang, Bo; Liu, Jianxin; Zhao, Tiebiao; Chen, YangQuan; “Fractional order robust visual servoing control of a quadrotor UAV with larger sampling period”. 2016 International Conference on Unmanned Aircraft Systems (ICUAS). Pp. 1228-1234. 2016. IEEE
56. Stark, Brandon; Zhao, Tiebiao; Chen, YangQuan; “An analysis of the effect of the bidirectional reflectance distribution function on remote sensing imagery accuracy from small unmanned aircraft systems”. 2016 International Conference on Unmanned Aircraft Systems (ICUAS) . pp. 1342-1350. 2016. IEEE
57. Stark, Brandon; Chen, YangQuan; “A framework of optimal remote sensing using small unmanned aircraft systems”. 2016 12th IEEE/ASME International Conference on Mechatronic and Embedded Systems and Applications (MESA). 6-Jan. 2016. IEEE
58. Zhao, Haoran; Qiao, Liyan; Deng, Libao; Chen, YangQuan; “Construction of chaotic sensing matrix for

fractional bandlimited signal associated by fractional Fourier transform". 2016 IEEE AUTOTESTCON. 7-Jan 2016. IEEE

59. Zhao, Tiebiao; Stark, Brandon; Chen, YangQuan; Ray, Andrew; Doll, David; "More reliable crop water stress quantification using small unmanned aerial systems (sUAS)". IFAC-PapersOnLine. 49(16):409-414. 2016. Elsevier
60. Ge, Fudong; Chen, YangQuan; Kou, Chunhai; "Spreading control of sub-diffusion processes". 2016 IEEE 55th Conference on Decision and Control (CDC). Pp. 2253-2258. 2016. IEEE
61. Chen, Hua; Chen, YangQuan; Chen, Wen; Yang, Fang; "Output tracking of nonholonomic mobile robots with a model-free fractional-order visual feedback" IFAC-PapersOnLine. 49(18):736-741. 2016. Elsevier
62. Medellin-Azuara, J; Morande, JA; Jin, Y; Chen, Y; Paw U, KT; Viers, JH; "Use of Unmanned Aerial Vehicles for Improving Farm Scale Agricultural Water Management in Agriculture at a Farm Scale. A case study for field crops in the California's Central Valley". AGU Fall Meeting Abstracts. 2016

2015:

63. F. Yeh; A. S. Warlaumont; Y. Chen; T. M. Shea; B. Stark. "A neurorobotic model of learning to shake a rattle" **2015 Joint IEEE International Conference on Development and Learning and Epigenetic Robotics** (ICDL-EpiRob), Pages: 250 - 251, DOI: http://dx.doi.org/10.1109/DEVLRN.2015.7346150
64. C. Yin; Y. Chen; B. Stark; S. M. Zhong. "Extremum seeking control with fractional-order switching technique design for maximum power point tracking in photovoltaic systems". 2015 **54th IEEE Conference on Decision and Control (CDC)** Pages: 5629 - 5634, DOI: http://dx.doi.org/10.1109/CDC.2015.7403102
65. Jianxiong Cao; Y. Chen; Changpin Li. "Multi-UAV-based optimal crop-dusting of anomalously diffusing infestation of crops". **American Control Conference (ACC),** 2015; Pages: 1278 - 1283, DOI: http://dx.doi.org/10.1109/ACC.2015.7170909
66. Jianxiong Cao, YangQuan Chen, Changpin Li. "Closed-loop controlled spraying of anomalously diffusing pests using networked unmanned aircraft crop-dusters: The anisotropic case". **The International Congress on Industrial and Applied Mathematics** (ICIAM). Aug. 10-14, 2015. Beijing, China.
67. J. Huang; Y. Chen; Z. Li. "Human operator modeling based on fractional order calculus in the manual control system with second-order controlled element" **Control and Decision Conference (CCDC), 2015 27th Chinese;** Year: 2015; Pages: 4902 - 4906, DOI: http://dx.doi.org/10.1109/CCDC.2015.7162802
68. Yousef Sardahi; Yousef Naranjani; YangQuan Chen; Jian-Qiao Sun. Multi-Objective Optimization of Time-Delayed Fractional-Order Damping for Better Step Response. Proc. ASME. 57403; Volume 4B: Dynamics, Vibration, and Control, V04BT04A053.November 13, 2015; IMECE2015-50569; http://dx.doi.org/10.1115/IMECE2015-50569
69. Hadi Malek; Sara Dadras; YangQuan Chen. Failure Prediction Model and ESR Modeling of Electrolytic Capacitor With Application to Predictive Maintenance. Proc. ASME. 57199; Volume 9: 2015 ASME/IEEE International Conference on Mechatronic and Embedded Systems and Applications, 009T07A016.August 02, 2015; DETC2015-46175; http://dx.doi.org/10.1115/DETC2015-46175
70. Jianhong Wang; Yongqiang Ye; YangQuan Chen. Fraction Phase Lead Repetitive Control and its Application in Inverter. Proc. ASME. 57199; Volume 9: 2015 ASME/IEEE International Conference on Mechatronic and Embedded Systems and Applications, V009T07A017.August 02, 2015; DETC2015-46186; http://dx.doi.org/10.1115/DETC2015-46186
71. Dan Li; Junyi Cao; Shengxi Zhou; Yangquan Chen. Fractional Order Model of Broadband Piezoelectric Energy Harvesters. Proc. ASME. 57199; Volume 9: 2015 ASME/IEEE International Conference on Mechatronic and Embedded Systems and Applications, V009T07A019.August 02, 2015; DETC2015-46192; http://dx.doi.org/10.1115/DETC2015-46192
72. Caibin Zeng; YangQuan Chen; Igor Podlubny. Is Our Universe Accelerating Dynamics Fractional Order? Proc. ASME. 57199; Volume 9: 2015 ASME/IEEE International Conference on Mechatronic and

Embedded Systems and Applications, V009T07A020.August 02, 2015; DETC2015-46216; http://dx.doi.org/10.1115/DETC2015-46216

73. Jianxin Liu; Tiebiao Zhao; YangQuan Chen. Maximum Power Point Tracking of Proton Exchange Membrane Fuel Cell With Fractional Order Filter and Extremum Seeking Control. Proc. ASME. 57199; Volume 9: 2015 ASME/IEEE International Conference on Mechatronic and Embedded Systems and Applications, V009T07A026.August 02, 2015. DETC2015-46633; http://dx.doi.org/10.1115/DETC2015-46633
74. XueFeng Zhang; YangQuan Chen. Improvement of Strict LMI Admissibility Criteria of Singular Systems: Continuous and Discrete. Proc. ASME. 57199; Volume 9: 2015 ASME/IEEE International Conference on Mechatronic and Embedded Systems and Applications, V009T07A028.August 02, 2015; DETC2015-46690; http://dx.doi.org/10.1115/DETC2015-46690
75. XueFeng Zhang; YangQuan Chen. D -Stability Based LMI Criteria of Stability and Stabilization for Fractional Order Systems. Proc. ASME. 57199; Volume 9: 2015 ASME/IEEE International Conference on Mechatronic and Embedded Systems and Applications, V009T07A029.August 02, 2015; DETC2015-46692; http://dx.doi.org/10.1115/DETC2015-46692
76. Fudong Ge; YangQuan Chen; Chunhai Kou. The Adjoint Systems of Time Fractional Diffusion Equations and Their Applications in Controllability Analysis. Proc. ASME. 57199; Volume 9: 2015 ASME/IEEE International Conference on Mechatronic and Embedded Systems and Applications, 009T07A030.August 02, 2015; DETC2015-46696; http://dx.doi.org/10.1115/DETC2015-46696
77. Fudong Ge; YangQuan Chen; Chunhai Kou. Regional Controllability of Anomalous Diffusion Generated by the Time Fractional Diffusion Equations. Proc. ASME. 57199; Volume 9: 2015 ASME/IEEE International Conference on Mechatronic and Embedded Systems and Applications, V009T07A031.August 02, 2015; DETC2015-46697; http://dx.doi.org/10.1115/DETC2015-46697
78. Yan Li; YangQuan Chen. Quantitative Analysis of Singularities for Fractional Order Systems. Proc. ASME. 57199; Volume 9: 2015 ASME/IEEE International Conference on Mechatronic and Embedded Systems and Applications, V009T07A035.August 02, 2015; DETC2015-46879; http://dx.doi.org/10.1115/DETC2015-46879
79. Marwin Ko; Brandon Stark; Monica Barbadillo; YangQuan Chen. An Evaluation of Three Approaches Using Hurst Estimation to Differentiate Between Normal and Abnormal HRV. Proc. ASME. 57199; Volume 9: 2015 ASME/IEEE International Conference on Mechatronic and Embedded Systems and Applications, V009T07A036.August 02, 2015; DETC2015-46966; http://dx.doi.org/10.1115/DETC2015-46966
80. Ke-Cai Cao; YangQuan Chen; Dan Stuart. A New Fractional Order Dynamic Model for Human Crowd Stampede System. Proc. ASME. 57199; Volume 9: 2015 ASME/IEEE International Conference on Mechatronic and Embedded Systems and Applications, V009T07A037.August 02, 2015; DETC2015-47007; http://dx.doi.org/10.1115/DETC2015-47007
81. Guimei Zhang; Binbin Chen; YangQuan Chen. Research on Image Matching Combining on Fractional Differential With Scale Invariant Feature Transform. Proc. ASME. 57199; Volume 9: 2015 ASME/IEEE International Conference on Mechatronic and Embedded Systems and Applications, 009T07A038.August 02, 2015; DETC2015-47015; http://dx.doi.org/10.1115/DETC2015-47015
82. Daniel Stuart; Mohammad Sadra Sharifi; Keith Christensen; Anthony Chen; Yong Seog Kim; YangQuan Chen. Modeling Different Groups of Pedestrians With Physical Disability, Using the Social Force Model and Fractional Order Potential Fields. Proc. ASME. 57199; Volume 9: 2015 ASME/IEEE International Conference on Mechatronic and Embedded Systems and Applications, V009T07A040.August 02, 2015; DETC2015-47042; http://dx.doi.org/10.1115/DETC2015-47042
83. S. Hassan HosseinNia; Inés Tejado; Blas M. Vinagre; YangQuan Chen. Iterative Learning and Fractional

Reset Control. Proc. ASME. 57199; Volume 9: 2015 ASME/IEEE International Conference on Mechatronic and Embedded Systems and Applications, V009T07A041.August 02, 2015; DETC2015-47061; http://dx.doi.org/10.1115/DETC2015-47061

84. Chun Yin; YangQuan Chen; Yuhua Cheng; Shou-ming Zhong; Lulu Tian. Maximum Power Point Tracking in Photovoltaic System Through Extremum Seeking Control With FO Switching Technique. Proc. ASME. 57199; Volume 9: 2015 ASME/IEEE International Conference on Mechatronic and Embedded Systems and Applications, V009T07A043.August 02, 2015; DETC2015-47296; http://dx.doi.org/10.1115/DETC2015-47296
85. Jiacai Huang; YangQuan Chen; Zhuo Li. Mathematical Model of Human Operator Using Fractional Calculus for Human-in-the-Loop Control. Proc. ASME. 57199; Volume 9: 2015 ASME/IEEE International Conference on Mechatronic and Embedded Systems and Applications, V009T07A045.August 02, 2015; DETC2015-47464; http://dx.doi.org/10.1115/DETC2015-47464
86. Yanan Qiu; Zhiyong Dai; YangQuan Chen; Xiaogeng Liang. Constrained Control for Brushless DC Motors With Fractional Friction Compensation. Proc. ASME. 57199; Volume 9: 2015 ASME/IEEE International Conference on Mechatronic and Embedded Systems and Applications, V009T07A046.August 02, 2015; DETC2015-47508; http://dx.doi.org/10.1115/DETC2015-47508
87. Niloufar Irannejad; YangQuan Chen; Jiacai Huang. Haptic Interface of Data-Drone Operation Considering Human Operator's Force Sensitivity. Proc. ASME. 57199; Volume 9: 2015 ASME/IEEE International Conference on Mechatronic and Embedded Systems and Applications, V009T07A093.August 02, 2015; DETC2015-46695; http://dx.doi.org/10.1115/DETC2015-46695
88. Nathan Hoffer, Cal Coopmans, and YangQuan Chen. "Small Low-Cost Unmanned Aerial Vehicle System Identification By Error Filtering Online Learning (EFOL) Enhanced Least Squares Method**."** In Proc. of the **Int. Conf. on Unmanned Aircraft Systems (ICUAS).** June 2015. Denver, CO. http://dx.doi.org/10.1109/ICUAS.2015.7152430
89. Brandon Stark, Matthew McGee, and YangQuan Chen. "Short Wave Infrared (SWIR) Imaging Using Small Unmanned Aerial Systems (sUAS)." In Proc. of the **Int. Conf. on Unmanned Aircraft Systems (ICUAS).** June 2015. Denver, CO. http://dx.doi.org/10.1109/ICUAS.2015.7152328
90. Brandon Stark, Brendan Smith, Nathaly Navarrete and YangQuan Chen. "Airworthiness and Protocol Development for Safe Night Flying Missions for Small Unmanned Aerial Systems (sUASs)." In Proc. of the **Int. Conf. on Unmanned Aircraft Systems (ICUAS)**. June 2015. Denver, CO. http://dx.doi.org/10.1109/ICUAS.2015.7152298
91. Tiebiao Zhao, Brandon Stark, YangQuan Chen, Andrew L. Ray and David Doll. "A Detailed Field Study of Direct Correlations Between Ground Truth Crop Water Stress and Normalized Difference Vegetation Index (NDVI) from Small Unmanned Aerial System (sUAS)." In Proc. of the **Int. Conf. on Unmanned Aircraft Systems (ICUAS).** June 2015. Denver, CO. http://dx.doi.org/10.1109/ICUAS.2015.7152331
92. Brendan Smith, Brandon Stark, Tiebiao Zhao and YangQuan Chen. "An Outdoor Scientific Data Drone Ground Truthing Test Site." In Proc. of the **Int. Conf. on Unmanned Aircraft Systems (ICUAS).** June 2015. Denver, CO. http://dx.doi.org/10.1109/ICUAS.2015.7152320
93. Smith, Brendan, Beman, Michael, Gravano, David and Chen, YangQuan. Development and Validation of a Microbe Detecting UAV Payload". Proc. of the 2015 IFAC Workshop on RED-UAS (Research Education and Development of Unmanned Aerial Systems), November 23-25, 2015, Cancun, Mexico.

2014:

94. C. Zeng, Q. Yang and Y. Q. Chen. "Semimartingale approach of stochastic Gilpin-Ayala model driven by multifractional Brownian motion". **Proc. of the 5th International Conference on Nonlinear Science and Complexity (NSC 2014)**, August 4-9, 2014, Xi'an, China.
95. Chun Yin, YangQuan Chen*, Shouming Zhong. "Robust stability and stabilization of uncertain fractional-

order descriptor nonlinear system." **Proc. of the IFAC World Congress**, Cape Town, South Africa, Aug. 2014.
96. Chun Yin, YangQuan Chen*, Shouming Zhong. "Fractional-order power rate type reaching law for sliding mode control of uncertain nonlinear system." **Proc. of the IFAC World Congress**, Cape Town, South Africa, Aug. 2014.
97. Zhuo Li, Chun Yin, YangQuan Chen*, Jiaguo Liu. "Process Identification Using the Relay Feedback with a Fractional Order Integrator". **Proc. of the IFAC World Congress**, Cape Town, South Africa, Aug. 2014.
98. Brandon Stark, Sean Rider, YangQuan Chen*. "Optimal control of a diffusion process using networked unmanned aerial systems with smart health." **Proc. of the IFAC World Congress**, Cape Town, South Africa, Aug. 2014.
99. Zhuo Li, YangQuan Chen*. "Ideal, Simplified and Inverted Decoupling of Fractional Order TITO Processes." **Proc. of the IFAC World Congress**, Cape Town, South Africa, Aug. 2014.
100. Stark, B.; Stevenson, B.; Stow-Parker, K.; YangQuan Chen, "Embedded sensors for the health monitoring of 3D printed unmanned aerial systems," **Unmanned Aircraft Systems (ICUAS), 2014 International Conference on ,** pp.175,180, 27-30 May 2014 doi: 10.1109/ICUAS.2014.6842253
URL: http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=6842253&isnumber=6842225
101. Li Yan; Chen YangQuan; Zhai Lun, "Stability of fractional-order population growth model based on distributed-order approach," **Control Conference (CCC), 2014 33rd Chinese** , pp.2586-2591, 28-30 July 2014; doi: 10.1109/ChiCC.2014.6897043
URL: http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=6897043&isnumber=6895198
102. Jensen, A.M.; McKee, M.; YangQuan Chen, "Procedures for processing thermal images using low-cost microbolometer cameras for small unmanned aerial systems," **Geoscience and Remote Sensing Symposium (IGARSS), 2014 IEEE International** , pp.2629-2632, 13-18 July 2014 doi: 10.1109/IGARSS.2014.6947013 URL: http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=6947013&isnumber=6946328
103. Yan Li; YangQuan Chen; Hyo-Sung Ahn, "Fractional order iterative learning control for fractional order system with unknown initialization," **American Control Conference (ACC),** 2014 , pp.5712-5717, 4-6 June 2014; doi: 10.1109/ACC.2014.6859010
URL: http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=6859010&isnumber=6858556
104. Stark, B.; YangQuan Chen, "Optimal Collection of High Resolution Aerial Imagery with Unmanned Aerial Systems," **Unmanned Aircraft Systems (ICUAS), 2014 International Conference on** , pp.89-94, 27-30 May 2014 doi: 10.1109/ICUAS.2014.6842243
URL: http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=6842243&isnumber=6842225
105. Yan Li; Lun Zhai; YangQuan Chen; Hyo-Sung Ahn, "Fractional-order iterative learning control and identification for fractional-order Hammerstein system," **Intelligent Control and Automation (WCICA), 2014 11th World Congress on** , pp.840-845, June 29 2014-July 4 2014; doi: 10.1109/WCICA.2014.7052825
URL: http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=7052825&isnumber=7052676
106. Yan Li; YangQuan Chen, "Lyapunov stability of fractional-order nonlinear systems: A distributed-order approach," **Fractional Differentiation and Its Applications (ICFDA), 2014 International Conference on** , pp.1-6, 23-25 June 2014; doi: 10.1109/ICFDA.2014.6967416
URL: http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=6967416&isnumber=6967350
107. Yan Li; Yang Zhao; YangQuan Chen; Hyo-Sung Ahn, "An identification based optimization of fractional-order iterative learning control," **Control and Decision Conference (2014 CCDC), The 26th Chinese** , pp.7-12, May 31 2014-June 2 2014; doi: 10.1109/CCDC.2014.6852108 URL: http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=6852108&isnumber=6852105
108. Wei Yu; Ying Luo; Youguo Pi; YangQuan Chen, "Fractional-order modeling of a permanent magnet synchronous motor velocity servo system: Method and experimental study," **Fractional Differentiation and Its Applications (ICFDA), 2014 International Conference on ,** pp.1-6, 23-25 June 2014 doi: 10.1109/ICFDA.2014.6967365 URL: http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=6967365&isnumber=6967350

109. Y. Li; Y. Chen; H. S. Ahn. “A high-gain adaptive fractional-order iterative learning control” **Control & Automation (ICCA), 11th IEEE International Conference on;** Year: 2014; Pages: 1150 - 1155, DOI: http://dx.doi.org/10.1109/ICCA.2014.6871084
110. Hoffer, N.V.; Coopmans, C.; YangQuan Chen; Fullmer, R.R., "Small low-cost unmanned aerial vehicle system identification: Brief sensor survey and data quality, consistency checking, and reconstruction," **Unmanned Aircraft Systems (ICUAS), 2014 International Conference on** , pp.477-482, 27-30 May 2014; doi: 10.1109/ICUAS.2014.6842288

URL: http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=6842288&isnumber=6842225

111. Tiebiao Zhao; Zhuo Li; YangQuan Chen, "Fractional order nonlinear model predictive control using RIOTS_95," **Fractional Differentiation and Its Applications (ICFDA), 2014 International Conference on** , pp.1-6, 23-25 June 2014; doi: 10.1109/ICFDA.2014.6967366

URL: http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=6967366&isnumber=6967350

112. Zhuo Li; Tiebiao Zhao; YangQuan Chen, "A low cost research platform for modeling and control of multi-input multi-output fractional order dynamic systems," **Fractional Differentiation and Its Applications (ICFDA), 2014 International Conference on ,** pp.1-6, 23-25 June 2014; doi: 10.1109/ICFDA.2014.6967431

URL: http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=6967431&isnumber=6967350

113. Yang Zhao; Yan Li; YangQuan Chen, "Complete parametric identification of fractional order Hammerstein systems," **Fractional Differentiation and Its Applications (ICFDA), 2014 International Conference on** , pp.1-6, 23-25 June 2014; doi: 10.1109/ICFDA.2014.6967417

URL: http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=6967417&isnumber=6967350

114. Zhuo Li; YangQuan Chen, "Identification of linear fractional order systems using the relay feedback approach," **American Control Conference (ACC)**, 2014 , pp.3704-3709, 4-6 June 2014

doi: 10.1109/ACC.2014.6858830

URL: http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=6858830&isnumber=6858556

115. Zhuo Li; Chun Yin; YangQuan Chen, "Plasma impedance matching using fractional order sliding mode based extremum seeking control," **Decision and Control (CDC), 2014 IEEE 53rd Annual Conference on** , pp.3444-3449, 15-17 Dec. 2014; doi: 10.1109/CDC.2014.7039923

URL: http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=7039923&isnumber=7039338

116. Malek, H.; Dadras, S.; YangQuan Chen, "Application of fractional order current controller in three phase grid-connected PV systems," **American Control Conference (ACC),** 2014 , pp.5224-5229, 4-6 June 2014; doi: 10.1109/ACC.2014.6859509

URL: http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=6859509&isnumber=6858556

117. Stark, B.; Smith, B.; YangQuan Chen, "Survey of thermal infrared remote sensing for Unmanned Aerial Systems," **Unmanned Aircraft Systems (ICUAS), 2014 International Conference on** , pp.1294-1299, 27-30 May 2014; doi: 10.1109/ICUAS.2014.6842387

URL: http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=6842387&isnumber=6842225

118. Jianxiong Cao ; Changpin Li ; YangQuan Chen. “On tempered and substantial fractional calculus.” **Mechatronic and Embedded Systems and Applications (MESA), 2014 IEEE/ASME 10th International Conference on** DOI: 10.1109/MESA.2014.6935561 Publication Year: 2014 , Page(s): 1 - 6
119. Knight, J. ; Smith, B. ; YangQuan Chen. “An essay on unmanned aerial systems insurance and risk assessment.” **Mechatronic and Embedded Systems and Applications (MESA), 2014 IEEE/ASME 10th International Conference on** DOI: 10.1109/MESA.2014.6935560 Year: 2014 , Page(s): 1 - 6
120. Chun Yin ; QiShui Zhong ; YangQuan Chen ; Shou-ming Zhong. “Estimating the state of charge of lithium batteries based on fractional-order sliding-mode observer.” **Fractional Differentiation and Its Applications (ICFDA), 2014 Int. Conference on DOI**: 10.1109/ICFDA.2014.6967363 Year: 2014 , Page(s): 1 – 6
121. Yan Li ; YangQuan Chen ; Hyo-Sung Ahn. “A high-gain adaptive fractional-order iterative learning control” **Control & Automation (ICCA), 11th IEEE International Conference on** DOI: 10.1109/ICCA.2014.6871084 Publication Year: 2014 , Page(s): 1150 - 1155

2013:

122. Chun Yin, YangQuan Chen*, Shou-ming Zhong. “LMI based design of a sliding mode controller for a class of uncertain fractional-order nonlinear systems,” Proceedings of the American Control Conference, Washington DC, June 2013.
123. Yan Li ; YangQuan Chen ; Hyo-Sung Ahn. “On P-type fractional order iterative learning identification”. Control, Automation and Systems (ICCAS), 2013 13th International Conference on, DOI: 10.1109/ICCAS.2013.6703897; Publication Year: 2013 , Page(s): 219 – 225
124. Jensen, A.M. ; McKee, M. ; YangQuan Chen. “Calibrating thermal imagery from an unmanned aerial system – AggieAir.” Geoscience and Remote Sensing Symposium (IGARSS), 2013 IEEE International. DOI: 10.1109/IGARSS.2013.6721213, Publication Year: 2013 , Page(s): 542 - 545
125. Austin Jensen*, YangQuan Chen. “Tracking Tagged Fish With Swarming Unmanned Aerial Vehicles Using Fractional Order Potential Fields and Kalman Filtering.” The 2013 International Conference on Unmanned Aircraft Systems, ICUAS'13, Atlanta, GA, May 28-31, 2013.
126. Austin Jensen*, Cal Coopmans, YangQuan Chen. “Basics and Guidelines of Complementary Filters for Small UAS Navigation.” The 2013 International Conference on Unmanned Aircraft Systems, ICUAS'13, Atlanta, GA, May 28-31, 2013.
127. Jinlu Han, Long Di, Cal Coopmans, YangQuan Chen*. “Fractional Order Controller for Pitch Loop Control of a VTOL UAV.” The 2013 International Conference on Unmanned Aircraft Systems, ICUAS'13, Atlanta, GA, May 28-31, 2013.
128. Peter Ferrell, Brendan Smith, Brandon Stark, YangQuan Chen*. “Dynamic Flight Modeling of a Multi-Mode Flying Wing Quadrotor” The 2013 International Conference on Unmanned Aircraft Systems, ICUAS'13, Atlanta, GA, May 28-31, 2013.
129. Brandon Stark, Brennan Stevenson, YangQuan Chen*. “Implementation of ADS-B for Small Unmanned Aerial Systems: Case Study and Regulatory Practices” The 2013 International Conference on Unmanned Aircraft Systems, ICUAS'13, Atlanta, GA, May 28-31, 2013.
130. Nathan Hoffer, Cal Coopmans, Austin Jensen, YangQuan Chen*. “Small Low Cost Unmanned Aerial Vehicle System Identification: A Survey and Catagorization”. The 2013 International Conference on Unmanned Aircraft Systems, ICUAS'13, Atlanta, GA, May 28-31, 2013.
131. Jinlu Han, YangQuan Chen*. “Cooperative Contour Mapping of a Diffusive Signal Field by formations of Multiple UAVs.” The 2013 Int. Conf. on Unmanned Aircraft Systems, ICUAS'13, Atlanta, GA, May 28-31, 2013.
132. Cal Coopmans*, Austin Jensen, YangQuan Chen. “Fractional-Order Complementary Filter for Small Unmanned Aerial System.” The 2013 International Conference on Unmanned Aircraft Systems, ICUAS'13, Atlanta, GA, May 28-31, 2013.
133. Daniel Stuart, Ke-Cai Cao, Caibin Zeng, YangQuan Chen, Keith Christensen, Anthony Chen. “A Framework for Modeling and Managing Mass Pedestrian Evacuations Involving Individuals with Disabilities: Networked Segways as Mobile Sensors & Actuators.” DETC2013-12724. ASME/IEEE MESA 2013, ASME IDETC/CIE, August 4-7, 2013. Portland, OR, USA.
134. Chun Yin, Zhuo Li, YangQuan Chen, Shou-min Zhong. “Fractional Order Sliding Mode Control Based on Fractional Order Reaching Law: Reaching Condition Analysis and Experimental Validation.” DETC2013-12726. FDTA2013. ASME/IEEE MESA 2013, ASME IDETC/CIE, August 4-7, 2013. Portland, OR, USA.
135. Chun Yin, Brandon Stark, YangQuan Chen, Shou-min Zhong. “Minimum Energy Cognitive Lighting Control: Stability Analysis and Experiments.” DETC2013-12734. ASME/IEEE MESA 2013, ASME IDETC/CIE, August 4-7, 2013. Portland, OR, USA. (Best Application Paper Award of MESA2013)
136. Caibin Zeng and YangQuan Chen. “Optimal random search, fractional dynamics and fractional calculus.” DETC2013-12735. FDTA2013. ASME/IEEE MESA 2013, ASME IDETC/CIE, August 4-7, 2013. Portland, OR, USA.
137. Brandon Stark, Zhuo Li, Brendan Smith, YangQuan Chen. “Take-Home Mechatronics Control Labs: A Low-Cost Personal Solution and Educational Assessment.” DETC2013-12746 ASME/IEEE MESA 2013, ASME IDETC/CIE, August 4-7, 2013. Portland, OR, USA.
138. Brandon Stark, Tejal Patel, YangQuan Chen. “HRV monitoring for human factor research in UAS,”

DETC2013-12749 ASME/IEEE MESA 2013, ASME IDETC/CIE, August 4-7, 2013. Portland, OR, USA.

139. Sara Dadras, Hadi Malek, YangQuan Chen. "Fractional Order Coulomb Friction Compensation: Convergence Analysis and Experimental Validation on a Fractional Horsepower Dynamometer." DETC2013- 12765 FDTA2013. ASME/IEEE MESA 2013, ASME IDETC/CIE, Aug. 4-7, 2013. Portland, OR, USA.
140. Daniel Stuart, YangQuan Chen, Keith Christensen, Anthony Chen and Yong Kim. "Utilizing Augmented Reality Technology for Crowd Pedestrian Analysis Involving Individuals with Disabilities." DETC2013-12793 ASME/IEEE MESA 2013, ASME IDETC/CIE, August 4-7, 2013. Portland, OR, USA.
141. Hadi Malek, Sara Dadras, YangQuan Chen. "An Improved Maximum Power Point Tracking Based on Fractional Order Extremum Seeking Control for Grid-Connected Photovoltaic (PV) Systems." DETC2013-13267 ASME/IEEE MESA 2013, ASME IDETC/CIE, August 4-7, 2013. Portland, OR, USA.
142. Miguel Leonardo, Austin Jensen, YangQuan Chen, Mac McKee, Calvin Coopmans. "Fish track UAV payload system: A Wildlife Telemetry using UAV's for moving Target and moving Detector." DETC2013-13444. ASME/IEEE MESA 2013, ASME IDETC/CIE, August 4-7, 2013. Portland, OR, USA.
143. Sara Dadras and YangQuan Chen. "Sliding Mode Based LMI Criterion for Robust Stabilization of Uncertain Fractional Order Nonlinear Systems." FDTA2013. ASME/IEEE MESA 2013, ASME IDETC/CIE, August 4-7, 2013. Portland, OR, USA.

2012:

144. Xu, Y., Tian, Y.-P., Chen, Y. "Design of consensus protocol for nonholonomic systems under directed communication topology." Dec. 2012. Proceedings of the IEEE Conference on Decision and Control , art. no. 6426977, pp. 6253-6258. Maui, HI, USA. http://dx.doi.org/10.1109/CDC.2012.6426977
145. Malek, H., Dadras, S., Chen, Y. "A fractional order maximum power point tracker: Stability analysis and experiments." Dec. 2012. Proceedings of the IEEE Conference on Decision and Control , art. no. 6425961 , pp. 6861-6866. Maui, HI, USA. http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=6425961
146. Zeng, C., Chen, Y., Yang, Q. "Robust controllability of interval fractional order linear time invariant stochastic systems." Dec. 2012. Proceedings of the IEEE Conference on Decision and Control , art. no. 6425949 , pp. 4047-4050. Maui, HI, USA. http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=6425949
147. Zeng, C., Chen, Y., Yang, Q. "Almost sure and moment stability properties of LTI stochastic dynamic systems driven by fractional Brownian motion." Dec. 2012. Proceedings of the IEEE Conference on Decision and Control , art. no. 6425954 , pp. 4733-4736. Maui, HI, USA. http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=6425954
148. Yin, C., Stark, B., Zhong, S.-M., Chen, Y. "Global Extremum Seeking Control with Sliding Modes for output-feedback global tracking of nonlinear systems." Dec. 2012. Proceedings of the IEEE Conference on Decision and Control , art. no. 6426670 , pp. 7113-7118. Maui, HI, USA. http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=6426670
149. Shuai Hu, Wen Chen, Yangquan Chen. "Identification of Parameters in Distributed Order Relaxation Process." (#117). Proceedings of 2012 Fractional Derivative and Applications (FDA2012), Nanjing, China, May 15-17, 2012.
150. Zhuang Jiao, YangQuan Chen. "Stability analysis of fractional-order delay system for the matrix case." (#231) Proceedings of 2012 Fractional Derivative and Applications (FDA2012), Nanjing, China, May 15-17, 2012.
151. Xiaona Song, YangQuan Chen. "An LMI approach for H∞ analysis and PID control of fractional-order systems." (#286) ibid Caibin Zeng, Qigui Yang, Peng Guo, YangQuan Chen. "The Langevin equation associated with fractional Brownian motion" (#159) Proceedings of 2012 Fractional Derivative and Applications (FDA2012), Nanjing, China, May 15-17, 2012.
152. Peng Guo, Caibin Zeng, YangQuan Chen, Changpin Li. "A discrete method for fractional Langevin equation driven by fractional Brownian motion." (#023) Proceedings of 2012 Fractional Derivative and Applications (FDA2012), Nanjing, China, May 15-17, 2012.
153. Xuefeng Zhang, YangQuan Chen. "Non Existence of Periodic Solutions of Rational Fractional Order Linear

Time Invariant Systems." (#122) Proceedings of 2012 Fractional Derivative and Applications (FDA2012), Nanjing, China, May 15-17, 2012.

154. Xuefeng Zhang, YangQuan Chen. "Non Existence of Periodic Solutions of Linear Time Varying Periodic Fractional Order Systems." (#123) Proceedings of 2012 Fractional Derivative and Applications (FDA2012), Nanjing, China, May 15-17, 2012.
155. Xuefeng Zhang, YangQuan Chen. "Controllability and Observability of Fractional Order Linear Time Varying Systems." (#124) Proceedings of 2012 Fractional Derivative and Applications (FDA2012), Nanjing, China, May 15-17, 2012.
156. Deliang Qian, Jian Xu, YangQuan Chen. "The Normal Form of the Pitchfork Bifurcation for Fractional-Order Systems." (#268) Proceedings of 2012 Fractional Derivative and Applications (FDA2012), Nanjing, China, May 15-17, 2012.
157. Dali Chen, Dingyu Xue, YangQuan Chen. "Fractional differentiation-based approach for robust image edge detection." (#046) Proceedings of 2012 Fractional Derivative and Applications (FDA2012), Nanjing, China, May 15-17, 2012.
158. Xianming Ye, Jiangfeng Zhang, YangQuan Chen, Xiaohua Xia. "Fractional calculus and analysis and synthesis of the variability of irradiance and PV power time series." (#069) Proceedings of 2012 Fractional Derivative and Applications (FDA2012), Nanjing, China, May 15-17, 2012.
159. Lili Cao, Baodong Liu, Yan Li and YangQuan Chen. "Some Fundamental Relaxation Properties of Fractional Order Weighted Distributed Parameter Maxwell Model." (#091) Proceedings of 2012 Fractional Derivative and Applications (FDA2012), Nanjing, China, May 15-17, 2012.
160. Fengyu Zhou, Yang Zhao, Yan Li and YangQuan Chen. "An Implementation of Distributed Order PI Controller and Its Applications to the Wheeled Service Robot." (#090) Proceedings of 2012 Fractional Derivative and Applications (FDA2012), Nanjing, China, May 15-17, 2012.
161. Chun Yin, Yangquan Chen, Shouming Zhong. "Robust stability conditions for fractional-order linear systems with nonlinear uncertain parameters and the fractional order." (#161) Proceedings of 2012 Fractional Derivative and Applications (FDA2012), Nanjing, China, May 15-17, 2012.
162. Ke-Cai Cao, Caibin Zeng, Dan Stuart, YangQuan Chen. "Fractional Order Dynamic Modeling of Crowd Pedestrians." (#257) Proceedings of 2012 Fractional Derivative and Applications (FDA2012), Nanjing, China, May 15-17, 2012.
163. Sang-Chul Lee, Yan Li, YangQuan Chen, Hyo-Sung Ahn. "H1 Filtering for Fractional Order Systems." (#269) Proceedings of 2012 Fractional Derivative and Applications (FDA2012), Nanjing, China, May 15-17, 2012.
164. Dingyu Xue and YangQuan Chen. "OptimFOPID: A MATLAB Interface for Optimum Fractional-order PID Controller Design for Linear Fractional-order Plants." Proceedings of 2012 Fractional Derivative and Applications (FDA2012), Nanjing, China, May 15-17, 2012.
165. Brandon Stark, Calvin Coopmans, YangQuan Chen. "A Framework for Analyzing Human Factors in Unmanned Aerial Systems." Proc. of the 2012 Int. Symposium on Resilient Control Systems (ISRCS2012), SLC, UT, USA. August 2012
166. Brandon Stark, Calvin Coopmans, YangQuan Chen*. "Concept of Operations for Personal Remote Sensing Unmanned Aerial Systems." Proc. of the International Conference on Unmanned Aircraft Systems (ICUAS2012), June 12-15, 2012, Philadelphia, PA, USA.
167. Zhuo Li, Nathan Hoffer, Brandon Stark, YangQuan Chen*. "Design, Modeling and Validation of a T-tail Unmanned Aerial Vehicle." Proc. of the International Conference on Unmanned Aircraft Systems (ICUAS2012), June 12-15, 2012, Philadelphia, PA, USA.
168. Jinlu Han, Yaojin Xu, Long Di, YangQuan Chen*. "Low-cost Multi-UAV Technologies for Contour Mapping of Nuclear Radiation Field." Proc. of the International Conference on Unmanned Aircraft Systems (ICUAS2012), June 12-15, 2012, Philadelphia, PA, USA.
169. Zheng, Jingjing; Li, Yan*; Liu, Baodong; Chen, YangQuan. "The Lp Stability Analysis of the Basic Functions for Fractional Order Systems." 24th Chinese Control and Decision Conference. 23 May - 25 May 2012, Taiyuan, China. http://www.ccdc.neu.edu.cn/

170. Chen, Da-li*; Chen, YangQuan; Xue, Dingyu; Pan, Feng. “Adaptive Image Enhancement Based on Fractional Differential Mask.” 24th Chinese Control and Decision Conference. 23 May - 25 May 2012, Taiyuan, China. http://www.ccdc.neu.edu.cn/
171. Chen, Da-li*; Chen, YangQuan; Xue, Dingyu. “Robust Fractional Order Differentiator.” 24th Chinese Control and Decision Conference. 23 May - 25 May 2012, Taiyuan, China. http://www.ccdc.neu.edu.cn/
172. Ivo Petras* and YangQuan Chen. “Fractional-Order Circuit Elements with Memory”, ICCC2012. http://web.tuke.sk/ICCC/internet.php?param=default
173. Ying Luo, Tao Zhang, Li Zhou, BongJin Lee, Changik Kang, YangQuan Chen*. “Pre-Filtering Head-Dependent Adaptive Feed-Forward Compensation for Linear Vibration in Hard-Disc-Drive.” Prof. of the 2012 American Control Conference, pages 1967-1972. June 26-29, 2012, Montreal, Canada.
174. Zhuang Jiao, YangQuan Chen*, Yisheng Zhong. “Stability Condition of Linear Time-Invariant Distributed-Order Dynamic Systems”. Prof. of the 2012 American Control Conference, pages 5930-5935. June 26-29, 2012, Montreal, Canada.
175. Xuefeng Zhang, YangQuan Chen*. “Remarks of Fractional Order Control”. Prof. of the 2012 American Control Conference, pages 5169-5173. June 26-29, 2012, Montreal, Canada.
176. Austin Jensen+*, Bethany Neilson, Mac McKee, YangQuan Chen. “Thermal Remote Sensing With An Autonomous Unmanned Aerial Remote Sensing Platform For Surface Stream Temperatures.” The IGARSS 2012 #5097. 3/23/2012 http://www.igarss2012.org/
177. Hadi Malek+, Sara Dadras+, Robert Burt*, James Cook, YangQuan Chen. "Maximum Power Point Tracking Techniques For Efficient Photovoltaic Microsatellite Power Supply System." 26th Annual AIAA/USU Conference on Small Satellites. 3/19/2012 http://smallsat.org/
178. Ke-Cai Cao; PingWei Fan; YangQuan Chen. “Decision-making of Robots in Distributed Control of Diffusion Process,” Proc. of the IEEE/ASME Int. Conf. on Mechatronics and Embedded Systems and Applications, pp.23-28. July 8-10, 2012, Suzhou, China
179. Yan Li; YangQuan Chen. “Theory and Implementation of Weighted Distributed Order Integrator,” Proc. of the IEEE/ASME Int. Conf. on Mechatronics and Embedded Systems and Applications, pp.119-124. July 8-10, 2012, Suzhou, China

2011:

180. Ying Luo and YangQuan Chen*. “Stabilizing and Robust FOPI Controller Synthesis for First Order Plus Time Delay Systems.” Proc. of the IEEE CDC 2011, Orlando, FL, USA, Dec. 11-15, 2011.
181. Yan Li+*, Hyosung Ahn and YangQuan Chen. “A Generalized Fractional-Order Iterative Learning Control.” Proc. of the IEEE CDC 2011, Orlando, FL, USA, Dec. 11-15, 2011.
182. Wen Chen*, Yeh, Chih-Ping+ and YangQuan Chen. “Robust Iterative Learning Control Synthesized with Sliding-Mode Control for Output Tracking.” Proc. of the IEEE CDC 2011, Orlando, FL, USA, Dec. 11-15, 2011.
183. Yan Li*, YangQuan Chen and Hyo-Sung Ahn. “On the PD^{α}−Type Iterative Learning Control for the Fractional-Order Nonlinear Systems.” Proc. of the 2011 American Control Conference - ACC 2011, San Francisco, California, USA, June 29 - July 1, 2011
184. Ying Luo+, YangQuan Chen* and YouGuo Pi. “Fractional Order Adaptive Feedforward Cancellation.” Proc. of the 2011 American Control Conference - ACC 2011, San Francisco, California, USA, June 29 - July 1, 2011.
185. Ying Luo+, YangQuan Chen*. “Synthesis of Robust PID Controllers Design with Complete Information On Pre-Specifications for the FOPTD Systems.” Proc. of the 2011 American Control Conference - ACC 2011, San Francisco, California, USA, June 29 - July 1, 2011.
186. Tobias Fromm+, Long Di+, YangQuan Chen* and Holger Voos. “Visual Attitude Estimation For Low-Cost Personal Remote Sensing Systems.” Third International Workshop on Small UAV Technologies and Applications (SUAVTA), 7th ASME/IEEE International Conference on Mechatronics and Embedded Systems and Applications (MESA11), part of the 2011 ASME DETC/CIE. https://www.asmeconferences.org/IDETC2011/
187. Yaojin Xu+, Di Long+ and YangQuan Chen*. “Consensus Based Multiple Small Fixed-Wing UAV Formation.” Ibid.

188. Di Long+, Haiyang Chao+, Jinlu Han+ and YangQuan Chen*. "Cognitive Multi-UAV Formation Flight: Principle, Low-Cost UAV Testbed, Controller Tuning And Experiments." Ibid.
189. Di Long+ and YangQuan Chen*. "Autonomous Flying Under 500 USD Based on RC Aircraft." Ibid.
190. Calvin Coopmans+, Di Long+, Austin Jensen+, Aaron Dennis+, and YangQuan Chen*. "Improved Architecture Designs For A Low Cost Personal Remote Sensing Platform: Flight Control And Safety." Ibid.
191. Pooja Kavathekar+ and YangQuan Chen*. "Vehicle Platooning: A Brief Survey And Categorization." ibid
192. Long Di+, Tobias Fromm+, and YangQuan Chen*. "A Data Fusion System for Attitude Estimation of Low-cost Miniature UAVs." Proc. of the 2011 International Conference on Unmanned Aerial Systems (ICUAS 2011), Denver, CO. May 2011
193. Jensen, A.M.+*, Hardy, T., Mckee, M. & Chen, Y.Q. "Using a Multispectral Autonomous Unmanned Aerial Remote Sensing Platform (AggieAir) for Riparian and Wetland Applications." 2011 Proc. IEEE Int. Geoscience and Remote Sensing Symp. (IGARSS11)
194. Gianni Pagnini and YangQuan Chen*. "Mellin Convolution for Signal Filtering and its Application to the Gaussianization of Lévy Noise" **DETC2011-47392** Proc. of the ASME DETC/CIE 2011 Conferences, Washington DC, August 29-31, 2011. The Fifth International Symposium on Fractional Derivatives and Their Applications, part of The 7th ASME/IEEE MESA (Mechatronics and Embedded Systems and Applications) Conference.
195. Shiming Xue, Junyi Cao*, and Yangquan Chen. "Nonlinear Dynamic Analysis of a Cracked Rotor-Bearing System With Fractional Order Damping," **DETC2011-47415** Proc. of the ASME DETC/CIE 2011 Conferences, Washington DC, August 29-31, 2011. The Fifth International Symposium on Fractional Derivatives and Their Applications, part of The 7th ASME/IEEE MESA (Mechatronics and Embedded Systems and Applications) Conference.
196. Igor Podlubny*, Tomas Skovranek, Viktor V. Verbickij, YangQuan Chen, Blas M. Vinagre Jara, and Ivo Petras. "Discrete Fractional Calculus: Non-Equidistant Grids and Variable Step Length," **DETC2011-47623 ibid**
197. Deshun Yin*, Hao Wu, Chen Cheng, and YangQuan Chen. "Fractional Order Constitutive Model of Geomaterials Under the Condition of Triaxial Test." **DETC2011-47734 ibid**
198. Dali Chen, YangQuan Chen*, and Dingyu Xue. "Digital Fractional Order Savitzky-Golay Differentiator and its Application," **DETC2011-47864 ibid**
199. Zhuang Jiao and YangQuan Chen. "Impulse Response of a Generalized Fractional Second Order Filter," **DETC2011-47867 ibid**
200. Hadi Malek+, Ying Luo+, and YangQuan Chen*. "Tuning Fractional Order Proportional Integral Controllers for Time Delayed Systems With a Fractional Pole." **DETC2011-47872 ibid**
201. Hu Sheng+ and YangQuan Chen*. "Multifractional Property Analysis of Human Sleep EEG Signals," **DETC2011-47878 ibid**
202. Hu Sheng and YangQuan Chen, "Effects of Median Filtering on Fractional Processes," **DETC2011-47880 ibid**
203. Yan Li and YangQuan Chen. "Theory and Implementation of Distributed-Order Element Networks," **DETC2011-48063 ibid**
204. Wei Sun+, YangQuan Chen*, and Changpin Li. "Multi-Group Consensus of Heterogeneous Fractional-Order Nonlinear Agents via Pinning Control" **DETC2011-48151 ibid**
205. Xiaona Song+*; Tejado, I.+; YangQuan Chen; "Stabilization for fractional-order networked control systems with input time-varying delays." Advanced Mechatronic Systems (ICAMechS), 2011 International Conference on Publication Year: 2011 , Page(s): 39 - 42
206. Hyo-Sung Ahn*; YangQuan Chen; Moore, K.L.; "Multi-agent coordination by iterative learning control: Centralized and decentralized strategies." Intelligent Control (ISIC), 2011 IEEE International Symposium on Digital Object Identifier: 10.1109/ISIC.2011.6045400 Publication Year: 2011 , Page(s): 394 - 399
207. Xiaona Song+; Tejado, I.+; YangQuan Chen*; "Remote output feedback stabilization for fractional-order systems via communication networks."; Resilient Control Systems (ISRCS), 2011 4th International Symposium on Digital Object Identifier: 10.1109/ISRCS.2011.6016088 Publication Year: 2011 , Page(s): 49 - 54

208. Tejado, Inés+; Vinagre, B. M.*; Chen, YangQuan. "Fractional Gain Scheduled Controller for a Networked Smart Wheel: Experimental Results." Proc. of the 2011 IFAC World Congress, Volume # 18 | Part# 1, Milano, Italy. 10.3182/20110828-6-IT-1002.01094
209. Song, Xiaona+; Chen, YangQuan*; Tejado, Inés+; Vinagre, B. M. "Multivariable Fractional Order PID Controller Design Via LMI Approach." Proc. of the 2011 IFAC World Congress, Volume # 18 | Part# 1, Milano, Italy. 10.3182/20110828-6-IT-1002.03301
210. Xianming Ye+*, Xiaohua Xia, Jiangfeng Zhang and YangQuan Chen. "Characterizing Long Memories in Household Geyser Power Consumption Time Series." Prof. of the IEEE AfriCon 2011 – Zambia, Sept. 13-15, 2011.
211. Laurentz E. Olivier+ and Ian K. Craig* and YangQuan Chen. "Fractional Order Disturbance Observer for Run-of-Mine Ore Milling Circuit." Prof. of the IEEE AfriCon 2011 – Zambia, Sept. 13-15, 2011.

2010:

212. Christophe Tricaud+*, YangQuan Chen. "Optimal Trajectories of Mobile Remote Sensors for Parameter Estimation in Distributed Cyber-Physical Systems". **Proc. of the American Control Conference**, Marriott Waterfront - Baltimore, MD, USA. June 30 - July 2, 2010.
213. Haiyang Chao+*, YangQuan Chen. "Surface Wind Profile Measurement Using Multiple Unmanned Aerial Vehicles". **Proc. of the American Control Conference**, Marriott Waterfront - Baltimore, MD, USA. June 30 - July 2, 2010.
214. Xiaona Song+, Inés Tejado+, YangQuan Chen*. "Remote Stabilization for Fractional-Order Systems via Communication Networks". **Proc. of the American Control Conference**, Marriott Waterfront - Baltimore, MD, USA. June 30 - July 2, 2010.
215. Ying Luo+, YangQuan Chen*, Youguo Pi, B. M. Vinagre, Concepción A. Monje. "Optimized Fractional Order Conditional Integrator". **Proc. of the American Control Conference**, Marriott Waterfront - Baltimore, MD, USA. June 30 - July 2, 2010.
216. Yan Li+, YangQuan Chen*, Dingyu Xue+. "Sensitivity Function of LTI Fractional Order Dynamic Systems with Respect to the Orders". **Proc. of the American Control Conference**, Marriott Waterfront - Baltimore, MD, USA. June 30 - July 2, 2010.
217. Wen Chen* and YangQuan Chen. "Robust Iterative Learning Control for Output Tracking via Second-order Sliding Mode Technique". **Proc. of the American Control Conference**, Marriott Waterfront - Baltimore, MD, USA. June 30 - July 2, 2010.
218. Tricaud, Christophe+, Chen, YangQuan* and McKee, Mac. "Optimal Remote Sensors Trajectory Planning for Downscaling and Assimilation Problems". **Proc. of IEEE Conference on Decision and Control**, December 15-17, 2010, Hilton Atlanta Hotel, Atlanta, GA, USA
219. Yan Li+*, Hu Sheng+ and Chen, YangQuan. "On the Fractional-Order Distributed Parameter Low-Pass Filter". **Proc. of IEEE Conference on Decision and Control,** December 15-17, 2010, Hilton Atlanta Hotel, Atlanta, GA, USA
220. DaLi Chen+, YangQuan Chen*, Hu Sheng+ "Fractional Variational Optical Flow Model for Motion Estimation**". In Proceedings of the 4th IFAC Workshop on Fractional Differentiation and Its Applications**, University of Extremadura, Badajoz, Spain, October 18-20, 2010.
221. HongGuang Sun+*, Hu Sheng+, YangQuan Chen and Wen Chen. "On Dynamic-order Fractional Dynamic System**". In Proceedings of the 4th IFAC Workshop on Fractional Differentiation and Its Applications**, University of Extremadura, Badajoz, Spain, October 18-20, 2010.
222. Hu Sheng+, YangQuan Chen*, and TianShuang Qiu. "Tracking Performance of Hurst Estimators for Multifractional Gaussian Processes". **In Proceedings of the 4th IFAC Workshop on Fractional Differentiation and Its Applications**, University of Extremadura, Badajoz, Spain, October 18-20, 2010.
223. Hu Sheng+ and YangQuan Chen*. "Optimal Distributed-order Fractional Damping". **In Proceedings of the 4th IFAC Workshop on Fractional Differentiation and Its Applications**, University of Extremadura, Badajoz, Spain, October 18-20, 2010.
224. Hu Sheng+, Hongguang Sun+, Calvin Coopmans+, YangQuan Chen*, and Gary W. Bohannan*. "Physical Experimental Study of Variable-order Fractional Integrator and Differentiator". **In Proceedings of the 4th**

IFAC Workshop on Fractional Differentiation and Its Applications, University of Extremadura, Badajoz, Spain, October 18-20, 2010.

225. Hu Sheng+, YangQuan Chen* and TianShuang Qiu. "Robustness Analysis of Hurst Estimators for Multifractional Gaussian Processes**". In Proceedings of the 4th IFAC Workshop on Fractional Differentiation and Its Applications**, University of Extremadura, Badajoz, Spain, October 18-20, 2010.
226. Hu Sheng+, Yan Li+, and YangQuan Chen*. "Application of Numerical Inverse Laplace Transform Algorithms in Fractional Calculus". **In Proceedings of the 4th IFAC Workshop on Fractional Differentiation and Its Applications,** University of Extremadura, Badajoz, Spain, October 18-20, 2010.
227. Inés Tejado+*, Blas M. Vinagre and YangQuan Chen. "Fractional Gain and Order Scheduling Controller for Networked Control Systems with Variable Delay. Application to a Smart Wheel". **In Proceedings of the 4th IFAC Workshop on Fractional Differentiation and Its Applications,** University of Extremadura, Badajoz, Spain, October 18-20, 2010.
228. Yan Li+* and YangQuan Chen. "Fractional Order Universal Adaptive Stabilization for Fractional Order MIMO System**". In Proceedings of the 4th IFAC Workshop on Fractional Differentiation and Its Applications**, University of Extremadura, Badajoz, Spain, October 18-20, 2010.
229. Ying Luo+, Long Di+, Jinlu Han+, Haiyang Chao+, YangQuan Chen*. "VTOL UAV Altitude Flight Control Using Fractional Order Controllers". **In Proceedings of the 4th IFAC Workshop on Fractional Differentiation and Its Applications,** University of Extremadura, Badajoz, Spain, October 18-20, 2010.
230. Xiaona Song+ and YangQuan Chen*. "Fault Tolerant Control for Interval Fractional-Order Systems With Sensor Failures". **In Proceedings of the 4th IFAC Workshop on Fractional Differentiation and Its Applications**, University of Extremadura, Badajoz, Spain, October 18-20, 2010.
231. Yan Li*+, Hu Sheng+ and YangQuan Chen. "On Distributed Order Lead-Lag Compensator". **In Proceedings of the 4th IFAC Workshop on Fractional Differentiation and Its Applications**, University of Extremadura, Badajoz, Spain, October 18-20, 2010.
232. Christophe Tricaud+* and YangQuan Chen. "Smart Remote Sensing of Environmental Systems Using Unmanned Air Vehicles." **Proceedings of the 8th World Congress on Intelligent Control and Automation July 6-9 2010, Jinan, China. Pages 1800-1805.** 10.1109/WCICA.2010.5554548
233. Christophe Tricaud+* and YangQuan Chen. "D-Optimal Trajectories of Mobile Sensors with Fractional Dynamics for Parameter Estimation of Distributed Parameter Systems." **Proceedings of the 8th World Congress on Intelligent Control and Automation July 6-9 2010, Jinan, China. Pages: 220-225. 10.1109/WCICA.2010.5555021**
234. Yan Li+*, Hu Sheng+ and Yangquan Chen. "Impulse Response Invariant Discretization Of A Generalized Commensurate Fractional Order Filter." **Proceedings of the 8th World Congress on Intelligent Control and Automation July 6-9 2010, Jinan, China. Pages: 191-196. DOI: 10 .1109/WCICA.2010.5553926**
235. Hongguang Sun+*, Xiaona Song+ and Yangquan Chen. "A Class Of Fractional Dynamic Systems With Fuzzy Order." **Proceedings of the 8th World Congress on Intelligent Control and Automation July 6-9 2010, Jinan, China. Pages: 197-201.** DOI: 10.1109/WCICA.2010.5553923
236. Hu Sheng+; Haiyang Chao+; Calvin Coopmans+; Jinlu Han+; YangQuan Chen*; Mac MaKee. "Low-Cost UAV-Based Thermal Infrared Remote Sensing: Platform, Calibration and Applications", **In Proc. of the 2010 IEEE/ASME International Conference on Mechatronic and Embedded Systems and Applications,** July 15-17, 2010, Qingdao, ShanDong, China. Pages: 38-43. 10.1109/MESA.2010.5552031
237. Corentin Cheron+; Aaron Dennis+; Vardan Semerjyan+; YangQuan Chen*. "A Multifunctional HIL Testbed for Multirotor VTOL UAV Actuator". **In Proc. of the 2010 IEEE/ASME International Conference on Mechatronic and Embedded Systems and Applications**, July 15-17, 2010, Qingdao, ShanDong, China. Pages: 44-48. 10.1109/MESA.2010.5552032
238. Di Long+; Haiyang Chao+; YangQuan Chen*. "A Two-Stage Calibration Method for Low-cost UAV Attitude Estimation Using Infrared Sensors". **In Proc. of the 2010 IEEE/ASME International Conference on Mechatronic and Embedded Systems and Applications**, July 15-17, 2010, Qingdao, ShanDong, China. Pages: 137-142. 10.1109/MESA.2010.5552079
239. Hu Sheng+; Hongguang Sun+; YangQuan Chen*; Tianshuang Qiu. "A Variable Order Fractional Operator Based Synthesis Method for Multifractional Gaussian Noise". **In Proc. of the 2010 IEEE/ASME**

International Conference on Mechatronic and Embedded Systems and Applications, July 15-17, 2010, Qingdao, ShanDong, China. Pages: 474-479. 10.1109/MESA.2010.5552002

240. Yongshun Jin+*; YangQuan Chen. "A fractional-order synchronization of two networked motion control systems". **In Proc. of the 2010 IEEE/ASME International Conference on Mechatronic and Embedded Systems and Applications**, July 15-17, 2010, Qingdao, ShanDong, China. Pages: 504-510. 10.1109/MESA.2010.5552003
241. Johnathan Nielsen+; Levi Rock+; Brad Rogers+; Andrew Dalia+; Joshua Adams+; YangQuan Chen*. "Automated Social Coordination of Cyber-Physical Systems with Mobile Actuator and Sensor Networks". In **Proc. of the 2010 IEEE/ASME International Conference on Mechatronic and Embedded Systems and Applications**, July 15-17, 2010, Qingdao, ShanDong, China. Pages: 554-559. 10.1109/MESA.2010.5552016
242. Yan Li+*; Hu Sheng+; YangQuan Chen. "On Distributed Order Low-Pass Filter". In Proc. of the 2010 **IEEE/ASME International Conference on Mechatronic and Embedded Systems and Applications**, July 15-17, 2010, Qingdao, ShanDong, China. Pages: 588-592. (**Best Paper Award**) 10.1109/MESA.2010.5552095
243. YangQuan Chen*. "Fractional Calculus, Delay Dynamics and Networked Control Systems". In **Proceedings of the 3rd International Symposium on Resilient Control Systems**, August 10-12, 2010, Idaho Falls, ID, U.S.A. Pages: 58-63. https://secureweb.inl.gov/ISRCS2010/
244. Chao, Haiyang+; Coopmans, Calvin+; Di, Long+ and Chen, YangQuan*. "A Comparative Evaluation of Low-Cost IMUs for Unmanned Autonomous Systems". **In Proc. of the 2010 IEEE Conference on Multisensor Fusion and Integration**, September 5-7, 2010, Fort Douglas, University of Utah, Salt Lake City, Utah, USA. http://www.cs.utah.edu/mfi2010/
245. YangQuan Chen* and Hu Sheng+. "Optimal Time-Delayed Fractional-Order Damping". In **Proc. of The Third International Conference On Dynamics, Vibration And Control (ICDVC-2010)**, 12-14 MAY 2010, Hangzhou, China.
246. Austin Jensen+*; Norman Wildmann+; YangQuan Chen; Holger Voos. "In-Situ Unmanned Aerial Vehicle (UAV) Sensor Calibration To Improve Automatic Image Orthorectification". **Proc. of the IEEE IGARSS** 2010. July 25-30, 2010. Honolulu, Hawaii, USA. http://www.igarss2010.org/
247. Li, Yan+, Ahn, Hyo-Sung * and Chen, YangQuan. "Iterative Learning Control of a Class of Fractional Order Nonlinear Systems". In **Proc. of the 2010 IEEE Multi-conference on Systems and Control**, September 8-10, 2010, Yokohama, Japan. (ISIC2010) http://www.mei.titech.ac.jp/msc10/
248. Hongsheng Li; Xiulan Wen; Jianhua Zhang; Yangquan Chen. "A frequency-domain approach to PD-type iterative learning control." **2010 IEEE International Conference on Information and Automation (ICIA);** Digital Object Identifier: 10.1109/ICINFA.2010.5512246 Publication Year: 2010 , Page(s): 1652 – 1656.
249. Hongsheng Li; Yangquan Chen; Jianhua Zhang; Xiulan We. "A tuning algorithm of PD-type Iterative Learning Control" **2010 Chinese Control and Decision Conference (CCDC).** Digital Object Identifier: 10.1109/CCDC.2010.5499147 Publication Year: 2010 , Page(s): 1 – 6.
250. Ying Luo+*, YangQuan Chen and YouGuo Pi. "Fractional Order Ultra Low-Speed Position Servo: Improved Performance via Describing Function Analysis." **Virtual Control Conference 2010** (VCC2010). http://www.vcc-10.org/index_files/VCC_2010_Program.htm
251. Ying Luo+, Hongsheng Li, YangQuan Chen*. "Fractional Order Proportional and Derivative Controller Synthesis for A Class of Fractional Order Systems: Tuning Rule and Hardware-in-the-loop Experiment." In **Proc. of IEEE Conference on Decision and Control (CDC09),** Shanghai, China, Dec. 2009.
252. Chunyang Wang, Yongshun Jin+, YangQuan Chen*. "Auto-tuning of FOPI and FO[PI] Controllers with Iso-damping Property." In **Proc. of IEEE Conference on Decision and Control (CDC09),** Shanghai, China, Dec. 2009.
253. Christophe Tricaud+, YangQuan Chen*. "Time-Optimal Control of Fractional Dynamic Systems." **In Proc. of IEEE Conference on Decision and Control (CDC09),** Shanghai, China, Dec. 2009.
254. Shayok Mukhopadhyay+, YangQuan Chen*, Ajay Singh, Farrell Edwards. "Fractional Order Plasma Position Control of the STOR-1M Tokamak." **In Proc. of IEEE Conference on Decision and Control (CDC09),** Shanghai, China, Dec. 2009.

255. Wei Sun and YangQuan Chen*. “A Simulation Study of Consensus Speed over Scale-Free Networks”. In Proc. of the **IFAC Symposium on Networked Robotics (NetRob09),** Golden, CO, USA, Oct. 2009.
256. Joshua Adams+, Wei Sun+ and YangQuan Chen*. “Formations with Decentralized Centroidal Voronoi Tessellation Algorithm.” In **Proc. of the IFAC Symposium on Networked Robotics** (NetRob09), Golden, CO, USA, Oct. 2009.
257. Hyo-Sung Ahn* and Chen, YangQuan. “Periodic Adaptive Learning Control for Velocity-dependent Disturbance Compensation.” **ICCA 2009. The 7th IEEE International Conference on Control & Automation**, December 9-11, 2009, Christchurch, New Zealand.
258. Wang, Chunyang; Luo, Ying+ and Chen, YangQuan*. “Analytical Design of Fractional Order Proportional Integral and [Proportional Integral] Controllers for Robust Velocity Servo.” In **Proc. of The 4th IEEE Conference on Industrial Electronics and Applications**, Xi'an, China, 25-27 May 2009.
259. Ying Luo, YangQuan Chen*, Hyo-Sung Ahn, Youguo Pi. “Fractional Order Periodic Adaptive Learning Compensation for Cogging Effect in PMSM Position Servo System”. In **Proc. of The 2009 American Control Conference,** St. Louis, Missouri, USA, June 10 - 12, 2009.
260. Ying Luo+, YangQuan Chen*. “Fractional-order [Proportional Derivative] Controller for Robust Motion Control: Tuning Procedure and Validation”. In **Proc. of The 2009 American Control Conference**, St. Louis, Missouri, USA, June 10 - 12, 2009.
261. Christophe Tricaud+, YangQuan Chen*. “Optimal Mobile Actuator/Sensor Network Motion Strategy for Parameter Estimation in a Class of Cyber Physical Systems”. In **Proc. of The 2009 American Control Conference,** St. Louis, Missouri, USA, June 10 - 12, 2009.
262. Shayok Mukhopadhyay+, Yiding Han+, YangQuan Chen*. “Fractional Order Networked Control Systems and Random Delay Dynamics: A Hardware-In-The-Loop Simulation Study”. In **Proc. of The 2009 American Control Conference**, St. Louis, Missouri, USA, June 10 - 12, 2009.
263. Shelley Rounds+, YangQuan Chen*. “Cooperative Phototaxis Using Networked Mobile Sensors and Centroidal Voronoi Tessellations”. In Proc. of **The 2009 American Control Conference**, St. Louis, Missouri, USA, June 10 - 12, 2009.
264. Zhen Song*+, Chellury Ram Sastry, Nazif Cihan Tas, YangQuan Chen. “Feasibility Analysis on Optimal Sensor Selection in Cyber-Physical Systems”. In **Proc. of The 2009 American Control Conference**, St. Louis, Missouri, USA, June 10 - 12, 2009.
265. Christophe Tricaud+, YangQuan Chen*. Solution of Fractional Order Optimal Control Problems Using SVD-based Rational Approximations. In Proc. of **The 2009 American Control Conference**, St. Louis, Missouri, USA, June 10 - 12, 2009.
266. YangQuan Chen*, Ivo Petras, Dingyu Xue. “Fractional Order Control - A Tutorial”. (Lead Tutorial Paper). In Proc. of **The 2009 American Control Conference**, St. Louis, Missouri, USA, June 10 - 12, 2009. (15 pages)
267. Yihong Wang, Zhengang Zhao, Changpin Li and YangQuan Chen*. “Adomian's Method Applied to Navier-Stokes Equation with A Fractional Order”. In **Proc. of the ASME IDETC/CIE 2009, 4th Symposium on Fractional Derivatives and Their Applications (FDTA09),** Aug. 30-Sept. 2, 2009, San Diego, CA, USA. DETC2009-86691.
268. Changpin Li, Zhengang Zhaoa, and YangQuan Chen*. “Numerical Approximation and Error Estimation of a Time Fractional Order Diffusion Equation”. In **Proc. of the ASME IDETC/CIE 2009, 4th Symposium on Fractional Derivatives and Their Applications (FDTA09),** Aug. 30-Sept. 2, 2009, San Diego, CA, USA. DETC2009-86693.
269. Calvin Coopmans+, Ivo Petras and YangQuan Chen*. “Analogue Fractional-Order Generalized Memristive Devices”. In **Proc. of the ASME IDETC/CIE 2009, 4th Symposium on Fractional Derivatives and Their Applications (FDTA09)**, Aug. 30-Sept. 2, 2009, San Diego, CA, USA. DETC2009-86861.
270. Hu Sheng+ and YangQuan Chen*. “The Modeling of Great Salt Lake Elevation Time Series Based on FARIMA with Stable Innovations”. In **Proc. of the ASME IDETC/CIE 2009, 4th Symposium on Fractional Derivatives and Their Applications (FDTA09),** Aug. 30-Sept. 2, 2009, San Diego, CA, USA. DETC2009-86864.

271. Hu Sheng+ and YangQuan Chen*. "Robustness analysis of the estimators for noised long-range dependent time series". In **Proc. of the ASME IDETC/CIE 2009, 4th Symposium on Fractional Derivatives and Their Applications (FDTA09),** Aug. 30-Sept. 2, 2009, San Diego, CA, USA. DETC2009-86866.
272. Hu Sheng+, Nikita Zaveri+, YangQuan Chen*, Anhong Zhou*. "Analysis of electrochemical noise (ECN) of TiO2 nanoparticles coated Ti-6Al-4V in simulated biofluids using fractional order signal processing(FOSP) techniques". In Proc. of the **ASME IDETC/CIE 2009, 4th Symposium on Fractional Derivatives and Their Applications (FDTA09),** Aug. 30-Sept. 2, 2009, San Diego, CA, USA. DETC2009-86870.
273. Hu Sheng+, Hongguang Sun+, YangQuan Chen*, Leslie C. Mounteer Jr.+, Victoria G. Kmetzsch+, Charles Miller, Anhong Zhou*. "Fractional Order Signal Processing (FOSP) Technique For Chemotaxis Quantification Using Video Microscopy". In **Proc. of the ASME IDETC/CIE 2009, 4th Symposium on Fractional Derivatives and Their Applications (FDTA09),** Aug. 30-Sept. 2, 2009, San Diego, CA, USA. DETC2009-87472.
274. Hongguang Sun+, YangQuan Chen*, and Wen Chen. "The time-fractional differential equation model with random derivative order". In **Proc. of the ASME IDETC/CIE 2009, 4th Symposium on Fractional Derivatives and Their Applications (FDTA09),** Aug. 30-Sept. 2, 2009, San Diego, CA, USA. DETC2009-87483.
275. Shayok Mukhopadhyay+, Calvin Coopmans+ and YangQuan Chen*. "Purely Analog Fractional Order PID Control Using Discrete Fractional Capacitors (Fractors): Synthesis and Experiments". In **Proc. of the ASME IDETC/CIE 2009, 4th Symposium on Fractional Derivatives and Their Applications (FDTA09),** Aug. 30-Sept. 2, 2009, San Diego, CA, USA. DETC2009-87490.
276. Yongshun Jin+, Ying Luo+, Chunyang Wang and YangQuan Chen*. "Fractional order proportional derivative (FOPD) and FO[PD] controller design for networked position servo systems". In **Proc. of the ASME IDETC/CIE 2009, 4th Symposium on Fractional Derivatives and Their Applications (FDTA09),** Aug. 30-Sept. 2, 2009, San Diego, CA, USA. DETC2009-87662
277. In´es Tejado+*, Blas M. Vinagre and YangQuan Chen. "Comparing Generalized Order PID Controllers for Networked Control Systems with Random Delays and Data Dropouts". **In Proc. of the ASME IDETC/CIE 2009, 4th Symposium on Fractional Derivatives and Their Applications (FDTA09),** Aug. 30-Sept. 2, 2009, San Diego, CA, USA. DETC2009-87202.
278. Yan Li+ and YangQuan Chen*. "Fractional Order Universal Adaptive Stabilizer for Fractional Order Systems". In **Proc. of the ASME IDETC/CIE 2009, 7th International Conference on Multibody Systems, Nonlinear Dynamics, and Control (MSNDC), Symposium on Classic and Fractional Dynamics on Continuous and Discontinuous Vector Fields**. Aug. 30-Sept. 2, 2009, San Diego, CA, USA. DETC2009-87758.
279. Christophe Tricaud and YangQuan Chen*. "Communication Topology in Online Optimal Sensing Policy for Parameter Estimation of Distributed Parameter Systems". **In Proc. of the ASME IDETC/CIE 2009, The First Symposium on Cyber-Physical Systems (ISCPS09), 2009 ASME/IEEE International Conference on Mechatronic and Embedded Systems and Applications (MESA09),** Aug. 30-Sept. 2, 2009, San Diego, CA, USA. DETC2009-87502
280. Christophe Tricaud+ and YangQuan Chen*. "Optimal Sensor Trajectories for Parameter Estimation in Distributed System with Bounded Parameters". In **Proc. of the ASME IDETC/CIE 2009, The First Symposium on Cyber-Physical Systems (ISCPS09), 2009 ASME/IEEE International Conference on Mechatronic and Embedded Systems and Applications (MESA09),** Aug. 30-Sept. 2, 2009, San Diego, CA, USA. DETC2009-87504
281. Shelley Rounds+ and YangQuan Chen*. "Dynamic Formation Control Using Networked Mobile Sensors and Centroidal Voronoi Tessellations". In **Proc. of the ASME IDETC/CIE 2009, The First Symposium on Cyber-Physical Systems (ISCPS09), 2009 ASME/IEEE International Conference on Mechatronic and Embedded Systems and Applications (MESA09),** Aug. 30-Sept. 2, 2009, San Diego, CA, USA. DETC2009-87509
282. Haiyang Chao+, Ying Luo+, Di Long+ and YangQuan Chen*. "Fractional Order Flight Control of a Small Fixed-Wing UAV: Controller Design and Simulation Study". In **Proc. of the ASME IDETC/CIE 2009, 1st Small Unmanned Aerial Vehicle Technologies and Applications (SUAVTA), 2009 ASME/IEEE**

International Conference on Mechatronic and Embedded Systems and Applications (MESA09), Aug. 30-Sept. 2, 2009, San Diego, CA, USA. DETC2009-87574

283. Austin M. Jensen+, Daniel Morgan+, YangQuan Chen*, Shannon Clemens, and Thomas Hardy. "Using Multiple Open-Source Low-Cost Unmanned Aerial Vehicles (UAV) For 3D Photogrammetry And Distributed Wind Measurement". In **Proc. of the ASME IDETC/CIE 2009, 1st Small Unmanned Aerial Vehicle Technologies and Applications (SUAVTA), 2009 ASME/IEEE International Conference on Mechatronic and Embedded Systems and Applications (MESA09),** Aug. 30-Sept. 2, 2009, San Diego, CA, USA. DETC2009- 87586
284. Calvin Coopmans*+, Haiyang Chao+ and YangQuan Chen. "Design and Implementation of Sensing and Estimation Software in AggieNav, a Small UAV Navigation Platform". In **Proc. of the ASME IDETC/CIE 2009, 1st Small Unmanned Aerial Vehicle Technologies and Applications (SUAVTA), 2009 ASME/IEEE International Conference on Mechatronic and Embedded Systems and Applications (MESA09),** Aug. 30-Sept. 2, 2009, San Diego, CA, USA. DETC2009- 87675
285. Austin Jensen*+, Yiding Han+ and YangQuan Chen. "Using Aerial Images to Calibrate The Inertial Sensors of A Low-Cost Multispectral Autonomous Remote Sensing Platform (AggieAir)". In **Proc. of the 2009 IEEE International Geoscience & Remote Sensing Symposium,** June 13-17, Cape Town, South Africa (IGARSS 2009 Paper #2613). http://www.grss-ieee.org/
286. Austin Jensen*+, YangQuan Chen, Thom Hardy and Mac McKee. "A Low-Cost Autonomous Multispectral Remote Sensing Platform: New Developments And Applications". In **Proc. of the 2009 IEEE International Geoscience & Remote Sensing Symposium**, Cape Town, South Africa (IGARSS 2009 Paper #2608).
287. Christopher J. Hall*+, Daniel Morgan+, Austin Jensen+, Haiyang Chao+, Calvin Coopmans+, Mitchel Humpherys+, and YangQuan Chen. "Team OSAM-UAV's Design for the 2008 AUVSI Student UAS Competition". In **Proc. of the ASME IDETC/CIE 2009, 1st Small Unmanned Aerial Vehicle Technologies and Applications (SUAVTA), 2009 ASME/IEEE International Conference on Mechatronic and Embedded Systems and Applications (MESA09),** Aug. 30-Sept. 2, 2009, San Diego, CA, USA. DETC2009- 86500
288. Luo, Ying*+; Wang, Chunyang and Chen, YangQuan. "Tuning Fractional Order Proportional Integral Controllers for Fractional Order Systems". In **Proc. of the The 21st Chinese Control and Decision Conference (CCDC),** Guilin, China in June 17-19, 2009. http://www.ccdc.neu.edu.cn/ (ieeeXplore)
289. Wang, Chunyang; Luo, Ying*+ and Chen, YangQuan. "Fractional Order Proportional Integral (FOPI) and [Proportional Integral] (FO[PI]) Controller Designs for First Order Plus Time Delay (FOPTD) Systems". In **Proc. of The 21st Chinese Control and Decision Conference (CCDC**), Guilin, China in June 17-19, 2009.
290. Jin, Yongshun+; Luo, Ying*+ and Chen, YangQuan. "LabView Based Experimental Validation of Fractional Order Motion Controllers". In **Proc. of The 21st Chinese Control and Decision Conference (CCDC),** Guilin, China in June 17-19, 2009.
291. Li, HongSheng*; Wen, Xiulan; Chen, YangQuan and Zhang, Jianhua. "Design of Integer and Fractional Order Controllers for Cross-Coupled Contour Motion Systems". In **Proc. of The 21st Chinese Control and Decision Conference (CCDC)**, Guilin, China in June 17-19, 2009.
292. I. Tejado+*, M. Romero, B.M. Vinagre, Á.P. de Madrid2 and Y.Q. Chen. "Characterization and modeling of network traffic to control a smart wheel remotely". M. Ortigueira et.al. (eds.) **Proceedings of the 2009 Symposium on Fractional Signals and Systems,** Lisbon, Portugal, November 4-6, 2009
293. Ivo Petras*, YangQuan Chen and Calvin Coopmans. "Fractional-Order Memristive Systems", In **Proc. of the 14th IEEE International Conference on Emerging Technologies and Factory Automation.** Sept. 22-26, 2009, Mallorca, Spain.
294. Hyo-Sung Ahn*, Kevin L. Moore, and YangQuan Chen. "Iterative learning control for batch processes with missing measurements". **Proc. of the Symposium on Learning Control at CDC2009**, Shanghai, Shanghai Jiaotong University, Dec. 14-15, 2009.
295. Yan Li*, YangQuan Chen and Hyo-Sung Ahn. "Fractional-Order Iterative Learning Control for Fractional-Order Linear Systems". **Proc. of the Symposium on Learning Control at CDC2009**, Shanghai, Shanghai Jiaotong University, Dec. 14-15, 2009.

296. Austin M. Jensen, Marc Baumann, YangQuan Chen. "Low-Cost Multispectral Aerial Imaging Using Autonomous Runway-Free Small Flying Wing Vehicles." (Final paper pdf, initial abstract pdf) (PDF abstract). **2008 IEEE International Geoscience & Remote Sensing Symposium**, July 6-11, 2008 | Boston, Massachusetts, U.S.A. (Student travel award, $1000)
297. YangQuan Chen* and Christophe Tricaud+. "Optimal Interlaced Mobile Sensor Motion Planning and Parameter Estimation for Distributed Parameter Systems." **NSF CMMI Grantee Conference**. Knoxville, TN. Jan. 7-10, 2008.
298. Haiyang Chao+, Marc Baumann+, Austin Jensens+, YangQuan Chen*, Yongcan Cao, Wei Ren and Mac McKee. "Band-reconfigurable Multi-UAV-based Cooperative Remote Sensing for Real-time Water Management and Distributed Irrigation Control." **In Proceedings of the IFAC World Congress**, Seoul, Korea, July 2008,
299. Varsha Bhambhani+, YangQuan Chen*, Dingyu Xue. "Optimal Fractional Order Proportional Integral Controller for Varying Time-Delay Systems." **In Proceedings of the IFAC World Congress**, Seoul, Korea, July 2008,
300. Yongcan Cao+, Wei Ren*, YangQuan Chen. "Multi-Agent Consensus Using Both Current and Outdated States." **In Proceedings of the IFAC World Congress**, Seoul, Korea, July 2008, Accepted.
301. Maciej Patan, Christophe Tricaud+, YangQuan Chen*. « Resource-Constrained Sensor Routing for Parameter Estimation of Distributed Systems**." In Proceedings of the IFAC World Congress**, Seoul, Korea, July 2008,
302. Hyo-Sung Ahn*, Kevin L. Moore, YangQuan Chen. "Discrete-time Intermittent Iterative Learning Controller with Independent Data Dropouts." **In Proceedings of the IFAC World Congress**, Seoul, Korea, July 2008,
303. Hyo-Sung Ahn*, YangQuan Chen. "Conservatism-free Robust Stability Check of Fractional-order Interval Linear Systems." **In Proceedings of the IFAC World Congress**, Seoul, Korea, July 2008,
304. Ying Luo+, YangQuan Chen* and Hyo-Sung Ahn. "Fractional Order Adaptive Compensation for Cogging Effect in PMSM Position Servo Systems." **In Proc. of the 3rd IFAC Workshop on Fractional Derivative and Applications (FDA08),** Ankara, Turkey, Nov. 2008.
305. Yan Li+, YangQuan Chen* and Yongcan Cao+. "Fractional Order Universal Adaptive Stabilization." **In Proc. of the 3rd IFAC Workshop on Fractional Derivative and Applications (FDA08),** Ankara, Turkey, Nov. 2008. (Yan Li: Young Author Riemann-Liouville Award)
306. Christophe Tricaud+ and YangQuan Chen*. "Solving Fractional Order Optimal Control Problems in RIOTS_95 - A General-Purpose Optimal Control Problems Solver." **In Proc. of the 3rd IFAC Workshop on Fractional Derivative and Applications (FDA08),** Ankara, Turkey, Nov. 2008.
307. Yan Li+, YangQuan Chen*, Igor Podlubny and Yongcan Cao+. "Mittag-Leffler Stability of Fractional Order Nonlinear Dynamic Systems." **In Proc. of the 3rd IFAC Workshop on Fractional Derivative and Applications (FDA08),** Ankara, Turkey, Nov. 2008. (Yan Li: Young Author Riemann-Liouville Award)
308. Podlubny, Igor, Chechkin, A., Skovraneka, T., Chen, Yangquan, Vinagre, Blas. "Matrix Approach to Discrete Fractional Calculus II." **In Proc. of the 3rd IFAC Workshop on Fractional Derivative and Applications (FDA08),** Ankara, Turkey, Nov. 2008.
309. Varsha Bhambhani+, Yiding Han+, Shayok Mukhopadhyay+, Ying Luo+ and YangQuan Chen*. "Random delay effect minimization on a hardware-in-the-loop networked control system using optimal fractional order PI controllers." **In Proc. of the 3rd IFAC Workshop on Fractional Derivative and Applications (FDA08),** Ankara, Turkey, Nov. 2008.
310. Coopmans, Calvin; YangQuan Chen. "A general-purpose low-cost compact spatial-temporal data logger and its applications." **Proc. of the 2008 IEEE AUTOTESTCON,** Salt Lake City, UT, USA, 8-11 Sept. 2008, Page(s):64 – 68.
311. Ying Luo; Yang Quan Chen; Youguo Pi. "Authentic simulation studies of periodic adaptive learning compensation of cogging effect in PMSM position servo system." **Proc. of the 2008 Chinese Control and Decision Conference,** (CCDC 2008), Yantai, China, 2-4 July 2008 Page(s):4760 – 4765.
312. HongSheng Li; YangQuan Chen. "A fractional order proportional and derivative (FOPD) controller tuning

algorithm." **Proc. of the 2008 Chinese Control and Decision Conference**, (CCDC 2008), Yantai, China, 2-4 July 2008 Page(s):4059 – 4063.

313. Tricaud, C.; Yang Quan Chen. "Linear and nonlinear model predictive control using a general purpose optimal control problem solver RIOTS_95." **Proc. of the 2008 Chinese Control and Decision Conference**, (CCDC 2008), Yantai, China, 2-4 July 2008 Page(s): 1552 - 1557.
314. Hyo-Sung Ahn; Bhambhani, V.; YangQuan Chen. "Fractional-order integral and derivative controller design for temperature profile control." **Proc. of the 2008 Chinese Control and Decision Conference**, (CCDC 2008), Yantai, China, 2-4 July 2008 Page(s): 4766 - 4771.
315. Tricaud, C.; Patan, M.; Ucinski, D.; Yang Quan Chen. "D-optimal trajectory design of heterogeneous mobile sensors for parameter estimation of distributed systems." **Proc. of the 2008 American Control Conference**, Seattle, WA, USA, 11-13 June 2008 Page(s):663 – 668.
316. Varsha Bhambhani and YangQuan Chen. "Experimental Study of Fractional Order Proportional Integral (FOPI) Controller for Water Level Control." **Proceedings of the 47th IEEE Conference on Decision and Control.** Cancun, Mexico, Dec. 9-11, 2008, pp. 1791-1796.
317. Yongcan Cao, Yan Li, Wei Ren, YangQuan Chen. "Distributed Coordination Algorithms for Multiple Fractional-Order Systems." **Proceedings of the 47th IEEE Conference on Decision and Control.** Cancun, Mexico, Dec. 9-11, 2008, pp. 2920-2925.
318. Ying Luo+, YangQuan Chen* and Hyo-Sung Ahn. "Dual-high-order Periodic Adaptive Learning Compensation for State-dependant Periodic Disturbance." **Proceedings of the 47th IEEE Conference on Decision and Control.** Cancun, Mexico, Dec. 9-11, 2008, pp. 3038-3043.
319. Yan Li+ and YangQuan Chen*, "Fractional Order Linear Quadratic Regulator". **In Proceedings of the IEEE/ASME Int. Conf. on Mechatronics and Embedded Systems Applications (MESA08).** Beijing, China. October 12-15, 2008.
320. Shayok Mukhopadhyay+, Yan Li+ and YangQuan Chen*, "Experimental Studies of a Fractional Order Universal Adaptive Stabilizer". **In Proceedings of the IEEE/ASME Int. Conf. on Mechatronics and Embedded Systems Applications (MESA08).** Beijing, China. October 12-15, 2008.
321. Ying Luo+, YangQuan Chen and Hyo-Sung Ahn*. "A High Order Periodic Adaptive Learning Compensator for Cogging Effect in PMSM Position Servo System." **Proc. of the 2008 IEEE Int. Conf. on Systems, Man, and Cybernetics,** Oct. 2008, Singapore. pp. 3582-3587.
322. Hyo-Sung Ahn*, Kevin L. Moore and YangQuan Chen. "Stability of Discrete-time Iterative Learning Control with Random Data Dropouts and Delayed Controlled Signals in Networked Control Systems." **Proc. of The 10th International Conference on Control, Automation, Robotics and Vision**, ICARCV 2008, Hanoi, Vietnam, 17 - 20 December 2008.
323. Ying Luo+, YangQuan Chen and Hyo-Sung Ahn*. "Design of Dynamic Periodic Adaptive Learning Controller for Long-term Cogging Effect Compensation." **Proc. of The 10th International Conference on Control, Automation, Robotics and Vision**, ICARCV 2008, Hanoi, Vietnam, 17 - 20 December 2008.
324. Christophe Tricaud and YangQuan Chen. "Optimal Mobile Sensing Policy for Parameter Estimation of Distributed Parameter Systems: Finite Horizon Closed-loop Solution," **Proceedings of the 2008 SIAM Eighteenth International symposium on Mathematical Theory of Networks and Systems (MTNS08),** July 28-August 1, 2008, Virginia Tech, Blacksburg, Virginia, USA
325. Christophe Tricaud and YangQuan Chen. "Optimal Mobile Actuation Policy for Parameter Estimation of Distributed Parameter Systems," **Proceedings of the 2008 SIAM Eighteenth International symposium on Mathematical Theory of Networks and Systems (MTNS08),** July 28-August 1, 2008, Virginia Tech, Blacksburg, Virginia, USA
326. Hyo-Sung Ahn, YangQuan Chen, Kevin L. Moore, and Wonpil Yu. "Stability Analysis and Control of Repetitive Trajectory Systems in the State-Domain: Roller Coaster Application," **Proceedings of 2007 IEEE International Symposium on Intelligent Control,** Singapore, October 2007.
327. Wei Ren*, Haiyang Chao+, William Bourgeous+, Nathan Sorensen+, and YangQuan Chen, "Experimental Implementation and Validation of Consensus Algorithms on a Mobile Actuator and Sensor Network Platform", **The 2007 IEEE International Conference on Systems, Man, and Cybernetics (SMC 2007),** Oct. 2007, Montreal, Canada. pp. 171-176.

328. Haiyang Chao+, YangQuan Chen*, Wei Ren. "Consensus of Information in Distributed Control of a Diffusion Process using Centroidal Voronoi Tessellations". **IEEE Int. Conference on Decision and Control 2007,** New Orleans, LA, Dec. 2007. pp. 1441-1446.
329. Tarte, Yashodhan+ and YangQuan Chen*. "Wiener System Identification with Four-Segment and Analytically Invertible Nonlinearity Model". **Proc. of the 2007 American Control Conference**, July 11-13, 2007, Marriott Marquis Hotel at Times Square, New York City, USA.
330. Haiyang Chao+, Yongcan Cao+ and YangQuan Chen*. "Autopilots for Small Fixed-Wing Unmanned Air Vehicles: A Survey". **Proc. of the 2007 IEEE Int. Conf. on Mechatronics and Automation (ICMA07),** Harbin, China, August 5-9, 2007.
331. Christophe Tricaud+ and YangQuan Chen*. "Cooperative Control of Water Volumes of Parallel Ponds Attached to An Open Channel Based on Information Consensus with Minimum Diversion Water Loss", **Proc. of the 2007 IEEE Int. Conf. on Mechatronics and Automation (ICMA07),** Harbin, China, August 5-9, 2007.
332. YangQuan Chen* and Rongtao Sun+ and Anhong Zhou. "An Overview of Fractional Order Signal Processing (FOSP) Techniques". DETC2007-34228 in **Proc. of the ASME Design Engineering Technical Conferences,** Sept. 4-7, 2007 Las Vegas, NE, USA, 3rd ASME Symposium on Fractional Derivatives and Their Applications (FDTA'07), part of the 6th ASME International Conference on Multibody Systems, Nonlinear Dynamics, and Control (MSNDC). 18 pages.
333. YangQuan Chen* and Rongtao Sun+ and Anhong Zhou. "An Improved Hurst Parameter Estimator Based on Fractional Fourier Transform." DETC2007-34242 in **Proc. of the ASME Design Engineering Technical Conferences,** Sept. 4-7, 2007 Las Vegas, NE, USA, 3rd ASME Symposium on Fractional Derivatives and Their Applications (FDTA'07), part of the 6th ASME International Conference on Multibody Systems, Nonlinear Dynamics, and Control (MSNDC). 11 pages.
334. Abdollah Shafieezadeh+ and Keri Ryan and YangQuan Chen*. "Fractional Order LQR for Optimal Robust Control of A Simple Structure" DETC2007-34279 in **Proc. of the ASME Design Engineering Technical Conferences,** Sept. 4-7, 2007 Las Vegas, NE, USA, 3rd ASME Symposium on Fractional Derivatives and Their Applications (FDTA'07), part of the 6th ASME International Conference on Multibody Systems, Nonlinear Dynamics, and Control (MSNDC). 9 pages.
335. Rongtao Sun+ and YangQuan Chen* and Qianru Li+. "Modeling and Prediction of Great Salt Lake Elevation Time Series Based on ARFIMA". DETC2007-34905 in **Proc. of the ASME Design Engineering Technical Conferences,** Sept. 4-7, 2007 Las Vegas, NE, USA, 3rd ASME Symposium on Fractional Derivatives and Their Applications (FDTA'07), part of the 6th ASME International Conference on Multibody Systems, Nonlinear Dynamics, and Control (MSNDC). 11 pages.
336. Tripti Bhaskaran+ and YangQuan Chen* and Dingyu Xue. "Practical tuning of fractional order proportional and integral controller (I): Tuning Rule Development". DETC2007-34302 in **Proc. of the ASME Design Engineering Technical Conferences,** Sept. 4-7, 2007 Las Vegas, NE, USA, 3rd ASME Symposium on Fractional Derivatives and Their Applications (FDTA'07), part of the 6th ASME International Conference on Multibody Systems, Nonlinear Dynamics, and Control (MSNDC). 14 pages.
337. Tripti Bhaskaran+ and YangQuan Chen* and Gary Bohannan. "Practical tuning of fractional order proportional and integral controller (II): Experiments". DETC2007-34910 in **Proc. of the ASME Design Engineering Technical Conferences,** Sept. 4-7, 2007 Las Vegas, NE, USA, 3rd ASME Symposium on Fractional Derivatives and Their Applications (FDTA'07), part of the 6th ASME International Conference on Multibody Systems, Nonlinear Dynamics, and Control (MSNDC). 14 pages.
338. Qianru Li+ and Christophe Tricaud+ and YangQuan Chen*. "Great Salk Lake Level Forecasting Using FIGARCH Model" DETC2007-34909 in **Proc. of the ASME Design Engineering Technical Conferences**, Sept. 4-7, 2007 Las Vegas, NE, USA, 3rd ASME Symposium on Fractional Derivatives and Their Applications (FDTA'07), part of the 6th ASME International Conference on Multibody Systems, Nonlinear Dynamics, and Control (MSNDC). 10 pages.
339. William Bourgeous+, Shelley Rounds+ and YangQuan Chen*. "A Swarm Engineering Approach to Mobile Sensor Network Design Towards Collaborative Phototaxis With A Slowly Moving Light Source." DETC2007-34320 in **Proc. of the ASME Design Engineering Technical Conferences**,

3rd ASME/IEEE International Conference on Mechatronic and Embedded Systems and Applications (MESA07), Sept. 4-7, 2007 Las Vegas, NE, USA. 11 pages (Best Student Paper Award)

340. Austin Jensen+ and YangQuan Chen*. "Mobile Manipulator Networks: Platform Development and Applications." DETC2007-34412 in **Proc. of the ASME Design Engineering Technical Conferences**, 3rd ASME/IEEE International Conference on Mechatronic and Embedded Systems and Applications (MESA07), Sept. 4-7, 2007 Las Vegas, NE, USA. 11 pages.
341. Igor Podlubny* and YangQuan Chen. "Adjoint fractional differential expressions and operators". DETC2007-35005 in **Proc. of the ASME Design Engineering Technical Conferences,** Sept. 4-7, 2007 Las Vegas, NE, USA, 3rd ASME Symposium on Fractional Derivatives and Their Applications (FDTA'07), part of the 6th ASME International Conference on Multibody Systems, Nonlinear Dynamics, and Control (MSNDC).
342. Qianru Li*+, Christopher Fawson, Christophe Tricaud+ and YangQuan Chen. "Estimating the Conditional Density of Returns Based on Neural Network". **The 6th International Conference on Computational Intelligence in Economics and Finance,** July 15-22, 2007, Marriott Salt Lake City Center, Salt Lake City, Utah, USA, a part of the 10th Joint Conferences on Information Sciences (JCIS 2007).
343. Zhen Song+ and YangQuan Chen*. "Challenges and Some Results for The MAS-net Project", In **Proc. of the 1st Joint Emer. Prep. & Response/Robotic & Remote Sys. Top. Mtg.,** Salt Lake City, UT, February 11-16, 2006, pp. 258-264.
344. YangQuan Chen*, Zhongmin Wang+ and Kevin L. Moore. "Optimal Spraying Control of A Diffusion Process Using Mobile Actuator Networks With Fractional Potential Field Based Dynamic Obstacle Avoidance." pages 107-112, April 23-25, 2006. Ft. Lauderdale, FL, **Proc. of the IEEE International Conference on Network, Systems and Control** (ICNSC06).
345. Wei Ren*, Kevin L. Moore and YangQuan Chen. "Higher-order consensus algorithms in cooperative vehicle systems", pp. 457 – 462, April 23-25, 2006. Ft. Lauderdale, FL, **Proc. of the IEEE International Conference on Network, Systems and Control** (ICNSC06).
346. Bharath Ramaswamy+, YangQuan Chen*, Kevin L. Moore. "Omni-directional Robotic Wheel - A Mobile Real-Time Control Systems Laboratory". June 14-16, 2006, Minneapolis, Minnesota, **American Control Conference** pp. 719-724.
347. Hyo-Sung Ahn+, Kevin L. Moore, YangQuan Chen*. "Kalman filter augmented iterative learning control on the iteration domain," June 14-16, 2006, Minneapolis, Minnesota, **American Control Conference**, pp. 250-255.
348. YangQuan Chen*, Yashodhan Tarte+. "Sensor Undistortion Using Hyperbolic Splines in Least Squares Sense," June 14-16, 2006, Minneapolis, Minnesota, **American Control Conference**, pp. 2987-2988.
349. Dingyu Xue, Chunna Zhao and YangQuan Chen*. "Fractional Order PID Control of A DC-Motor with Elastic Shaft: A Case Study". June 14-16, 2006, Minneapolis, Minnesota, **American Control Conference** pp. 3182-3187.
350. Jian-Xin Xu, Rui Yan*, YangQuan Chen. "On Initial Conditions in Iterative Learning Control" June 14-16, 2006, Minneapolis, Minnesota, **American Control Conference**, pp. 220-225.
351. Jian-Xin Xu, Rui Yan*, YangQuan Chen. "Repetitive Learning Control: Existence of Solution, Convergence and Robustification" June 14-16, 2006, Minneapolis, Minnesota, **American Control Conference**, pp. 958-963.
352. Ahn, Hyosung+; Chen, YangQuan*, and Igor Podlubny. "Robust Stability Checking of A Class of Linear Interval Fractional Order System Using Lyapunov Inequality". **The Second IFAC Symposium on Fractional Derivatives and Applications** (IFAC FDA06) 19 - 21 July, 2006. Porto, Portugal.
353. YangQuan Chen*, Huifang Dou, Blas M. Vinagre and Concha A. Monje. "A Robust Tuning method for Fractional order PI controllers." **The Second IFAC Symposium on Fractional Derivatives and Applications** (IFAC FDA06) 19 - 21 July, 2006. Porto, Portugal.
354. Rongtao Sun+, Nikita Zaveri+, YangQuan Chen*, Anhong Zhou, Nephi Zufelt+. "Electrochemical Noise Signal Processing Using R/S Analysis and Fractional Fourier Transform." **The Second IFAC Symposium on Fractional Derivatives and Applications** (IFAC FDA06) 19 - 21 July, 2006. Porto, Portugal.

355. Anhong Zhou and YangQuan Chen*, "Fractional Order Processing of Quartz Crystal microbalance Based DNA Biosensor Signals." **The Second IFAC Symposium on Fractional Derivatives and Applications** (IFAC FDA06) 19 - 21 July, 2006. Porto, Portugal.
356. José Ignacio Suárez, Blas M. Vinagre* and YangQuan Chen. "A Fractional Adaptive Scheme for Lateral Control of AGV." **The Second IFAC Symposium on Fractional Derivatives and Applications** (IFAC FDA06) 19 - 21 July, 2006. Porto, Portugal.
357. Concepción A. Monje, Blas M. Vinagre*, Vicente Feliu and YangQuan Chen. "On Autotuning of Fractional Order PI^\\lambda D^\\mu Controllers". **The Second IFAC Symposium on Fractional Derivatives and Applications** (IFAC FDA06) 19 - 21 July, 2006. Porto, Portugal.
358. YangQuan Chen*. "Ubiquitous Fractional Order Controls?", (12 pages plenary talk paper) **The Second IFAC Symposium on Fractional Derivatives and Applications** (IFAC FDA06) 19 - 21 July, 2006. Porto, Portugal.
359. Hyo-Sung Ahn+, YangQuan Chen, Kevin L. Moore*. "Intermittent Iterative Learning Control**". Joint CCA, CACSD, and ISIC, 2006** (2006 CCA/CACSD/ISIC), October 4-6, 2006, Munich, Germany.
360. Lili Ma+, Kevin L. Moore*, YangQuan Chen. "Iterative Learning Control of Perspective Dynamic Systems". **Joint CCA, CACSD, and ISIC, 2006** (2006 CCA/CACSD/ISIC), October 4-6, 2006, Munich, Germany.
361. Zhen Song+ and YangQuan Chen*. "High Order B-Spline Networks and Its Applications to Learning Feedforward Control". June 25-28, 2006, Luoyang, China, **IEEE Int. Conf. on Mechatronics and Automation (ICMA06).**
362. William Bourgeous+, Lili Ma+, Pengyu Chen+, Zhen Song+, and YangQuan Chen*. "Simple and Efficient Extrinsic Camera Calibration Based on A Rational Model". June 25-28, 2006, Luoyang, China, **IEEE Int. Conf. on Mechatronics and Automation (ICMA06).**
363. Haiyang Chao+, YangQuan Chen* and Wei Ren. "A Study of Grouping Effect On Mobile Actuator Sensor Networks for Distributed Feedback Control of Diffusion Process Using Central Voronoi Tessellations". June 25-28, 2006, Luoyang, China**, IEEE Int. Conf. on Mechatronics and Automation (ICMA06**). (Best Student Paper Award Finalist)
364. Kevin L. Moore* and YangQuan Chen. "Iterative Learning Control Approach to a Diffusion Control Problem in an Irrigation Application". June 25-28, 2006, Luoyang, China, **IEEE Int. Conf. on Mechatronics and Automation (ICMA06).**
365. Hyosung Ahn+, YangQuan Chen and Kevin L. Moore*. "Maximum singular value and power of an interval matrix" June 25-28, 2006, Luoyang, China, **IEEE Int. Conf. on Mechatronics and Automation (ICMA06).**
366. Hyosung Ahn+, Kevin L. Moore* and YangQuan Chen. "A robust Schur stability condition for interval polynomial matrix systems" June 25-28, 2006, Luoyang, China**, IEEE Int. Conf. on Mechatronics and Automation (ICMA06).**
367. Hyosung Ahn+, Kevin L. Moore* and YangQuan Chen. "LMI Approach to Iterative Learning Control Design" **2006 IEEE Mountain Workshop on Adaptive and Learning Systems,** Utah State University, College of Engineering, Logan, U.S.A. July 24-26, 2006.
368. Rongtao Sun+, YangQuan Chen*, Nikita Zaveri+ and Anhong Zhou. "Local Analysis of Long Range Dependence Based on Fractional Fourier Transform". **2006 IEEE Mountain Workshop on Adaptive and Learning Systems,** Utah State University, College of Engineering, Logan, U.S.A. July 24 - 26, 2006(local PDF)
369. Dariusz Ucinski*, YangQuan Chen. "Sensor Motion Planning in Distributed Parameter Systems Using Turing's Measure of Conditioning". December 13-15, 2006. San Diego. **IEEE Int, Conference on Decision and Control** pp. 759 – 764.
370. Hyo-Sung Ahn*+, YangQuan Chen and Wonpil Yu. "Robust stability condition of an uncertain networked system with delayed data dropout in both forward and feedback channels". **SICE-ICASE International Joint Conference 2006** Oct. 18-21, 2006 in Bexco, Busan, Korea.
371. Yashodhan Tarte+, YangQuan Chen*, Wei Ren, Kevin L. Moore. "Fractional Horsepower Dynamometer - A General Purpose Hardware-In-The-Loop Real-Time Simulation Platform for Nonlinear Control Research and Education". December 13-15, 2006. San Diego. **IEEE Int, Conference on Decision and Control.**

372. YangQuan Chen*, Kevin Moore, Jie Yu, Tao Zhang. “Iterative learning control and repetitive control in harddisk drive industry - a tutorial” Industrial Tutorial Session. December 13-15, 2006. San Diego**.** **IEEE Int, Conference on Decision and Control** (14 pages lead paper)
373. Kevin Moore*, YangQuan Chen and Hyosung Ahn+. “Iterative Learning Control: A Tutorial and Big Picture View” Industrial Tutorial Session. December 13-15, 2006. San Diego**.** **IEEE Int, Conference on Decision and Control.**
374. Wei Ren* and YangQuan Chen. “Leaderless Formation Control for Multiple Autonomous Vehicles”. **AIAA Guidance, Navigation, and Control Conference and Exhibit.** 21 - 24 Aug 2006. Keystone, Colorado. AIAA 2006-6069.
375. Xue D*, Zhao C N, Chen Y. Q. “A modified approximation method of fractional order system”. **Proceedings of IEEE Conference on Mechatronics and Automation**. Luoyang, China, 2006. pp. 1043–1048.
376. Hyosung Ahn+; Kevin L. Moore; YangQuan Chen*. "Stability analysis of iterative learning control system with interval uncertainty". *In* **Proceedings of the 16th IFAC World Congress,** Prague, Czech, July 4 to July 8, 2005.
377. Hyosung Ahn+ and YangQuan Chen*. "State-periodic adaptive friction compensation". **In Proceedings of the 16th IFAC World Congress,** Prague, Czech, July 4 to July 8, 2005.
378. C. A. Monje, B. M. Vinagre*, A. J. Calderón, V. Feliu and Y. Q. Chen. "Self-tuning of Fractional Lead-Lag Compensators.” **In Proceedings of the 16th IFAC World Congress**, Prague, Czech, July 4 to July 8, 2005.
379. Jinsong Liang+, Weiei Zhang and YangQuan Chen*. "Robustness of Boundary Control of Damped Wave Equations with Large Delays at Boundary Measurement". **In Proceedings of the 16th IFAC World Congress**, Prague, Czech, July 4 to July 8, 2005.
380. A.R. Castaño, A. Ollero, B.M. Vinagre* and Y.Q. Chen. "Setup of A Spatial Lookaahead Path Tracking Controller.” **In Proceedings of the 16th IFAC World Congress**, Prague, Czech, July 4 to July 8, 2005.
381. Hyosung Ahn+; YangQuan Chen* and Huifang Dou. "State-periodic adaptive compensation of cogging and Coulomb friction in permanent magnet linear motors" **. In Proceedings of the 2005 American Control Conference,** Portland, OR, June 8 to 10, 2005. Pages:3036 – 3041.
382. Hyosung Ahn+; Kevin L. Moore; YangQuan Chen*. "Schur stability radius bounds for robust iterative learning controller design". **In Proceedings of the 2005 American Control Conference**, Portland, OR, June 8 to 10, 2005. Pages:178 – 183.
383. Lili Ma+, YangQuan Chen* and Kevin L. Moore . "Range identification for perspective dynamic systems with 3D imaging surfaces". In **Proceedings of the 2005 American Control Conference**, Portland, OR, June 8 to 10, 2005. Pages:3671 – 3675.
384. Dariusz Ucinski *, YangQuan Chen. "Time–Optimal Path Planning of Moving Sensors for Parameter Estimation of Distributed Systems" 12-15 December 2005 **Joint Conference on Decision and Control, and European Control Conference,** Seville, Spain.
385. YangQuan Chen*, Zhongmin Wang+ and Jinsong Liang+, "Optimal Dynamic Actuator Location in Distributed Feedback Control of A Diffusion Process." 12-15 December 2005 **Joint Conference on Decision and Control, and European Control Conference,** Seville, Spain.
386. Hyosung Ahn+, Kevin Moore and YangQuan Chen*. "Linear Dependency and Independency of Interval Vectors: Theory and Its Applications to Robust Controllability Test.” 12-15 December 2005 **Joint Conference on Decision and Control, and European Control Conference,** Seville, Spain.
387. Dingyu Xue and YangQuan Chen*. "Sub-optimum H2 Rational Approximations to Fractional Order Linear Systems.” September 25-28th, 2005 ASME 2005 Long Beach **ASME-DETC/ VIB 2005: 2nd symposium on Fractional Derivatives and Their Applications.**
388. YangQuan Chen*, Hyosung Ahn+ and Dingyu Xue. "Robust Controllability of Interval Fractional Order Linear Time Invariant Systems" September 25-28 th, **2005 ASME 2005 Long Beach ASME-DETC2005: 2nd symposium on Fractional Derivatives and Their Applications.**
389. Jinsong Liang+, Weiwei Zhang, YangQuan Chen*, and Igor Podlubny. "Robustness of Boundary Control of Fractional Wave Equations with Delayed Boundary Measurement Using Fractional Order Controller

and the Smith Predictor". September 25-28 th, *2005* **ASME 2005 Long Beach ASME-DETC 2005: Symposium on Dynamics and Control of Time-Varying and Time-Delay.**

390. Hyo-Sung Ahn+, YangQuan Chen*, Zhongmin Wang+. "State-Dependent Disturbance Compensation in Low-Cost Wheeled Mobile Robots using Periodic Adaptation," **In Proc. of the IEEE/RSJ Int. Conf. on Intelligent Robots and Systems (IROS2005),** Aug. 2-6, 2005, Edmonton, Canada, pp. 2361-2366.
391. Zhen Song+, YangQuan Chen*, Jinsong Liang+ and Dariusz Ucinski. "Optimal Mobile Sensor Motion Planning Under Nonholomonic Constraints for Parameter Estimation of Distributed Parameter Systems". **In Proc. of the IEEE/RSJ Int. Conf. on Intelligent Robots and Systems** (IROS2005), Aug. 2-6, 2005, Edmonton, Canada, pp. 1505-1510.
392. YangQuan Chen* and Zhongmin Wang+. "Formation Control: A Review and A New Consideration". **In Proc. of the IEEE/RSJ Int. Conf. on Intelligent Robots and Systems**, (IROS2005), Aug. 2-6, 2005, Edmonton, Canada, pp. 3664-3669.
393. Pengyu Chen+, Zhen Song+, Zhongmin Wang+, and YangQuan Chen*. "Pattern Formation Experiments in Mobile Actuator and Sensor Network (MAS-net)," **In Proc. of the IEEE/RSJ Int. Conf. on Intelligent Robots and Systems** (IROS2005) , Aug. 2-6, 2005, Edmonton, Canada, pp. 3658-3663.
394. YangQuan Chen*, Hyosung Ahn+ and Igor Podlubny. "Robust stability check of fractional order linear time invariant systems with interval uncertainties", **In Proc. of the IEEE ICMA05 (The 2005 IEEE International Conference on Mechatronics and Automation),** Niagara Falls, Ontario, Canada, July 29 to August 1, 2005. pp. 210-215. (Best Paper Award Finalist)
395. Hyosung Ahn+, YangQuan Chen* and Kevin L. Moore. "Monotonic convergent ILC design with the iteration varying model uncertainty," **In Proc. of the IEEE ICMA05 (The 2005 IEEE International Conference on Mechatronics and Automation),** Niagara Falls, Ontario, Canada, July 29 to August 1, 2005. pp. 572-577.
396. Chunna Zhao, Dingyu Xue and YangQuan Chen*. "A Fractional Order PID Controller Tuning Algorithm for A Class of Fractional Order Plants**," In Proc. of the IEEE ICMA05 (The 2005 IEEE International Conference on Mechatronics and Automation),** Niagara Falls, Ontario, Canada, July 29 to August 1, 2005. pp. 216-221.
397. Zhongmin Wang+, Jinsong Liang+ and YangQuan Chen*. "Actuation scheduling in mobile actuator networks for spatial-temporal feedback control of a diffusion process with dynamic obstacle avoidance," **In Proc. of the IEEE ICMA05 (The 2005 IEEE International Conference on Mechatronics and Automation),** Niagara Falls, Ontario, Canada, July 29 to August 1, 2005. pp. 752-757.
398. Zhongmin Wang+, Jinsong Liang+ and YangQuan Chen*. "Automatic dynamic flocking in mobile actuator sensor networks by central Voronoi tessellations," **In Proc. of the IEEE ICMA05 (The 2005 IEEE International Conference on Mechatronics and Automation),** Niagara Falls, Ontario, Canada, July 29 to August 1, 2005. pp. 1630-1635.
399. Hongsheng Li, Xingpeng Zhou and YangQuan Chen*. "Iterative Learning Control for Cross-Coupled Contour Motion Systems," **In Proc. of the IEEE ICMA05 (The 2005 IEEE International Conference on Mechatronics and Automation),** Niagara Falls, Ontario, Canada, July 29 to August 1, 2005. pp. 1468-1472.
400. Jinsong Liang+ and YangQuan Chen*. "Diff/Wave-MAS2D: a Simulation Platform for Measurement Scheduling and Controls in Distributed Parameter Systems with Moving Sensors and Moving Actuators". **In Proc. of the IEEE ICMA05 (The 2005 IEEE International Conference on Mechatronics and Automation),** Niagara Falls, Ontario, Canada, uly 29 to August 1, 2005. pp. 2228-2233.
401. Lili Ma+, YangQuan Chen*, Dong Chen and Bart Weimer. "Automatic Addressing for DNA Microarray Images," **In Proc. of the 8th Joint Conference on Information Sciences (JCIS/CSI),** July 21-26, SLC, Utah, pp. 215-218. www.jcis.org
402. Hyosung Ahn+ and YangQuan Chen*. "Sufficient Conditions for Linear Dependency and Independency of Interval Vectors," **In Proc. of the 8th Joint Conference on Information Sciences (JCIS/CSI),** July 21-26, SLC, Utah, pp. 253-256. 3/6/2005.
403. Hyosung Ahn+, Kevin L. Moore and YangQuan Chen*. "Monotonic Convergent Iterative Learning Controller Design based on Interval Model Conversion," **In Proc. of the 2005 International Symposium**

on Intelligent Control & 13th Mediterranean Conference on Control and Automation (2005 ISIC-MED) June 27-29, 2005, Hawaii Grand Hotel & Resort, Limassol, Cyprus. Page(s):1201 – 1206.

404. Hyosung Ahn+, Kevin L. Moore and YangQuan Chen*. "Algebraic H_infty Design of Higher-Order Iterative Learning Controllers," **In Proc. of the 2005 International Symposium on Intelligent Control & 13th Mediterranean Conference on Control and Automation (2005 ISIC-MED),** June 27-29, 2005, Hawaii Grand Hotel & Resort, Limassol, Cyprus. Page(s):1207 – 1212.
405. Jinsong Liang, YangQuan Chen*, Blas M. Vinagre and Igor Podlubny. "Identification of a fractional linear diffusion-wave equation from noisy boundary measurements". **The First IFAC Symposium on Fractional Differentiation and its Applications** 2004 Bordeaux, France, July 19-20, 2004. (IFAC FDA04)
406. C. A. Monje, B. M. Vinagre*, Y.Q. Chen, V. Feliu, P. Lanusse and J. Sabatier. "Proposals for Fractional PI$^\\lambda$D$^\\mu$ Tuning". **The First IFAC Symposium on Fractional Differentiation and its Applications** 2004 Bordeaux, France, July 19-20, 2004. (IFAC FDA04)
407. Jinsong Liang, YangQuan Chen*, Blas M. Vinagre and Igor Podlubny. "Boundary Stabilization of A Fractional Wave Equation Via A Fractional Order Boundary Controller". **The First IFAC Symposium on Fractional Differentiation and its Applications** 2004 Bordeaux, France, July 19-20, 2004. (IFAC FDA04).
408. YangQuan Chen*, Kevin L. Moore, Blas M. Vinagre and Igor Podlubny. "Robust PID Controller Autotuning With A Phase Shaper". **The First IFAC Symposium on Fractional Differentiation and its Applications** 2004 Bordeaux, France, July 19-20, 2004. (IFAC FDA04).
409. Ivo Petr\'a\v{s}, YangQuan Chen*, Blas M. Vinagre and Igor Podlubny. "Stability of Linear Time Invariant Systems with Interval Fractional Orders and Interval Coefficients". **International Conference on Computation Cybernetics (ICCC04),** 8/30-9/1/2004. Viena Technical University, Viena, Austria.
410. Lili Ma, YangQuan Chen and Kevin L. Moore. "Range Identification for Perspective Dynamic System with Single Homogeneous Observation". **The 2004 IEEE International Conference on Robotics and Automation (ICRA),** the New Orleans Riverside Hilton & Towers in New Orleans, Louisiana, from April 26 - May 1, 2004. ICRA04. (www.icra-iros.com) (PDF)
411. Lili Ma, YangQuan Chen and Kevin L. Moore. "Range Identification for Perspective Dynamic Systems Using Linear Approximation". **The 2004 IEEE International Conference on Robotics and Automation (ICRA),** the New Orleans Riverside Hilton & Towers in New Orleans, Louisiana, from April 26 - May 1, 2004. ICRA04. (www.icra-iros.com) (PDF)
412. Kevin L. Moore and YangQuan Chen. "Model-Based Approach To Characterization Of Diffusion Processes Via Distributed Control Of Actuated Sensor Networks". **The 1st IFAC Symposium on Telematics Applications in Automation and Robotics.** Helsinki University of Technology Espoo, Finland, 21-23 June 2004. (PDF)
413. J. I. Suárez, B. M. Vinagre, F. Gutierrez, J. E. Naranjo and Y. Q. Chen. "Dynamic Models Of An AGV Based On Experimental Results". **The 5th IFAC Symposium on Intelligent Autonomous Vehicles, IAV** 2004, Lisbon, Potugal, 5 to 7 July 2004. (IAV2004)
414. Jinsong Liang, YangQuan Chen*, R. Rees Fullmer. "Simulation Studies on the Boundary Stabilization and Disturbance Rejection for Fractional Diffusion-Wave Equation." **Proc. of the 2004 American Control Conference (ACC04).**
415. Jinsong Liang, YangQuan Chen*, Bao-Zhu Guo. "A Hybrid Symbolic-Numerical Simulation Method for Some Typical Boundary Control Problems". **Proc. of the 2004 American Control Conference** ACC04.
416. Zhongmin Wang, YangQuan Chen*, Ning Fang. "Minimum-Time Swing-up of A Rotary Inverted Pendulum by Iterative Impulsive Control". **Proc. of the 2004 American Control Conference** ACC04.
417. Ivo Petr\'a\v{s}, YangQuan Chen*, Blas M. Vinagre and Igor Podlubny. "Stability of Linear Time Invariant Systems with Interval Fractional Orders and Interval Coefficients". **International Conference on Computation Cybernetics (ICCC04)**, 8/30-9/1/2004. Viena Technical University, Viena, Austria. (PDF)
418. B. M. Vinagre, C. A. Monje, A. J. Calderón, Y. Q. Chen, V. Feliu. "The Fractional Integrator As Reference Function". **The 1st IFAC Symp. on Fractional Differentiation and its Applications**. Bordeaux, France, July 19-20, 2004. (PDF)
419. Zhongmin Wang, Zhen Song, Peng-Yu Chen, Anisha Arora, Dan Stormont and YangQuan Chen*.

"MASmote - A Mobility Node for MAS-net (Mobile Actuator Sensor Networks)". **IEEE Int. Conf. on Robotics and Biomimetics (RoBio04)**, August 22-25, Shengyang, China. (PDF-robio2004-330)

420. Hyo-Sung Ahn and YangQuan Chen*. "Time Periodical Adaptive Friction Compensation". **IEEE Int. Conf. on Robotics and Biomimetics (RoBio04),** August 22-25, Shengyang, China. (PDF-robio2004-100)
421. YangQuan Chen*, Dingyu Xue, and Huifang Dou. "Fractional Calculus and Biomimetic Control". **IEEE Int. Conf. on Robotics and Biomimetics (RoBio04),** August 22-25, Shengyang, China. (PDF-robio2004-347)
422. Jinsong Liang and YangQuan Chen*. "Boundary Control of Wave Equations with Delayed Boundary Measurement". **IEEE Int. Conf. on Robotics and Biomimetics (RoBio04),** August 22-25, Shengyang, China. (PDF-robio2004-348)
423. Jinsong Liang, Rees Fullmer* and YangQuan Chen. "Time-Optimal Magnetic Attitude Control for Small Spacecraft" **IEEE Int. Conference on Decision and Control (CDC04),** Bahamas, Paradise Island, Dec. 15-17, 2004.
424. Jinsong Liang, YangQuan Chen*, Max Meng and Rees Fullmer. "Fractional-order Boundary Control of the Fractional Wave Equation with Delayed Boundary Measurement Using the Smith Predictor " **IEEE Int. Conference on Decision and Control (CDC04),** Bahamas, Paradise Island, Dec. 15-17, 2004.
425. YangQuan Chen, Dingyu Xue and Jason Gu. "Analytic and Numerical Computation of Stability Bound for A Class of Linear Delay Differential Equations Using Lambert Function". **Presented at the Third International DCDIS Conference on Engineering Applications and Computational Algorithms**, Guelph, Ontario, Canada, May 15-18, 2003. URL: http://www.math.uwaterloo.ca/~xzliu/dcdis03/dcdisconf03/dcdisconf03.html (full paper PDF, Abstract, Slides) Also in Xinzhi Liu editor, "Engineering Applications and Computational Algorithms", Watam Press, Waterloo, ISSN 1492-8760. An added volumn of Journal of "Dynamics of Continuous, Discrete and Impulsive Systems, Series B: Applications and Algorithms". pp. 489-494 Suppl. S, 2003.
426. Kevin L. Moore and YangQuan Chen. "A separative high-order framework for monotonic convergent iterative learning controller design". **American Control Conference** 2003. June 4 to 6, 2003, The Adams Mark Hotel, Denver, Colorado USA http://acc2003.me.berkeley.edu/ pp. 3644-3649. (PDF)
427. J. I. Suarez, B. M. Vinagre, and Y. Q. Chen, "Spatial Path Tracking of an Autonomous Industrial Vehicle using Fractional Order Controllers," in **Proc. of the 11th International Conference on Advanced Robotics**, ICAR 2003, June 30 - July 3, 2003. http://www.isr.uc.pt/icar03/ (PDF)
428. A.Ollero, B. M. Vinagre, A.Rodríguez-Castaño and Y. Q. Chen. "Fractional controller for guidance of autonomous ground vehicles". **In Proc. of the 5th IFAC International Symposium on Intelligent Components and Instruments for Control Applications (SICICA2003),** July 9 - 11, 2003, Aveiro - Portugal. http://www.det.ua.pt/eventos/sicica2003/scope.asp (PDF)
429. Zhen Song, Pranav Sukthankar, YangQuan Chen, Jason Gu. "Progressive Fuzzy Fusion Control of Two Coupled Inverted Penduli" SP2-III: New Methodologies for Sensor Fusion (1). **IEEE CIRA2003. (2003 IEEE International Symposium on Computational Intelligencein Robotics and Automation),** July 16-20, 2003, Kobe, Japan, http://imd.eng.kagawa-u.ac.jp/CIRA03/ (movie clips, full paper PDF, PPT presentation slides, abstract)
430. YangQuan Chen, Blas M. Vinagre and Igor Podlubny. "On Fractional Order Disturbance Observer". Paper: DETC2003/VIB-48371. **19th Biennial Conference on Mechanical Vibration and Noise, the ASME First Symposium on Fractional Derivatives and Their Applications, International Design Engineering Technical Conferences,** Chicago, Illinois September 2-6, 2003. (PDF) (Abstract PDF) (SLIDES.pdf)
431. YangQuan Chen, Blas M. Vinagre and Igor Podlubny. "A New Discretization Method for Fractional Order Differentiators Via Continued Fraction Expansion". Paper: DETC2003/VIB-48391. **19th Biennial Conference on Mechanical Vibration and Noise, the ASME First Symposium on Fractional Derivatives and Their Applications, International Design Engineering Technical Conferences,** Chicago, Illinois September 2-6, 2003. (PDF) (Abstract PDF) (SLIDES.pdf)
432. Rein Luus and YangQuan Chen. "Optimal Switching Control Via Direct Search Optimization". **2003 IEEE International Symposium On Intelligent Control (ISIC).** October 5-8, 2003, Westin Galleria Houston,Texas, USA. http://vlab.ee.nus.edu.sg/~isic2003/ (PDF) (Abstract) (Slides)

433. Lili Ma, YangQuan Chen and Kevin L. Moore. "Flexible Camera Calibration Using a New Analytical Radial Undistortion Formula with Application to Mobile Robot Localization". **2003 IEEE International Symposium On Intelligent Control (ISIC).** October 5-8, 2003, Westin Galleria Houston,Texas, USA.http://vlab.ee.nus.edu.sg/~isic2003/ (PDF)
434. Jinsong Liang, YangQuan Chen and Bao-Zhu Guo. "A New Boundary Control Method for Beam Equation With Delayed Boundary Measurement Using Modified Smith Predictors". **The 42nd IEEE Conference on Decision and Control** . Dec. 2003, Hawaii, USA. (under review, Feb. 2003, Accepted July 2003). (PDF) (Slides)
435. YangQuan Chen, ChuanHua Hu and Kevin L. Moore. "Relay Feedback Tuning of Robust PID Controllers With Iso-Damping Property". **The 42nd IEEE Conference on Decision and Control** . Dec. 2003, Hawaii, USA. (Submitted March 2003, Accepted July 2003). (PDF) (Slides)
436. YangQuan Chen and Kevin L. Moore. "Iterative Learning Control With Iteration-Domain Adaptive Feedforward Compensation". **The 42nd IEEE Conference on Decision and Control** . Dec. 2003, Hawaii, USA. (PDF) (Slides)
437. Jinsong Liang, YangQuan Chen, Max Meng and Rees Fullmer. "Solving Tough Optimal Control Problems by Network Enabled Optimization Server (NEOS)". **Proc. of the 2003 IEEE Intelligent Automation Conference,** Dec. 15-17, 2003, Hong Kong, China. (PDF)
438. J. Gu, M. Meng and Y.Q. Chen. "Reliability Study of a Multiple Sensor System". **International Conference on Control Science and Engineering (ICCSE 2003).** Harbin, China Dec. 18-20, 2003. (PDF)
439. M. Farajmandi, J. Gu, Max Meng, Peter X. Liu and Y.Q. Chen. "Internet Based Wireless Mobile Robot". In **Proc. of The 2003 IEEE Intelligent Automation Conference**. Hong Kong, China. Dec. 15-17, 2003, pp. 549-554. (PDF)
440. Y. Q. Chen, J. Liang, J. Gu and R. Fullmer. "RIOTS + AD: Integrating Automatic Differentiation into Computational Optimal Control". **International Conference on Control Science and Engineering (ICCSE 2003).** Harbin, China Dec. 18-20, 2003. (PDF)
441. L. Ma, M. Berkemeier, Y. Q. Chen, M. Davidson, V. Bahl, K. Moore, "Wireless Visual Servoing for ODIS - An Under Car Inspection Mobile Robot," in **Proceedings of the 15th IFAC World Congress on Automatic Control,** Barcelona, Spain, 2002. (Invited) http://www.csois.usu.edu/publications/pdf/pub065.pdf
442. M. Berkemeier, M. Davidson, V. Bahl, Y. Q. Chen, L. Ma, "Visual Servoing of an Omni-Directional Mobile Robot for Alignment with Parking Lot Lines," in **Proceedings of the 2002 IEEE International Conference on Robotics & Automation,** Washington, DC, 2002, pp. 4202-4210. http://www.csois.usu.edu/publications/pdf/pub062.pdf
443. YangQuan Chen and Kevin L. Moore. "An Optimal Design of PD-type Iterative Learning Controller With Monotonic Convergence," in **Proceedings of the 17th IEEE International Symposium on Intelligent Control**, IEEE ISIC'02, Vancouver, British Columbia October 27-30, 2002. (Invited) http://www.csois.usu.edu/publications/pdf/pub070.pdf
444. Zheng Song, YangQuan Chen, Lili Ma, and You Chung Chung. "Some Sensing and Perception Techniques for an Omni-directional Ground Vehicles with a Laser Scanner," in **Proceedings of the 17th IEEE International Symposium on Intelligent Control**, IEEE ISIC'02, Vancouver, British Columbia October 27-30, 2002. (Invited) http://www.csois.usu.edu/publications/pdf/pub069.pdf
445. Ping Jiang and YangQuan Chen. "Singularity-free Neural Network Controller with Iterative Training," in **Proceedings of the 17th IEEE International Symposium on Intelligent Control**, IEEE ISIC'02, Vancouver, British Columbia October 27-30, 2002. (Invited) http://www.csois.usu.edu/publications/pdf/pub075.pdf
446. I. Petras, Y. Q. Chen and B. M. Vinagre, "A Robust Stability Test Procedure for A Class of Uncertain LTI Fractional-Order Control Systems". **Proc. of the 3rd Int. Carpathians Control Conference (ICCC2002),** Ostrava, Czech Republic, May 27-30, 2002. pp. 247-252. http://www.csois.usu.edu/publications/pdf/pub071.pdf
447. Y. Q. Chen, P. Jiang and H. Chen, "Analysis and Design of A Learning Feedforward Controller Using Bartlet Window". **Proc. of The 4th IEEE World Congress on Intelligent Control and Automation**

(WCICA02), June 10-14, 2002, Shanghai, China. pp. 944-949. http://www.csois.usu.edu/publications/pdf/pub073.pdf
448. D. Xue and Y. Q. Chen, “A Comparative Introduction of Four Fractional Order Controllers”. **Proc. of The 4th IEEE World Congress on Intelligent Control and Automation (WCICA02),** June 10-14, 2002, Shanghai, China. pp. 3228-3235. http://www.csois.usu.edu/publications/pdf/pub072.pdf
449. Kevin L. Moore, YangQuan Chen, and Vikas Bahl. “Feedback Controller Design to Ensure Monotonic Convergence in Discrete-Time, P-Type Iterative Learning Control," in **Proceedings of 4th Asian Control Conference,** Singapore, Sept 2002. pp. 440-445. (Invited) http://www.csois.usu.edu/publications/pdf/pub067.pdf
450. YangQuan Chen and Kevin L. Moore. "PI-type Iterative Learning Control Revisited". in Proc. of the **American Control Conference** (ACC'02), May 8-10, 2002, Anchorage, Alaska, USA, pp. 2138-2143. http://www.csois.usu.edu/publications/pdf/pub064.pdf
451. Kevin L. Moore and YangQuan Chen. "On the monotonic convergence of a high-order iterative learning updating law," in **Proc. of the 15-th IFAC World Congress** (IFAC'02). July 21-26, 2002, Barcelona, Spain. (Invited) http://www.csois.usu.edu/publications/pdf/pub066.pdf
452. YangQuan Chen and Kevin L. Moore. “Harnessing the Nonrepetitiveness in Iterative Learning Controller," in **Proc. of the IEEE Int. Conf. on Decision and Control (CDC'02**), Dec. 2002, Las Vegas, NE, USA. pp. 3350-3355. http://www.csois.usu.edu/publications/pdf/pub080.pdf
453. Blas M. Vinagre, Ivo Petras, Igor Podlubny, YangQuan Chen, “Stability of Fractional-order Model Reference Adaptive Control,", **International Symposium on Mathematical Theory of Networks and Systems**, published in 2002 MTNS Problem Book, Open Problems on the Mathematical Theory of Systems, University of Notre Dame, August 12-16, 2002, Problem 73. (Invited) http://www.csois.usu.edu/publications/pdf/pub078-079.pdf
454. Ivo Petrás, YangQuan Chen, and Blas M. Vinagre "Robust stability test for interval fractional order linear systems," **International Symposium on Mathematical Theory of Networks and Systems**, published in 2002 MTNS Problem Book, Open Problems on the Mathematical Theory of Systems, University of Notre Dame, August 12-16, 2002, Problem 53. (Invited) http://www.csois.usu.edu/publications/pdf/pub078-079.pdf
455. Y. Chen and K. L. Moore, ``Analytical stability bound for a class of delayed fractional-order dynamic systems". **Presented at the IEEE Conference on Decision and Control** (CDC'01), Dec. 3-7, 2001, Orlando, FL, USA. pp. 1421-1426.
456. YangQuan Chen and Kevin L. Moore. ``On D$^{\alpha}$-type Iterative Learning Control". Presented at the **IEEE Conference on Decision and Control** (CDC'01), Dec. 3-7, 2001, Orlando, FL, USA. pp.4451-4456.
457. YangQuan Chen and Kevin L. Moore. ``Frequency Domain Adaptive Learning Feedforward Control". Presented at **The 2001 IEEE International Symposium on Computational Intelligence in Robotics and Automation** (IEEE CIRA 2001), July 29 - August 1, 2001, Banff, Alberta, Canada. pp. 396-401.
458. YangQuan Chen, Kevin L. Moore and Vikas Bahl. ``Improved Path Following of USU ODIS By Learning Feedforward Controller Using Dilated B-Spline Network". Presented at **The 2001 IEEE International Symposium on Computational Intelligence in Robotics and Automation** (IEEE CIRA 2001), July 29 - August 1, 2001, Banff, Alberta, Canada. pp. 59-64.
459. Ping Jiang and YangQuan Chen. ``Repetitive Robot Visual Servoing Via Segmented Trained Neural Network Controller". Presented at **The 2001 IEEE International Symposium on Computational Intelligence in Robotics and Automation** (IEEE CIRA 2001), July 29 - August 1, 2001, Banff, Alberta, Canada. pp. 260-265.
460. Chen YangQuan and Kevin L. Moore. "Comments on US Patent 3555252: Learning Control Of Actuators In Control Systems." **ILC Invited Sessions at ICARCV'2000 (The Sixth International Conference on Control, Automation, Robotics and Vision).** In CARCV'00 CD-ROM Proceedings.
461. Z. G. Li, C. Y. Wen, Y. C. Soh and Y. Q. Chen. "Iterative Learning Control of Linear Parameterized Varying Uncertain Systems." **ILC Invited Sessions at ICARCV'2000 (The Sixth International Conference on Control, Automation, Robotics and Vision).** In ICARCV'00 CD-ROM Proceedings.

462. Z. G. Li, Y. C. Soh and Y. Q. Chen. "A New Application of High Order Learning Scheme." **ILC Invited Sessions at ICARCV'2000 (The Sixth International Conference on Control, Automation, Robotics and Vision)**. In ICARCV'00 CD-ROM Proceedings.
463. Chen, YangQuan and Kevin L. Moore, ``Improved Path Following for an Omni-Directional Vehicle Via Practical Iterative Learning Control Using Local Symmetrical Double-Integration," **Proc. of the Asian Control Conference 2000,** July 5-7, 2000, Shanghai, China. pp. 1878-1883. CD-ROM Proceedings.
464. Z. G. Li, C. Y. Wen, Y. C. Soh and Y. Q. Chen, ``Iterative Learning Control of Linear Time Varying Uncertain Systems", **Proc. of the Asian Control Conference 2000**, July 5-7, 2000, Shanghai, China. pp. 1890-1894. CD-ROM Proceedings.
465. Tong Heng Lee, Huifang Dou, Kok Kiong Tan, and Yangquan Chen, ``Experimental Studies on High Precision Tracking Control of Linear Motor Using Noncausal Filtering Based Iterative Learning Control", **Proc. of the Asian Control Conference 2000,** July 5-7, 2000, Shanghai, China. CD-ROM Proceedings.
466. Jian Xin Xu, Tong Heng Lee, YangQuan Chen and Hou Tan, ``Enhancing Trajectory Tracking for a Class of Process Control Problems using Iterative Learning", **Proc. of the Asian Control Conference** 2000, July 5-7, 2000, Shanghai, China.
467. Y. Chen, J.-X. Xu and M. Sun, ``Extracting Aero-bomb's Aerodynamic Drag Coefficient Curve From Theodolite Data Via Iterative Learning", **Proc. of the IFAC World Congress**, pp. 115-9, June 1999, Beijing, China.
468. K. K. Tan, H. F. Dou, Y. Chen and T. H. Lee. ``Developments in Mechatronics in Singapore", the **Asian Control Professors Association (ACPA) Forum**. Japan, Nov. 1998.
469. Y. Chen, T. H. Lee, J.-X. Xu and S. Yamamoto, ``Noncausal filtering based design of iterative learning controller", K. L. Moore Editor. **Proc. of The First Int. Workshop on Iterative Learning Control**, pp. 63-70, Tampa, FL. USA, Dec. 14-15, 1998.
470. M. Sun, D. Wang and Y. Chen, ``Iterative Learning Control of Uncertain Nonlinear Systems with Delayed State" **Proc. of the Fifth Int. Conf. on Control, Automation, Robotics and Vision (ICARCV'98),** pp. 1238-42, Singapore, 9-11 Dec., 1998.
471. S. Xie, Y. Wu, C. Wen and Y. Chen, ``Application of a new predictive thickness control method for hot rolling mill". **Proc. of the Fifth Int. Conf. on Control, Automation, Robotics and Vision (ICARCV'98),** pp. 1243-7, Singapore, 9-11 Dec., 1998.
472. Y. Chen, C. Wen, H. Dou and M. Sun. ``Iterative Learning Identification", presented at the **1997 IEEE Conf. on Decision and Control**, December 10-12, 1997, Hyatt Regency San Diego, California. pp. 4702-7.
473. Y. Chen, C. Wen, H. Dou. ``High-order Iterative Learning Control of Functional Neuromuscular Stimulation Systems ", presented at the **1997 IEEE Conf. on Decision and Control**, December 10-12, 1997, Hyatt Regency San Diego, California. pp. 3757-62.
474. Y. Chen, J.-X. Xu and C. Wen. ``A High-order Terminal Iterative Learning Control Scheme", presented at the **1997 IEEE Conf. on Decision and Control**, December 10-12, 1997, Hyatt Regency San Diego, California. pp.3771-2.
475. Y. Chen, J.-X. Xu, T.H. Lee and S. Yamamoto. ``An Iterative Learning Control In Rapid Thermal Processing", Presented in **the IASTED Int. Conf. on Modeling, Simulation and Optimization**, Singapore, pp.189-92,1997.
476. Y. Chen, J.-X. Xu, T.H. Lee and S. Yamamoto, ``Comparative Studies of Iterative Learning Control Schemes for A Batch Chemical Process", Presented at **the IEEE Singapore Int. Symposium on Control Theory and Applications,** Singapore, pp. 166-70, 1997.
477. Y. Chen, C. Wen and M. Sun. ``Discrete-time Iterative Learning Control of Uncertain Nonlinear Feedback Systems". **Proc. of The Second Chinese World Congress on Intelligent Control and Intelligent Automation (CWC ICIA'97),** Xi'an Jiaotong University Press, Xi'an, China, pp. 1972-7,1997.
478. Y. Chen, C. Wen and M. Sun. ``A High-order Iterative Learning Controller with Initial State Learning". **Proc. of The Second Chinese World Congress on Intelligent Control and Intelligent Automation (CWC ICIA'97),** Xi'an Jiaotong University Press, Xi'an, China, pp. 684--9, 1997.
479. M. Sun, B. Huang, X. Zhang and Y. Chen. `` Robust convergence of the D-type learning controller". **Proc.**

of The Second Chinese World Congress on Intelligent Control and Intelligent Automation (CWC ICIA'97), Xi'an Jiaotong University Press, Xi'an, China, pp. 678--83, 1997.

480. H. Dou, Z. Zhou, Y. Chen, J.-X. Xu and J. J. Abbas, ``Robust Control of Functional Neuromuscular Stimulation System by Discrete-time Iterative Learning Scheme", Presented at **the Asian Control Conference (ASCC'97),** Seoul, Korea, vol. 1, pp. 565-8, 1997.
481. Y. Chen, J.-X. Xu and T. H. Lee. ``Current Iteration Tracking Error Assisted High-order Iterative Learning Control of Discrete-time Uncertain Nonlinear Systems", Presented at **the Asian Control Conference (ASCC'97)**, Seoul, Korea, vol. 1, pp. 573-6, 1997.
482. M. Sun, X. Zhang, Y. Chen and J.-X. Xu, ``Selective Learning with a Forgetting Factor For Trajectory Tracking of Uncertain Nonlinear Systems", Presented at the **Asian Control Conference (ASCC'97),** Seoul, Korea, vol. 2, pp. 47-50, 1997.
483. Y. Chen, C. Wen, J.-X. Xu and M. Sun. ``An initial state learning method for iterative learning control of uncertain time-varying systems". Presented at the **35th IEEE Conference on Decision and Control**, Dec. 1996, pp. 3996-4001.
484. Y. Chen, C. Wen, J.-X. Xu and M. Sun. `` Extracting Projectile's Aerodynamic Drag Coefficient Curve Via High-order Iterative Learning Identification". Presented at **the 35th IEEE Conference on Decision and Control,** Dec. 1996, pp.3070-3071.
485. Y. Chen, J.-X. Xu and T. H. Lee. `` An iterative learning controller using current iteration tracking error information and initial state learning". Presented at **the 35th IEEE Conference on Decision and Control**, Dec. 1996, pp.3064-3069.
486. Y. Chen, J.-X. Xu and T. H. Lee. ``Current Iteration Tracking Error Assisted Iterative Learning Control of Uncertain Nonlinear Discrete-time Systems." Presented at **the 35th IEEE Conference on Decision and Control,** Dec. 1996, pp.3040-3045.
487. Y. Chen, J.-X. Xu and T. H. Lee. `` Feedback-Assisted High-order Iterative Learning Control of Uncertain Nonlinear Discrete-time Systems". Presented at the **Int. Conf. on Control, Automation, Robotics and Vision**, Singapore, Dec. 1996, pp.1785-1789.
488. H. Dou, Z. Zhou, Y. Chen, J.-X. Xu and J. Abbas. ``Robust Motion Control of Electrically Stimulated Human Limb Via Discrete-time High-order Iterative Learning Scheme". Presented at the **Int. Conf. on Control, Automation, Robotics and Vision**, Singapore, Dec. 1996, pp. 1087-1091.
489. H. Dou, Z. Zhou, Y. Chen, J.-X. Xu and J. Abbas, ``Iterative Learning Control Strategy for Functional Neuromuscular Stimulation", in **Proc. of the 1996 IEEE Engineering in Medicine and Biology Society** (EMBS) Int. Conf. , (Amsterdam), Oct. 1996.
490. H. Dou, Z. Zhou, M. Sun, and Y. Chen, ``Robust high-order P-type iterative learning control for a class of uncertain nonlinear systems," in **Proc. of the 1996 IEEE Int. Conf. on Systems, Man, and Cybernetics**, (Beijing), pp. 923--928, Oct. 1996.
491. H. Dou, Y. Chen and M. Sun, ``Iterative learning identification of a nonlinear function in a nonlinear dynamic system ", **In Proc. of the First IFAC Youth Automation Conference (IFAC YAC'95),** Beijing, China, pp. 138-143, Aug. 1995.
492. Chen, Yangquan, Sun, Mingxuan and Dou, Huifang, ``Dual-staged P-type Iterative Learning Control Schemes", In **Proc. of the 1st Asian Control Conf. (ASCC'94),** Tokyo, Japan, pp. 239-242, 1994.
493. Chen, Y. and Dou, Huifang, ``Robust Curve Identification by Iterative Learning", In **Proc. of the First Chinese World Congress on Intelligent Control and Intelligent Automation (CWC ICIA'93),** Beijing, China, Science Press, pp.1973-1980, 1993.
494. Chen, Yangquan, Sun, Mingxuan, Huang Baojian and Dou, Huifang, ``Robust higher order repetitive learning control algorithm for tracking control of delayed repetitive systems", In **Proc. of the 31-st IEEE Conf. on Decision and Control,** Tucson, Arizona, USA, pp.2504-2510, Dec. 1992.
495. Chen, Yangquan, Lu, Deye, Dou, Huifang and Qing, Yingxiao, ``Optimal dynamic fitting and identification of aerobomb's fitting drag coefficient curve", In **Proc. of the 1st IEEE Conf. on Control Applications,** Dayton, Ohio, USA, pp.853-858, Sept. 1992.

Refereed (abstract based) Conference Papers

496. Victoria Gene Kmetzsch+, Leslie Charles Mounteer Jr.+, Charles Miller, Nisar Ahmed Kanhar, YangQuan Chen, Anhong Zhou*, "Use of real-time video microscopy to quantify chemotactic response". The 2009 Annual Meeting of Institute of Biological Institute March 19-22, 2009, Santa Clara, California. (Poster presentation) (www.ibe.org) (poster only, no paper, only abstract)
497. Yiding Han+, Huifang Dou* and Yangquan Chen. "Mapping River Changes Using Low Cost Autonomous Unmanned Aerial Vehicles". American Water Resources Association (AWRA) 2009 SPRING SPECIALTY CONFERENCE. May 4 – 6, 2009, Anchorage, Alaska. http://awra.org/meetings/Anchorage2009/posters.html (Poster presentation) (poster only, no paper, only abstract)
498. Yan Li+, YangQuan Chen and Hyo-Sung Ahn. "Fractional Order Iterative Learning Control". The ICROS-SICE International Joint Conference 2009 (ICCAS-SICE 2009), August 18–21, 2009, Fukuoka International Congress Center, Fukuoka, JAPAN. http://www.sice.or.jp/ICCAS-SICE2009/index.html (abstract-based, full paper required in final submission, *ieeeXplore*)
499. Hyo-Sung Ahn and YangQuan Chen. "Iterative Learning Control for Multi-agent Formation". The ICROS-SICE International Joint Conference 2009 (ICCAS-SICE 2009), August 18–21, 2009, Fukuoka International Congress Center, Fukuoka, JAPAN. http://www.sice.or.jp/ICCAS-SICE2009/index.html (abstract-based, full paper required in final submission, *ieeeXplore*)
500. Christopher Hall, Daniel Morgan, Austin M. Jensen, Haiyang Chao, YangQuan Chen, Mac McKee. "Multiple Micro Aerial Vehicles for Applications in Real-Time Remote Sensing" *AWRA 2008 Annual Water Resources Conference*, New Orleans, LA, USA. November 17-20, 2008. (Poster presentation)
501. Haiyang Chao, YangQuan Chen*, Wei Ren. "*Mobile Actuator Networks for Distributed Feedback Control of Diffusion Process Using Multiscale Central Voronoi Tessellations*". 2007 SIAM Conference on Computational Science and Engineering, Costa Mesa, CA, Feb., 2007.(invited and oral presented)
502. Nikita Zaveri, Rongtao Sun, Yun Peng, Anhong Zhou*, YangQuan Chen, "*Biocorrosion Study of Stainless Steel Using Electrochemical, AFM, and SEM*". 2006 IBE Annual Meeting March 10-12, 2006 Hilton Tucson East Tucson, Arizona. (Poster) (local PDF, abstract)
503. Zhongmin Wang, Zhen Song, Peng-Yu Chen, YangQuan Chen* and Kevin L. Moore. *"Formation motion control methods in mobile actuator/sensor networks*" SPIE05 Tracking No. OR05-OR43-60. Paper No. 5804-84. Conference: Unmanned Ground Vehicle Technology VII; Symposium: OR05 Defense and Security. (12 page PDF paper and PPT) Presented by K. Moore
504. YangQuan Chen*, Huifang Dou, Dong Chen, and Anhong Zhou. "*Time-frequency approach (TFA) for fast robust DNA sequence comparison"* Poster presented by Prof. Anhong Zhou. (PPT . DOC) Tenth Annual Meeting of the Institute of Biological Engineering, March 4-6, 2005, The University of Georgia, Athens, Georgia, Biology-Inspired Engineering Frontiers
505. Anhong Zhou*, Joan Mclean, and YangQuan Chen. "*Modules Adaptation - Bioinstrumentation Course Omprovement.*" (PPT) Presented by Prof. Anhong Zhou. The 2005 Annual ASEE Rocky Mountain Section Conference (April 15-16, 2005, Logan, UT)
506. YangQuan Chen* and Wenbin Yu. "*Control-II: From Digital Control to Mechatronics to Smart mechatronics*." (PPT) The 2005 Annual ASEE Rocky Mountain Section Conference (April 15-16, 2005, Logan, UT)
507. Rees Fullmer*, Jinsong Liang, YangQuan Chen. "*Time-Optimal Magnetic Attitude Control for Small Spacecraft*". The Annual AIAA/Utah State University Conference on Small Satellites 9-12 August 2004.www.smallsat.org
508. Kevin L. Moore, YangQuan Chen, and Zhen Song. "*Diffusion-based path planning in mobile actuator-sensor networks (MAS-net): some preliminary results*". INTELLIGENT COMPUTING: THEORY AND APPLICATIONS II (OR53). SPIE Defense and Security Symposium 2004. April 12-16, 2004, Gaylord Palms Resort and Convention Center, Orlando, FL, USA. (PDF) SPIE5421-08.
509. YangQuan Chen, Kevin L. Moore, and Zhen Song. "*Diffusion boundary and zone control via mobile actuator-sensor networks (MAS-net): challenges and opportunities*." intelligent Computing: Theory And Applications II (OR53). SPIE Defense and Security Symposium 2004. April 12-16, 2004, Gaylord Palms Resort and Convention Center, Orlando, FL, USA. (PDF) SPIE5421-12.

510. Lili Ma, YangQuan Chen and Kevin L. Moore. "*Blind Detection and Compensation of Camera Lens Geometrical Distortions*". SIAM Conference on Imaging Science (May 3-5, 2004, SLC, USA) (PDF)
511. Z. Song, K. L. Moore, Y. Chen, V. Bahl, "*Two-dimensional laser servoing for precision motion control of an omni-directional security robot*," Unmanned Ground Vehicle Technology V -->, AeroSense, Aerospace/Defense Sensing, Simulation, and Controls, Conference 5083, Tuesday 22-Wednesday 23 April 2003, Proceedings of SPIE Vol. #5083. Paper #[5083-47] (PDF) http://spie.org/conferences/Programs/03/or/conferences/index.cfm?fuseaction=5083
512. Kevin L. Moore and YangQuan Chen. "*Spatial-Based ILC for Motion Control Applications*." MECH2K3: Second International Congress on Mechatronics. July 14-17, 2003. http://www.mechanik.tu-graz.ac.at/mech2k3/ (PDF, movie clips, videotaped presentation)

Selected Papers Published in Refereed National Conferences in China & Singapore:

1. Huifang Dou, Kok Kiong Tan, Kok Zuea Tang, and YangQuan Chen. "Analysis, Design and Application of A New Practical Iterative Learning Control Scheme", Proc. of the Chinese Control Conference. Dec. 6-8, 2000. pp. 743-7, Hong Kong, China.
2. Yangquan Chen and Changyun Wen, On Iterative Learning Identification Of Aerodynamic Property Curves. Proc. of the 9th MINDEF-NTU Joint R & D Seminar, A publication of the Defense Technology Group, the Ministry of Defense, Singapore, pages 1-7, Jan. 1999.
3. M. J. Chen, S. K. Wang, Y. Q. Wu, Y. Chen and Y. Zhang. 1996, ``HT-93 distributed auto-testing system". Proc. of the Annual NORINCO Computer Application Conference, pp. 104-107, Nanjing, China, 1996. (in Chinese)
4. Y. Chen, C. Wen, and Z. Gong. Aerobomb's drag coefficient curve identification via optimal dynamic fitting. In Proc. of the 7th MINDEF-NTU Joint R & D Seminar, A publication of the Defense Technology Group, the Ministry of Defense, Singapore., pages 116--123, Jan. 1996.
5. Shi, Y. and Chen, Y., ``Study on the launching initial disturbance reduction by applying plastic belt", Proc. of the Eighth Annual Applied Mechanics Conference of the Chinese Ordnance Society, Sept. 1994, Beijing. (in Chinese)
6. Y. Chen, ``Fast 4 DOF trajectory prediction model for projectiles", National Ballistic Conference, Oct. 1990, Jinan, China. (in Chinese)
7. Y. Chen, ``Researches on Yaw Card Data Reduction", National Ballistic Conference, Oct. 1990, Jinan, China. (in Chinese)

A Selected List of Technical Reports:

1. Zhao, Yang; Dehghan, Sina; Ates, Abdullah; Yuan, Jie; Zhou, Fengyu; Li, Yan; Chen, YangQuan; "PID2018 Benchmark Challenge: learning feedforward control" arXiv preprint arXiv:1805.11934. 2018
2. Zhang, Guoxiang; Chen, YangQuan; "LoopSmart: Smart visual SLAM through surface loop closure". arXiv preprint arXiv:1801.01572; 2018
3. Yuan, Jie; Ates, Abdullah; Dehghan, Sina; Zhao, Yang; Fei, Shumin; Chen, YangQuan; "PID2018 Benchmark Challenge: Model-based Feedforward Compensator with A Conditional Integrator" arXiv preprint arXiv:1806.00137. 2018
4. Dehghan, Sina; Zhao, Tiebiao; Zhao, Yang; Yuan, Jie; Ates, Abdullah; Chen, YangQuan; "PID2018 Benchmark Challenge: Model Predictive Control With Conditional Integral Control Using A General Purpose Optimal Control Problem Solver-RIOTS". arXiv preprint arXiv:1806.01976. 2018
5. Yang, Qi; Chen, Dali; Zhao, Tiebiao; Chen, YangQuan; ON THE OCCASION OF PROFESSOR RICHARD L. MAGIN'S 70TH BIRTHDAY. Fractional calculus in image processing – a review. arXiv preprint arXiv:1608.03240 2016
6. Viola, Jairo; Radici, Alberto; Chen, YangQuan; "Comparison of control strategies for the temperature control of a refrigeration system based on vapor compression". arXiv preprint arXiv:1810.06074
7. Ates, Abdullah; Yuan, Jie; Dehghan, Sina; Zhao, Yang; Yeroglu, Celaleddin; Chen, YangQuan; "PID2018 benchmark challenge: Multi-objective stochastic optimization algorithm". arXiv preprint arXiv:1806.00958. 2018

8. I. Podlubny, A. Chechkin, T. Skovranek, Y. Q. Chen, B. M. Vinagre Jara, "Matrix approach to discrete fractional calculus II: partial fractional differential equations", 2008 (http://arxiv.org/abs/0811.1355). Code: http://www.mathworks.com/matlabcentral/fileexchange/22071
9. J. Liang, Eddie Loo, H. F. Dou, Y. Liu, and Y. Q. Chen. *"An Internet-based Educational Real-Time Control System Lab Using WebLab*". Presentation Sides (PPT). USU Department of Instructional Technology, The USU 15-th IT Institute. August 28, 2003.
10. cs.CV/0307051 [abs, ps, pdf, other] An Analytical Piecewise Radial Distortion Model for Precision Camera Calibration
11. cs.CV/0307047 [abs, ps, pdf, other] Rational Radial Distortion Models with Analytical Undistortion Formulae
12. cs.CV/0307046 [abs, ps, pdf, other] New Analytical Radial Distortion Model for Camera Calibration
13. cs.CV/0307045 [abs, ps, pdf, other] Flexible Camera Calibration Using a New Analytical Radial Undistortion Formula with Application to Mobile Robot Localization
14. cs.CV/0307072 http://arxiv.org/abs/cs.CV/0307072 Camera Calibration: a USU Implementation.
15. cs.CV/0308003 http://arXiv.org/abs/cs/0308003 : A Family of Simplified Geometric Distortion Models for Camera Calibration
16. Lili Ma and YangQuan Chen and Kevin L. Moore. Blind Detection and Compensation of Camera Lens Geometric Distortions. (http://arXiv.org/abs/cs/0405095 , 152kb)
17. Yangquan Chen, "The Ballistic Mystery of the 'Paris Gun'", 6 pages, Dec. 1998. (unpublished, sent to World War I Historical Archive Center at http://www.worldwar1.com/pharc005.htm)
18. Qi, Zaikang and Chen, Yangquan. Initial Disturbance and Dynamic Imbalance Effects On Projectile Trajectories, SRC-TM-87679, Oct.,1987
19. Qi, Zaikang and Chen, Yangquan. A Five Degree of Freedom Model For Calculating High Elevation Projectile Trajectories and An Accurate 4-D Model, SRC-TM-87677, Sept.,1987
20. Qi, Zaikang and Chen, Yangquan. A Six Degree of Freedom Projectile Model and Program LOB6, SRC-TM-87678, Sept.,1987
21. Chen, Yangquan. A Trajectory Feasibility Study of Gun-launched Anti-aircraft Guided Missile (With A Test Study For U.S. C.L.G.P. Copperhead), SRC-TM-87689, Oct.,1987
22. Chen, Yangquan. Program GM6 - A Six Degree of Freedom Guided Missile Program, SRC-CP-87680, Oct.,1987

Seagate Internal Technical Reports/Memos(*)[1]

1. On a possible new scheme for PES linearization. 03/99 (6 pages)
2. *Linear Cubic PES Linearisation Scheme - Supporting Proof. 04/99 (1 page)
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32. A Cost-effective SP-ZAP Scheme With Neighboring-Track Assistance. 28 Jan 2000, Revised 31 Jan 2000. (6 pages)
33. OT issue due to 1x AFC under strong RV : duplication and fixe. 14 March 2000. (2 pages)
34. Frictional Force and Its Challenges on High Precision Servo Control of Hard Disk Drive With High TPI. Speaker: Ding Mingzhong Prepared by: Ding Mingzhong, Chen Yangquan, Ooi Kiankeong. Servo Product Development Group, Seagate Science Park R&D Center, March 6, 2000. EEE/NTU, TECH WEEK 2000. Invited Talk. REPORT ref# 2000/233 @ SP Servo Product Development Data Base.
35. U8/V8/U10 typical Bode plots. April 7, 2000. REPORT ref# 2000/242.
36. Feedforward Scheme to Cancel 930Hz PES Oscillation during Seek Settling Due to Arm or Coil Bending Mode. 22 Feb. 2000. REPORT ref# 2000/273. (with M. Z. Ding and L. L. Tan) (11 pages)
37. Acoustic Improvement for Short PTOS Seek. 22 Feb. 2000. REPORT ref# 2000/274. (with M. Z. Ding and K. K. Ooi) (9 pages)
38. Drive Level Results for the Proposed and Implemented "Local Smooth Jerk (LSJ) Seek". REPORT ref# 2000/278. (with M. Z. Ding and K. K. Ooi) (9 pages)
39. Techniques for Improving Seek-settling by Selective Multiple Active Damping Schemes Against Plural Resonance Frequencies. May 19, 2000. (with M. Z. Ding and K. K. Ooi) (10 pages)
40. New RVSC ppt slides (15 slides). Aug. 7, 2000.
41. An introduction to RVSC (13 slides). Aug. 3, 2000.
42. Tuning knobs of RVSC (rotational vibration/shock compensator) and how to tune them - U6 as an example. Aug. 3, 2000. (4 pages)

43. A brief guide on how to apply mini-shaker to perform RV tests. Aug. 3,2000. (4 pages)
44. After SP-ZAP Learning or During SP-ZAP Learning? A Study on the Time-Domain 1F-Component Removal From RROZAP Table. Nov. 24, 1999. (2 pages)
45. "Method to Improve the Compensation for Written-in Error in A Hard Disk Drive", June 6, 2000. (7 pages) (with Liu X., Lim C.K., Ooi K.K. and Bi, Q)
46. "PES Frequency and Magnitude Dependent Scheduling of Q-filter's Relative Degree in RVSC (Rotational Vibration and Shock Compensator)", Aug. 4, 2000. (9 pages) (with KK Ooi, MZ Ding, LL Tan, SQ Min)
47. "Identification and Cancellation of Cage Frequency in a Hard Disc Drive", July 05, 2000. (14 pages) (with KK Ooi, X. Liu, WW Yeo, WS Lee and BW Quak)
48. "A Hybrid Scheme for Written-in RRO (repeatable runout) Compensation With Adjustable Track-Squeeze Improvement ", August 8, 2000. (6 pages) (With MZ Ding, KK Ooi, SQ Min, X. Liu, and Eric WS Lee)
49. "SP-ZAP error tolerance on consecutive bad track-ID W/R values", 31 August 2000. (5 pages). (with WeiSung Lee Eric, and KianKeong Ooi)
50. "Tips for SP-ZAP Learning Gain Tuning on U6", 11 September 2000 (1 pages).
51. "Remove2f for U6 SP-ZAP", 13 September 2000. (3 pages)
52. "An Investigation of SP-ZAP improvement rate 1-sigma variations". 13 Sept. 2000. (3 pages)
53. "Remove2f for U6 SP-ZAP", 13 September 2000. (3 pages)
54. Learned RROZAP table consistency and REMOVE2f/3f - U6 drive level results. 19 Sept. 2000. (3pages)
55. Memo on SP-ZAP table gain (TG). 20 Sept. 2000. (3pages)

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