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**Mechatronics, Embedded Systems and Automation (MESA) Lab**

**Presents**

**Fractional Calculus Day @ UCMerced**

<http://mechatronics.ucmerced.edu/research/applied-fractional-calculus>

**Final Program ([DOC](index.docx))**

[**Flyer.pdf**](FCDay-UCMerced-2013-June-12-Flyer.pdf)

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| time | Presenter | Topic | remark |
| 09:00-09:10 | YangQuan Chen | [Welcome and introduction](mailto:FCDay@UCMerced-2013-June-12-yangquan-chen.pptx) |  |
| 09:10-09:30 | George Chiu | Introduction to NSF ENG/CMMI/CS programs |  |
| 09:30-10:30 | Francesco Mainardi  Giovanna Babini | [Fractional relaxation and diffusions equations of distributed order](MAINARDI_LECTURE_UCM2013.pdf)  Q/A on Francesco Mainardi:  Introduction to Dr. Mainardi's traits as a leading scientist in fractional calculus ([Mainardi publication list](fm-publist_13-APRIL.pdf)) |  |
| 10:30-11:15 | Igor Podlubny | Building fractional-order models: Data fitting using solutions of fractional differential equations |  |
| 11:15-12:00 | Nickolay Korabel | [Random walk through Anomalous Processes: some applications of Fractional Calculus](12June2013_FDM_TALK-Nickolay.pdf) |  |
| 12:00-13:00 | Lunch break, free pizza/soda for all participants | | |
| 13:00-14:00 | Eric Brown | Simulating shear thickening fluids with fractional derivatives |  |
| 14:00-15:00 | Christopher T. Kello | [Scaling Laws in Cognitive Science](Kello%20fractional%20calculus%20day.pptx) |  |
| 15:00-15:20 | Yanbao Ma | [Fractional Calculus: A Possible Solution for Non-Fourier Heat Transfer Modeling?](Non_Fourier_Heat_Transport_Atwater_FCDay_2013-Prof-Ma.pdf) |  |
| 15:20-15:40 | Zhuo Li | [Fractional order relay feedback experiments for MIMO process identification and decoupler autotuning](AFC%20Day%202013%20-%20Zhuo.pptx) | with video  demo |
| 15:40-16:00 | Chun Yin | [Energy optimization by fractional order extremum-seeking: three classes of methods and experimental comparisons for photovoltaic and](FC-Day2013_Chun%20Yin.pptx)  [lighting systems](FC-Day2013_Chun%20Yin.pptx) | with live demo |
| 16:00-16:20 | Break | | |
| 16:20-16:40 | Jiaguo Liu | [Study on a fractional model of viscoelasticity of human cranial bone](Study%20on%20the%20viscoelasticity%20of%20human%20cranial%20bone-Jiaguo-Liu.pptx) |  |
| 16:40-17:20 | YangQuan Chen | “[Mechatronics meets fractional calculus](mailto:FCDay@UCMerced-2013-June-12-yangquan-chen%20-%20mechatronics-meets-FC1.pptx)” and  “[ME280: Fractional Order Mechanics](mailto:FCDay@UCMerced-2013-June-12-yangquan-chen%20-%20ME280-FOMech.pptx)” | [ME280 Flyer](ME280-Fall2013-Flyer%20-front-back-page-fit.pdf)  [ME280 Syllabus](ME280-Fall2013-Syllabus-YQChen-v3.pdf) |
| Wrap up | | | |