

2021

1. B. Ahmad and S. K. Ntouyas. [Nonlocal Nonlinear Fractional-order Boundary Value Problems](#). World Scientific, 2021.
2. B. Ahmad, J. Henderson, and R. Luca. [Boundary Value Problems for Fractional Differential Equations and Systems](#). World Scientific, 2021.
3. V. Ambrosio. [Nonlinear Fractional Schrödinger Equations in \$R^N\$](#) . Springer, 2021.
4. G. A. Anastassiou. [Constructive Fractional Analysis with Applications](#). Springer Nature, 2021.
5. G. A. Anastassiou. [Generalized Fractional Calculus: New Advancements and Applications](#). Springer, 2021.
6. A. Atangana and S. I. Araz. [New Numerical Scheme with Newton Polynomial: Theory, Methods, and Applications](#). Academic Press, 2021.
7. B. Jin. [Fractional Differential Equations: An Approach via Fractional Derivatives](#). Springer Nature, 2021.
8. T. Kaczorek and K. Borawski. [Descriptor Systems of Integer and Fractional Orders](#). Springer Nature, 2021.
9. M. Li. [Theory of Fractional Engineering Vibrations](#). De Gruyter, 2021.
10. H. Matthew. [Fractional Differential Equations: Numerical Methods for Applications](#). Springer, 2021.
11. H. Singh, J. Singh, S. D. Purohit, and D. Kumar. [Advanced Numerical Methods for Differential Equations: Applications in Science and Engineering](#). CRC Press, 2021.
12. S. Shao, M. Chen, and P. Shi. [Robust Discrete-Time Flight Control of UAV with External Disturbances](#). Springer, 2021.
13. V. E. Tarasov and V. V. Tarasova. [Economic Dynamics with Memory: Fractional Calculus Approach](#). Walter de Gruyter GmbH & Co KG, 2021.
14. E. Tlelo-Cuautle, L. G. De La Fraga, and O. Guillén-Fernández. [Optimization of Integer/Fractional Order Chaotic Systems by Metaheuristics and Their Electronic Realization](#). CRC Press, 2021.
15. Z. Trzaska. [Mixed Mode Oscillations \(MMOs\): Fundamentals and Applications](#). Springer Nature, 2021.

2020

16. T. Allahviranloo. [Fuzzy Fractional Differential Operators and Equations: Fuzzy Fractional Differential Equations \(Studies in Fuzziness and Soft Computing \(397\)\)](#). Springer, 2020, 305 pages, ISBN-10: 3030512711.
17. T. Allahviranloo and W. Pedrycz. [Soft Numerical Computing in Uncertain Dynamic Systems](#). Academic Press, 2020.
18. G. A. Anastassiou. [Intelligent Analysis: Fractional Inequalities and Approximations Expanded](#). Springer, 2020.
19. K. Bingi, R. Ibrahim, M. N. Karsiti, S. M. Hassan, and V. R. Harindran. [Fractional-order Systems and PID Controllers](#). Springer International Publishing, 2020.
20. S. Chakraverty, R. M. Jena, and S. K. Jena. [Time-fractional Order Biological Systems with Uncertain Parameters. Synthesis Lectures on Mathematics and Statistics](#). Morgan & Claypool, 2020.

21. C. Copot, C. M. Ionescu, and C. I. Muresan. [*Image-Based and Fractional-Order Control for Mechatronic Systems: Theory and Applications with MATLAB®*](#). Springer Nature, 2020.
22. S. Das. [*Kindergarten of fractional calculus*](#). Cambridge Scholars Publishing, 2020, 533 pages, ISBN-10: 1527544982.
23. D. DEEPANJAN and K. B. RASAJIT. [*Fractional Calculus – Application to Physical Problems*](#). LAP LAMBERT Academic Publishing, 2020.
24. H. Dutta. [*Mathematical Modelling in Health, Social and Applied Sciences*](#). Springer Nature, 2020.
25. H. Dutta, A. O. Akdemir, and A. Atangana. [*Fractional Order Analysis: Theory, Methods and Applications*](#). Wiley; 2020, 336 pages. ISBN 9781119654162. URL: <https://books.google.com/books?id=DEzDwAAQBAJ>.
26. P. W. Egolf and K. Kutter. [*Nonlinear, Nonlocal and Fractional Turbulence*](#). Springer, 2020.
27. CG. Gal and M. Warma. [*Fractional-in-time Semilinear Parabolic Equations and Applications*](#). Springer, 2020.
28. BI. Halperin and JK. Jain. [*Fractional Quantum Hall Effects: New Developments*](#). World Scientific, 2020, 552 pages, ISBN-10: 9811217483.
29. M. S. Hashemi and D. Baleanu. [*Lie Symmetry Analysis of Fractional Differential Equations*](#). CRC Press, 2020, 222 pages, ISBN-10: 0367441861.
30. S. Iqbal, J. Pečarić, and Z. Tomovski. [*Analytical Inequalities in Fractional Calculus: Hardy, Opial and Related Inequalities*](#). LAP LAMBERT Academic Publishing, 2020.
31. A. Kubica, K. Ryszewska and M. Yamamoto. [*Time-Fractional Differential Equations: A Theoretical Introduction*](#). Springer, 2020.
32. D. Kumar and J. Singh. [*Fractional Calculus in Medical and Health Science \(Mathematics and its Applications\)*](#). CRC Press, 2020, 264 pages, ISBN-10: 0367351218.
33. P. Kunche and N. Manikanthababu. [*Fractional Fourier Transform Techniques for Speech Enhancement*](#). Springer International Publishing AG, 2020.
34. J. A. T. Machado, N. Özdemir, and D. Baleanu. [*Numerical Solutions of Realistic Nonlinear Phenomena*](#). Springer Nature, 2020.
35. R. Martínez-Guerra, F. Meléndez-Vázquez, and I. Trejo-Zúñiga. [*Fault-tolerant Control and Diagnosis for Integer and Fractional-order Systems: Fundamentals of Fractional Calculus and Differential Algebra with Real-Time Applications*](#). Springer Nature, 2020.
36. AE. Matouk. [*Advanced Applications of Fractional Differential Operators to Science and Technology*](#). IGI Global, 2020.
37. J. Mishra, R. Agarwal, and A. Atangana. [*Mathematical Modeling and Soft Computing in Epidemiology*](#). CRC Press, 2020.
38. U. Oberst, M. Scheicher, and I. Scheicher. [*Linear Time-Invariant Systems, Behaviors and Modules*](#). Springer International Publishing, 2020.
39. MD. Ortigueira and D. Valério. [*Fractional Signals and Systems*](#). Walter de Gruyter GmbH & Co KG, 2020.
40. G. E. Paredes. [*Fractional-Order Models for Nuclear Reactor Analysis*](#). Woodhead Publishing, 2020.
41. S. Ray. [*Nonlinear Differential Equations in Physics*](#). Springer Singapore, 2020.
42. AP. Singh, D. Deb, H. Agrawal and VE. Balas. [*Fractional Modeling and Controller Design of Robotic Manipulators: With Hardware Validation*](#). Springer Nature, 2020.
43. E. Shishkina and S. Sitnik. [*Transmutations, Singular and Fractional Differential Equations with Applications to Mathematical Physics*](#). Academic Press, 2020.

44. R. T. Shwayaa. [Fractional Integral Differential Equations: Numerical Methods for Solving Fractional Integral Differential Equations](#). Scholars' Press, 2020.
45. A. S. Srinivasa Rao and P. Mallikarjuna Rao. [Design and Study of Antenna Beam Forming: A Novel Antenna Beam-Forming Concept using Fractional Fourier Transform](#). Scholars' Press, 2020.
46. N. Su. [Fractional Calculus for Hydrology, Soil Science and Geomechanics: An Introduction to Applications](#). CRC Press, 2020, 340 pages, ISBN-10: 1138491667.
47. ZZ. Sun and G. Gao. [Fractional Differential Equations: Finite Difference Methods](#). Walter de Gruyter GmbH & Co KG, 2020, 430 pages, ISBN-10: 3110615177.
48. E. Tlelo-Cuautle and A. D. Pano-Azucena. [Analog/digital Implementation of Fractional Order Chaotic Circuits and Applications](#). Berlin, Germany: Springer, 2020.
49. XJ. Yang, F. Gao, and Y. Ju. [General Fractional Derivatives with Applications in Viscoelasticity](#). Academic Press, 2020.

2019

50. R. Almeida, D. Tavares, and DFM. Torres. [The Variable-order Fractional Calculus of Variations](#). Springer International Publishing, 2019.
51. O. Banna, Y. Mishura, and K. Ralchenko. [Fractional Brownian Motion \(Approximations of fBm\): Weak and Strong Approximations and Projections](#). Wiley-ISTE, 2019, ISBN-10: 1786302608. <https://doi.org/10.1002/9781119476771>
52. R. G. Campos. [The XFT Quadrature in Discrete Fourier Analysis](#). Springer International Publishing, 2019.
53. A. Carbotti, S. Dipierro, and E. Valdinoci. [Local Density of Solutions to Fractional Equations](#). Walter de Gruyter GmbH & Co KG, 2019, 143 pages, ISBN-10 : 3110660695.
54. W. Chen, Y. Li, and P. Ma. [The Fractional Laplacian](#). World Scientific Pub Co Inc, 2019, 350 pages, ISBN-10: 9813223995. <https://doi.org/10.1142/10550>
55. F. Colombo and J. Gantner. [Quaternionic Closed Operators, Fractional Powers and Fractional Diffusion vaes \(Operator Theory: Advances and Applications\)](#). Birkhäuser, 2019, ISBN-10: 303016408X. https://www.amazon.com/Quaternionic-Operators-Fractional-Diffusion-Processes/dp/303016408X/ref=sr_1_fkmr0_1?keywords=Colombo%2C+J.+Gantner%3A+Quaternionic+Closed+Operators%2C+Fractional+Powers+and+Fractional+Diffusion+Processes+%28Operator+Theory%3A+Advances+and+Applications%29.&qid=1554784917&s=gateway&sr=8-1-fkmr0
56. J. F. Gómez, L. Torres, and R. F. Escobar. [Fractional Derivatives with Mittag-Leffler Kernel: Trends and Applications in Science and Engineering](#). Springer, 2019, 341 pages, ISBN-10: 3030116611. <https://doi.org/10.1007/978-3-030-11662-0>
57. A. Kochubei and Y. Luchko. [Fractional Differential Equations \(De Gruyter Reference\)](#). De Gruyter, 2019, 601 pages, ISBN-10: 3110570823. <https://doi.org/10.1515/9783110571660>
58. C. Li and M. Cai. [Theory and Numerical Approximations of Fractional Integrals and Derivatives](#). SIAM, 2019, 312 pages, ISBN: 978-1-61197-587-1, <https://doi.org/10.1137/1.9781611975888>
59. Y. Liang, W. Chen, and W. Cai. [Hausdorff Calculus: Applications to Fractal Systems \(Fractional Calculus in Applied Sciences and Engineering\)](#). De Gruyter, 2019, 310 pages, ISBN-10: 3110606925. <https://doi.org/10.1515/9783110608526>

60. A. M. Mathai and H. J. Haubold. *An Introduction to Fractional Calculus (Mathematics Research Developments)*. Nova Science Pub Inc, 2019, 258 pages, ISBN-10: 1536146323.
[https://books.google.com/books?id=PbGYswEACAAJ&dq=Mathai,+H.+J.+Haubold:+An+Introducti+on+to+Fractional+Calculus+\(Mathematics+Research+Developments\).&hl=zh-CN&sa=X&ved=0ahUKewiRhPv1I8LhAhVUIqYKHVcFAgEQ6AEIKTAA](https://books.google.com/books?id=PbGYswEACAAJ&dq=Mathai,+H.+J.+Haubold:+An+Introducti+on+to+Fractional+Calculus+(Mathematics+Research+Developments).&hl=zh-CN&sa=X&ved=0ahUKewiRhPv1I8LhAhVUIqYKHVcFAgEQ6AEIKTAA)
61. T. Michelitsch, B. Colle, and A. P. Riascos. *Fractional Dynamics on Lattices and Networks*. Wiley-ISTE, 2019, 200 pages, ISBN-10: 178630158X. <https://doi.org/10.1002/9781119608165>
62. C. Milici, G. Drăgănescu, and J. T. Machado. *Introduction to Fractional Differential Equations (Nonlinear Systems and Complexity)*. Springer, 2019, 201 pages, ISBN-10: 3030008940.
<https://doi.org/10.1007/978-3-030-00895-6>
63. E. C. Oliveira. *Solved Exercises in Fractional Calculus (Studies in Systems, Decision and Control)*. Springer International Publishing, 2019, 340 pages, ISBN-10: 3030205266.
64. K. M. Owolabi and A. Atangana. *Numerical Methods for Fractional Differentiation*. Springer Singapore, 2019, 328 pages, ISBN-10: 9811500975.
65. A. I. Saichev. *Distributions in the Physical and Engineering Sciences, Volume 3: Random and Anomalous Fractional Dynamics in Continuous Media*. Birkhäuser, 2019, 424 pages, ISBN-10: 3030064670. <https://doi.org/10.1007/978-3-319-92586-8>
66. T. Sandev and Ž. Tomovski. *Fractional Equations and Models: Theory and Applications*. Springer Nature, 2019, 345 pages, ISBN-10: 303029613X.
67. H. Singh, D. Kumar, and D. Baleanu. *Methods of Mathematical Modelling: Fractional Differential Equations*. CRC Press, 2019, 254 pages, ISBN-10: 0367220083.
68. H. M. Srivastava. *Operators of Fractional Calculus and Their Applications*. MDPI AG, 2019, 136 pages, ISBN-10: 3038973408. <https://doi.org/10.3390/math6090157>
69. N. Su. *Fractional Calculus in Soil Hydrology and Mechanics: Fundamentals and Applications*. CRC Press, 2019, 300 pages, ISBN-10: 1138491667.
https://www.amazon.com/Fractional-Calculus-Soil-Hydrology-Mechanics/dp/1138491667/ref=sr_1_fkmrnull_1?keywords=Fractional+Calculus+in+Soil+Hydrology+and+Mechanics%3A+Fundamentals+and+Applications.&qid=1554784981&s=gateway&sr=8-1-fkmrnull
70. J. C. Trigeassou and N. Maamri. *Analysis, Modeling and Stability of Fractional Order Differential Systems 2: The Infinite State Approach*. John Wiley & Sons, 2019, 413 pages, ISBN-10: 1786304554.
71. Y. Yang and H. H. Zhang. *Fractional Calculus with its Applications in Engineering and Technology*. Morgan & Claypool, 2019, 109 pages, ISBN: 9781681735160.
72. XJ. Yang. *General Fractional Derivatives: Theory, Methods and Applications*. Chapman and Hall/CRC, 2019, 384 pages, ISBN-10: 1138336165.
https://www.amazon.com/General-Fractional-Derivatives-Methods-Applications/dp/1138336165/ref=sr_1_fkmr0_1?keywords=Yang%3A+General+Fractional+Derivatives%3A+Theory%2C+Methods+and+Applications.+C&qid=1554784846&s=gateway&sr=8-1-fkmr0

73. A. Amenta and P. Auscher. *Elliptic Boundary Value Problems with Fractional Regularity Data: The First Order Approach*. American Mathematical Soc., 2018, 152 pages, ISBN-10: 1470442507. <https://doi.org/10.1090/crmm/037>
74. G. A. Anastassiou. *Intelligent Computations: Abstract Fractional Calculus, Inequalities, Approximations*. Heidelberg: Springer, 2018, 319 pages, ISBN: 978-3-319-66936-6.
75. G. A. Anastassiou. *Nonlinearity: Ordinary and Fractional Approximations by Sublinear and Max-Product Operators*. Springer, 2018, 293 pages, ISBN-10: 3319895087. <https://doi.org/10.1007/978-3-319-89509-3>
76. G. A. Anastassiou. *Ordinary and Fractional Approximation by Non-additive Integrals: Choquet, Shilkret and Sugeno Integral Approximators*. Springer, 2018, 347 pages, ISBN-10: 3030042863. <https://doi.org/10.1007/978-3-030-04287-5>
77. G. A. Anastassiou and I. K. Argyros. *Functional Numerical Methods: Applications to Abstract Fractional Calculus*. Springer, 2018, 161 pages, ISBN-10: 3319887947. <https://doi.org/10.1007/978-3-319-69526-6>
78. S. Bhalekar. *Frontiers in Fractional Calculus (Current Developments in Mathematical Sciences)*. Bentham Science Publishers, 2018, 375 pages, ISBN-10: 168108600X. <https://doi.org/10.2174/97816810859991180101>
79. K. Cao and Y. Chen. *Fractional Order Crowd Dynamics: Cyber-Human System Modeling and Control*. Vol. 4. Walter de Gruyter GmbH & Co KG, 2018, 138 pages, ISBN-13: 978-3110472813. <https://doi.org/10.1515/9783110473988>
80. S. K. Damarla and M. Kundu. *Fractional Order Processes: Simulation, Identification, and Control*. CRC Press, 2018, 364 pages, ISBN-10: 0367571137.
81. J. Dix. *Fractional Calculus, Paths on Networks, Geometry, Gravitation: Collected Essays, Volume I*. Independently Published, 2018, 109 pages, ISBN-10: 1719825270. https://books.google.com/books?id=94_9uwEACAAJ&dq=Dix:+Fractional+Calculus,+Paths+on+Networks,+Geometry,+Gravitation:+Collected+Essays,+Volume+I.&hl=zh-CN&sa=X&ved=0ahUKewjE3MDolclhAhVE-WEKHT-WAS0Q6AEIKTAA
82. M. Edelman, E. N. Macau, and M. Sanjuan. *Chaotic, Fractional, and Complex Dynamics: New Insights and Perspectives*. Springer, 2018, 315 pages, ISBN-10: 3319681087. <https://doi.org/10.1007/978-3-319-68109-2>
83. L. R. Evangelista and E. K. Lenzi. *Fractional Diffusion Equations and Anomalous Diffusion*. Cambridge University Press, 2018, 358 pages, ISBN-10: 9781107143555. <https://doi.org/10.1017/9781316534649>
84. F. Ge, Y. Chen, and C. Kou. *Regional Analysis of Time-fractional Diffusion Processes*. Springer International Publishing, 2018, 250 pages, ISBN-10: 9783319728957. <https://doi.org/10.1007/978-3-319-72896-4>
85. S. G. Georgiev. *Fractional Dynamic Calculus and Fractional Dynamic Equations on Time Scales*. Springer, 2018, 360 pages, ISBN-10: 9783319739533. <https://doi.org/10.1007/978-3-319-73954-0>
86. H. J. Hans. *Special Functions: Fractional Calculus and the Pathway for Entropy*. MDPI, 2018, 304 pages, ISBN-10: 3038426652. <https://doi.org/10.3390/books978-3-03842-664-6>
87. C. F. Lorenzo and T. Hartley. *Generalized Functions for the Fractional Calculus*. Independently published, 1999 (2018 Publish), 36 pages, ISBN-10: 1724034332. <https://doi.org/10.1615/critrevbiomedeng.v36.i1.40>

88. R. Martínez-Guerra and C. A. Pérez-Pinacho. *Advances in Synchronization of Coupled Fractional Order Systems: Fundamentals and Methods*. Springer, 2018, 185 pages, ISBN-10: 3319939459, ISBN-13: 978-3319939452. <https://doi.org/10.1007/978-3-319-93946-9>
89. C. Skiadas. *Fractional Dynamics, Anomalous Transport and Plasma Science*. Springer, 2018, 201 pages, ISBN-10: 3030044823. <https://doi.org/10.1007/978-3-030-04483-1>
90. V. Vyawahare and P. V. Nataraj. *Fractional-order Modeling of Nuclear Reactor: From Subdiffusive Neutron Transport to Control-oriented Models: A Systematic Approach*. Springer, 2018, 200 pages, ISBN-10: 9811356556. <https://doi.org/10.1007/978-981-10-7587-2>

2017

91. A. T. Azar, S. Vaidyanathan, and A. Ouannas. *Fractional Order Control and Synchronization of Chaotic Systems*. Springer, 2017, 877 pages, ISBN-10: 3319502484. <https://doi.org/10.1007/978-3-319-50249-6>
92. M. Chen, S. Shao, and P. Shi. *Robust Adaptive Control for Fractional-order Systems with Disturbance and Saturation*. Wiley-ASME Press Series, 2017, 256 pages, ISBN-10: 1119393272. <https://doi.org/10.1002/9781119393351>
93. M. Fečkan, J. Wang, and M. Pospíšil. *Fractional-order Equations and Inclusions*. Walter de Gruyter GmbH & Co KG, 2017, 367 pages, ISBN-10: 3110521385, ISBN-13: 978-3110521382. <https://doi.org/10.1515/9783110522075>
94. K. Kubilius, Y. Mishura, and K. Ralchenko. *Parameter Estimation in Fractional Diffusion Models*. Springer, 2017, 390 pages, ISBN-10: 331971029X. <https://doi.org/10.1007/978-3-319-71030-3>
95. A. M. Mathai and H. J. Haubold. *Fractional and Multivariable Calculus: Model Building and Optimization Problems*. Springer, 2017, 234 pages, ISBN-10: 3319599925. <https://doi.org/10.1007/978-3-319-59993-9>
96. I. M. Stamova and G. T. Stamov. *Functional and Impulsive Differential Equations of Fractional Order: Qualitative Analysis and Applications*. CRC Press, 2017, 276 pages, ISBN-10: 1498764835. <https://doi.org/10.1201/9781315367453>
97. R. U. Verma. *Semi-Infinite Fractional Programming*. Springer Singapore, 2017, 291 pages, ISBN-10: 9811062552. https://doi.org/10.1007/978-981-10-6256-8_4
98. B. J. West. *Nature's Patterns and the Fractional Calculus*. Walter de Gruyter GmbH & Co KG, 2017, 199 pages, ISBN-10: 3110534118, ISBN-13: 978-3110534115. <https://doi.org/10.1515/9783110535136>
99. D. Xue. *Fractional-order Control Systems: Fundamentals and Numerical Implementations*. Vol. 1. Walter de Gruyter GmbH & Co KG, 2017, 320 pages, ISBN-10: 3110499991. <https://doi.org/10.1515/9783110497977>

2016

100. G. A. Anastassiou and I. K. Argyros. *Intelligent Numerical Methods II: Applications to Multivariate Fractional Calculus*. Springer International Publishing, 2016, 116 pages, ISBN-10: 3319336053. <https://doi.org/10.1007/978-3-319-33606-0>

101. S. Chakraverty, S. Tapaswini, and D. Behera. *Fuzzy Arbitrary Order System: Fuzzy Fractional Differential Equations and Applications*. John Wiley & Sons, 2016, 272 pages, ISBN-10: 111900411X. <https://doi.org/10.1002/9781119004233>
102. C. F. Lorenzo and T. T. Hartley. *The Fractional Trigonometry: With Applications to Fractional Differential Equations and Science*. John Wiley & Sons, 2016, 464 pages, ISBN-10: 9781119139409. <https://doi.org/10.1002/9781119139447>
103. C. Pozrikidis. *The Fractional Laplacian*. Chapman and Hall/CRC, 2016, 294 pages, ISBN-10: 1498746152. <https://doi.org/10.1201/b19666>
104. B. J. West. *Fractional Calculus View of Complexity: Tomorrow's Science*. CRC Press, 2016, 285 pages, ISBN-13: 978-1-4987-3800-2. <https://doi.org/10.1201/b18911>

2015

105. B. Bandyopadhyay and S. Kamal. *Stabilization and Control of Fractional Order Systems: A Sliding Mode Approach*. Vol. 317. Switzerland: Springer International Publishing, 2015, 200 pages, ISBN-10: 3319086200. <https://doi.org/10.1007/978-3-319-08621-7>
106. T. Kaczorek and K. Rogowski. *Fractional Linear Systems and Electrical Circuits (Studies in Systems, Decision and Control)*. Cham, Switzerland: Springer International Publishing, 2015, 254 pages, ISBN-10: 3319113607. <https://doi.org/10.1007/978-3-319-11361-6>
107. C. Li and F. Zeng. *Numerical Methods for Fractional Calculus*. Chapman and Hall/CRC, 2015, 300 pages, ISBN-10: 1482253801. <https://doi.org/10.1201/b18503>
108. A. B. Malinowska, T. Odziejewicz, and F. M. Torres. *Advanced Methods in the Fractional Calculus of AI*. Springer, 2015, 148 pages, ISBN-10: 9783319147550. <https://doi.org/10.1007/978-3-319-14756-7>
109. R. Martínez-Guerra, C. A. Pérez-Pinacho, and G. C. Gómez-Cortés. *Synchronization of Integral and Fractional Order Chaotic Systems: A Differential Algebraic and Differential Geometric Approach*. Springer, 2015, 242 pages, ISBN-10: 3319152831. <https://www.springer.com/gp/book/9783319152837>
110. F. Padula and A. Visioli. *Advances in Robust Fractional Control*. Cham, Switzerland: Springer, 2015, 176 pages, ISBN-10: 3319109294. <https://doi.org/10.1007/978-3-319-10930-5>
111. Y. Povstenko. *Fractional Thermoelasticity (Solid Mechanics and Its Applications)*. Springer, 2015, 253 pages, ISBN-10: 331915334X. <https://doi.org/10.1007/978-3-319-15335-3>

2014

112. T. M. Atanackovic. *Fractional Calculus with Applications in Mechanics: Vibrations and Diffusion Processes*. John Wiley & Sons, 2014, 336 pages, ISBN-10: 9781848214170. <https://doi.org/10.1002/9781118577530>
113. R. Herrmann. *Fractional Calculus: An Introduction for Physicists (2nd Edition)*. World Scientific, 2014, 500 pages, ISBN-10: 9814551074. https://doi.org/10.1142/9789814551083_0005
114. R. Gorenflo, A. A. Kilbas, F. Mainardi, and S. V. Rogosin. *Mittag-Leffler Functions, Related Topics and Applications*. Springer, 2014, 443 pages, ISBN-10: 3662439298.

2013

115. S. Cohen and J. Istaş. *Fractional Fields and Applications*. Springer, 2013, 284 pages, ISBN-10: 3642367380. <https://doi.org/10.1007/978-3-642-36739-7>
116. V. Daftardar-Gejji. *Fractional Calculus: Theory and Applications*. Narosa, New Delhi, 2013, 232 pages, ISBN-10: 8184873336. <https://books.google.com/books?id=fBWYngEACAAJ&dq=Fractional+Calculus:+Theory+and+Applications.&hl=zh-CN&sa=X&ved=0ahUKEwj7uc6cksLhAhUOQN4KHAlXAzUQ6AEIMDAB>

2012

117. S. Abbas, M. Benchohra and G. M. N'Guérékata. *Topics in Fractional Differential Equations*. Springer Science & Business Media, 2012, 412 pages, ISBN-10: 1489995471. <https://books.google.com/books?hl=zh-CN&lr=&id=UCkQAN3teM4C&oi=fnd&pg=PR7&dq=Topics+in+fractional+differential+equations.+&ots=S8XYK8mmqu&sig=BaBgT97fLqae5CPkkmkWZBo5Yf6A>
118. M. H. Annaby and Z. S. Mansour. *Q-fractional Calculus and Equations*. Springer, 2012, 340 pages, ISBN-10: 364230897X. <https://books.google.com/books?hl=zh-CN&lr=&id=OEi5BQAAQBAJ&oi=fnd&pg=PR3&dq=Q-fractional+Calculus+and+Equations&ots=GEf146VQaQ&sig=bUVEjU8JRQ4IBYKY4DQxra4bFEs>
119. D. Baleanu, K. Diethelm, E. Scalas, and J. J. Trujillo. *Fractional Calculus: Models and Numerical Methods*. World Scientific, 2012, 428 pages, ISBN-10: 981-4355-20-8, ISBN-13: 978-981-4355-20-9. (2nd Edition, 2016, 478 pages, ISBN-10: 9813140038, ISBN-13: 978-9813140035.) <https://books.google.com/books?hl=zh-CN&lr=&id=NhS7CgAAQBAJ&oi=fnd&pg=PR7&dq=Fractional+calculus:+models+and+numerical+methods.&ots=JldFMsuz50&sig=yd1pgl9uZLorKzONI3dzDWg1Xu8>
120. D. Baleanu, J. A. Machado, and A. Luo. *Fractional Dynamics and Control*. Springer Science & Business Media, 2012, 309 pages, ISBN-13: 978-1-4614-0456-9. https://books.google.com/books?hl=zh-CN&lr=&id=8tpLwiLONDkC&oi=fnd&pg=PR1&dq=Fractional+dynamics+and+control&ots=fwX4VBw2tj&sig=G8mvORY4ULXev3UKqcsx_KMAh2Q
121. J. Klafter, S. C. Lim, and R. Metzler. *Fractional Dynamics: Recent Advances*. World Scientific, 2012, 530 pages, ISBN-13: 978-981-4340-58-8. <https://doi.org/10.1142/8087>
122. Y. Luo and Y. Chen. *Fractional Order Motion Controls*. John Wiley & Sons, 2012, 454 pages, ISBN-10: 1119944554. <https://doi.org/10.1002/9781118387726>
123. I. Nourdin. *Selected Aspects of Fractional Brownian Motion*. Springer, 2012, 122 pages, ISBN-10: 8847028221. <https://doi.org/10.1007/978-88-470-2823-4>
124. I. Pan and S. Das. *Intelligent Fractional Order Systems and Control: An Introduction*. Springer, 2012, 316 pages, ISBN-10: 3642438520.

https://books.google.com/books?hl=zh-CN&lr=&id=bLy5BQAAQBAJ&oi=fnd&pg=PR3&dq=Intelligent+fractional+order+systems+and+control:+an+introduction.&ots=ZchTWQmTVc&sig=F-z6ez_Th4bXStFBpYRW-NVnuZI

125. M. Zubair, M. J. Mughal, and Q. A. Naqvi. *Electromagnetic Fields and Waves in Fractional Dimensional Space*. Springer Science & Business Media, 2012, 88 pages, ISBN-10: 3642253571. <https://doi.org/10.1007/978-3-642-25358-4>

2011

126. S. Das and I. Pan. *Fractional Order Signal Processing: Introductory Concepts and Applications*. Springer Science & Business Media, 2011, 116 pages, ISBN-10: 3642231160. <https://books.google.com/books?hl=zh-CN&lr=&id=qHKQ92q1uRIC&oi=fnd&pg=PP3&dq=Fractional+order+signal+processing:+introductory+concepts+and+applications.+&ots=wQmdtYyOaE&sig=1emlJZamePtOgZ6RR1XFLwhet7Q>
127. S. Das. *Functional Fractional Calculus*. Springer Science & Business Media, 2011, 612 pages, ISBN-10: 3642205445. <https://doi.org/10.1007/978-3-642-20545-3>
128. T. Kaczorek. *Selected Problems of Fractional Systems Theory*. Springer Science & Business Media, 2011, 364 pages, ISBN-10: 3642205011. <https://doi.org/10.1007/978-3-642-20502-6>
129. J. S. Leszczyński. *An Introduction to Fractional Mechanics*. Publishing Office of Czestochowa University of Technology, 2011, 128 pages, ISBN: 978-83-7193-494-0. <https://books.google.com/books?id=dIFdLwEACAAJ&dq=An+introduction+to+fractional+mechanics&hl=zh-CN&sa=X&ved=0ahUKewjLro2cj8LhAhUPBKYKHUcPBnwQ6AEIKTAA>
130. M. M. Meerschaert and A. Sikorskii. *Stochastic Models for Fractional Calculus*. Walter de Gruyter, 2011, 391 pages, ISBN-10: 3110258692, ISBN-13: 978-3-11-025869-1. <https://doi.org/10.1515/9783110258165>
131. M. D. Ortigueira. *Fractional Calculus for Scientists and Engineers*. Springer Science & Business Media, 2011, 154 pages, ISBN-10: 978940070746-7. <https://doi.org/10.1007/978-94-007-0747-4>
132. I. Petráš. *Fractional-order Nonlinear Systems: Modeling, Analysis and Simulation*. Springer Science & Business Media, 2011, 218 pages, ISBN-10: 9783642181009. <https://books.google.com/books?hl=zh-CN&lr=&id=6exW-H3nllUC&oi=fnd&pg=PP4&dq=Fractional-order+nonlinear+systems:+modeling,+analysis+and+simulation&ots=Fgof4sGmIF&sig=1f8klkBBsjl4WjMclBlwiSI-KFI>
133. B. L. S. Prakasa Rao. *Statistical Inference for Fractional Diffusion Processes*. John Wiley & Sons, 2011, 280 pages, ISBN-10: 0470665688. <https://books.google.com/books?hl=zh-CN&lr=&id=kjFvTEWHmD0C&oi=fnd&pg=PT5&dq=Statistical+inference+for+fractional+diffusion+processes.&ots=O6-AfSjrl&sig=GsjUTB3hfs9AXaWnvTcA9nVyINU>
134. E. R. Scheinerman and D. H. Ullman. *Fractional Graph Theory: A Rational Approach to the Theory of Graphs*. Dover Publications, 2011, 240 pages, ISBN-10: 0486485935. <https://books.google.com/books?hl=zh-CN&lr=&id=zzFxD8kPWigC&oi=fnd&pg=PP1&dq=Fractional+graph+theory:+a+rational+approach+to+the+theory+of+graphs.&ots=yUl8wVwQuh&sig=vhnLfwe2PehOVuvj5hMfrtEGuMs>

135. H. Sheng, Y. Chen, and T. Qiu. *Fractional Processes and Fractional-order Signal Processing: Techniques and Applications*. Springer Science & Business Media, 2011, 295 pages, ISBN-10: 1447122321. <https://doi.org/10.1007/978-1-4471-2233-3>
136. V. E. Tarasov. *Fractional Dynamics: Applications of Fractional Calculus to Dynamics of Particles, Fields and Media*. Springer Science & Business Media, 2011, 505 pages, ISBN-10: 3642140025. https://books.google.com/books?hl=zh-CN&lr=&id=Mc193SwT_JQC&oi=fnd&pg=PR3&dq=+Fractional+dynamics:+applications+of+fractional+calculus+to+dynamics+of+particles,+fields+and+media&ots=gBx4JfWTC&sig=P_MB5FqT9V58h4QckvPsOvXGJbU

2010

137. D. Baleanu, Z. B. Güvenç, and J. A. Tenreiro Machado. *New Trends in Nanotechnology and Fractional Calculus Applications*. New York: Springer, 2010, 531 pages, ISBN-10: 9048132924. <https://link.springer.com/content/pdf/10.1007/978-90-481-3293-5.pdf>
138. R. Caponetto, G. Dongola, L. Fortuna, and I. Petras. *Fractional Order Systems: Modeling and Control Applications*. Vol. 72. World Scientific, 2010, 200 pages, ISBN-10: 9814304190. <https://doi.org/10.1142/7709>
139. K. Diethelm. *The Analysis of Fractional Differential Equations: An Application-oriented Exposition Using Differential Operators of Caputo Type*. Springer Science & Business Media, 2010, 264 pages, ISBN-10: 9783642145735. <https://books.google.com/books?hl=zh-CN&lr=&id=K4vKvX98SM8C&oi=fnd&pg=PR5&dq=The+analysis+of+fractional+differential+equations:+An+application-oriented+exposition+using+differential+operators+of+Caputo+type&ots=OLfUngs9ql&sig=R4bv02KvATFWuIWu4n7Jw2AQ91Y>
140. A.C. J. Luo and V. Afraimovich. *Long-range Interactions, Stochasticity and Fractional Dynamics: Dedicated to George M. Zaslavsky (1935–2008)*. Springer Science & Business Media, 2010, 311 pages, ISBN-10: 3642123422. <https://doi.org/10.1007/978-3-642-12343-6>
141. F. Mainardi. *Fractional Calculus and Waves in Linear Viscoelasticity: An Introduction to Mathematical Models*. Imperial College Pr, 2010, 347 pages, ISBN-10: 1848163290. <https://doi.org/10.1142/9781848163300>
142. C. A. Monje, Y. Chen, B. M. Vinagre, D. Xue, and V. Feliu-Batlle. *Fractional-order Systems and Controls: Fundamentals and Applications*. Springer Science & Business Media, 2010, 415 pages, ISBN-10: 1849963347. <https://books.google.com/books?hl=zh-CN&lr=&id=c4fV9WeCiEwC&oi=fnd&pg=PR9&dq=Fractional-order+systems+and+controls:+fundamentals+and+applications&ots=E0qVR5hOOG&sig=doWtdgj9kTit2FL2phtkmRenhaA>

2009

143. M. Klimek. *On Solutions of Linear Fractional Differential Equations of a Variational Type*. Publishing Office of Czestochowa University of Technology, 2009, 244 pages, ISBN-10: 837193422X.

https://www.amazon.com/Solutions-Fractional-Differential-Equations-Variational/dp/837193422X/ref=sr_1_fkmrnull_1?keywords=ISBN-10%3A+837193422X&qid=1554781703&s=gateway&sr=8-1-fkmrnull

144. S. Rostek. *Option Pricing in Fractional Brownian Markets (Lecture Notes in Economics and Mathematical Systems)*. Springer, 2009, 152 pages, ISBN-10: 3642003303.
<https://doi.org/10.1007/978-3-642-00331-8>

2008

145. F. Biagini, Y. Hu, B. Øksendal, and T. Zhang. *Stochastic Calculus for Fractional Brownian Motion and Applications*. Springer Science & Business Media, 2008, 330 pages, ISBN-10: 9781852339968.
<https://books.google.com/books?hl=zh-CN&lr=&id=ccdWU2NW9f4C&oi=fnd&pg=PR7&dq=Stochastic+calculus+for+fractional+Brownian+motion+and+applications.&ots=b5NOKs6Ebl&sig=OV6E3GuDpNHDmGYMBDi4uldy1No>
146. S. Das. *Functional Fractional Calculus for System Identification and Controls*. Springer, 2008, 260 pages, ISBN-10: 3642091784. <https://doi.org/10.1007/978-3-540-72703-3>
147. Y. Mishura. *Stochastic Calculus for Fractional Brownian Motion and Related Processes*. Vol. 1929. Springer Science & Business Media, 2008, 416 pages, ISBN-10: 3540758720.
<https://doi.org/10.1007/978-3-540-75873-0>

2007

148. J. Sabatier, O. P. Agrawal, and J. A. Tenreiro Machado. *Advances in Fractional Calculus: Theoretical Developments and Applications in Physics and Engineering*. Vol. 4. No. 9. Dordrecht: Springer, 2007, 552 pages, ISBN-10: 9781402060410.
<https://www.springer.com/gp/book/9781402060410>

2006

149. A. A. Kilbas, H. M. Srivastava, and J. J. Trujillo. *Theory and Applications of Fractional Differential Equations*. Vol. 204. Elsevier Science Limited, 2006, 540 pages, ISBN-10: 0444518320.
[https://doi.org/10.1016/s0304-0208\(06\)x8001-5](https://doi.org/10.1016/s0304-0208(06)x8001-5)
150. R. L. Magin. *Fractional Calculus in Bioengineering*. Redding: Begell House, 2006, 684 pages, ISBN-10: 1567002153.
<https://www.amazon.com/Fractional-Calculus-Bioengineering-Richard-Magin/dp/1567002153>

2005

151. R. A. Hirschweiler and T. H. MacGregor. *Fractional Cauchy Transforms*. Chapman and Hall/CRC, 2005, 272 pages, ISBN 10: 1584885602. <https://doi.org/10.1201/9781420034875>

152. A. Khare. *Fractional Statistics and Quantum Theory*. World Scientific, 2005, 316 pages, ISBN-10: 9812561609. <https://doi.org/10.1142/9789812567758>
153. G. M. Zaslavsky. *Hamiltonian Chaos and Fractional Dynamics*. Oxford University Press on Demand, 2005, 436 pages, ISBN-10: 0199535485. <https://books.google.com/books?hl=zh-CN&lr=&id=qMQRDAAAQBAJ&oi=fnd&pg=PR9&dq=Hamiltonian+chaos+and+fractional+dynamics&ots=DCuJWn5rd6&sig=RcGkUqvW2xt84RpuvLIpodLDtI>

2004

154. A. M. F. Ohashi. *Evolution Equations Driven by a Fractional White Noise in Spaces of Abstract Stochastic Distributions*. UNICAMP, 2004, 25 pages. http://143.106.77.95/sites/default/files/rel_pesq/rp44-04.pdf

2003

155. E. B. Bajalinov. *Linear-fractional Programming Theory, Methods, Applications and Software*. Vol. 84. Springer Science & Business Media, 2003, 425 pages, ISBN-10: 1461348226. <https://doi.org/10.1007/978-1-4419-9174-4>
156. B. J. West, M. Bologna, and P. Grigolini. *Physics of Fractal Operators*. Springer, 2003, 354 pages, ISBN 0-387-95554-2. <https://doi.org/10.1063/1.1650234>

2001

157. H. M. Ozaktas, Z. Zalevsky, and M. A. Kutay. *The Fractional Fourier Transform with Applications in Optics and Signal Processing*. John Wiley, 2001, 513 pages, ISBN-13: 987-0471963462. <https://ieeexplore.ieee.org/abstract/document/7076127/>

2000

158. R. Hilfer. *Applications of Fractional Calculus in Physics*. World Scientific, 2000, 472 pages, ISBN-10: 9810234570. <https://doi.org/10.1142/9789812817747>

1998

159. A. I. Barros. *Discrete and Fractional Programming Techniques for Location Models*. Springer Science & Business Media, 1998, 180 pages, ISBN-10: 1461368243. <https://doi.org/10.1007/978-1-4615-4072-4>
160. I. Podlubny. *Fractional Differential Equations: An Introduction to Fractional Derivatives, Fractional Differential Equations, to Methods of Their Solution and Some of Their Applications*.

Academic Press, 1998, 340 pages, ISBN-10: 0125588402.

[https://doi.org/10.1016/s0076-5392\(99\)x8001-5](https://doi.org/10.1016/s0076-5392(99)x8001-5)

1997

161. N. K. Blied. *Generalized Analytic Functions in Fractional Spaces*. Vol. 86. CRC Press, 1997, 160 pages, ISBN-10: 0582288614.

<https://books.google.com/books?hl=zh-CN&lr=&id=TU8X2NpAGXEC&oi=fnd&pg=PP9&dq=Generalized+analytic+functions+in+fractional+spaces&ots=XprTah5HFS&sig=L3PVzRbWkZw3bba146FYczrqg3E>

162. A. Carpinteri and F. Mainardi. *Fractals and Fractional Calculus in Continuum Mechanics*. Vol. 378. Springer, 1997, 348 pages, ISBN-10: 321182913X. <https://doi.org/10.1007/978-3-7091-2664-6>

163. I. V. Novozhilov. *Fractional Analysis: Methods of Motion Decomposition*. Springer Science & Business Media, 1997, 232 pages, ISBN-10: 1461286670.

<https://books.google.com/books?hl=zh-CN&lr=&id=mwHaBwAAQBAJ&oi=fnd&pg=PP8&dq=Fractional+analysis:+Methods+of+motion+decomposition&ots=YXVzeEXwEo&sig=GPRVqNwfwjdSrIDGUGSGJLMAiko>

1996

164. B. Rubin. *Fractional Integrals and Potentials*. Chapman and Hall/CRC, 1996, 424 pages, ISBN-10: 0582253411.

https://books.google.com/books?hl=zh-CN&lr=&id=eN6VHU_mMaoC&oi=fnd&pg=PR11&dq=Fractional+integrals+and+potentials&ots=pc7PBNwP0&sig=pBZgwte_kv5f3AVyZTuQReOJMI

165. T. Runst and W. Sickel. *Sobolev Spaces of Fractional Order, Nemytskij Operators, and Nonlinear Partial Differential Equations*. Walter de Gruyter, 1996, 560 pages, ISBN: 3-11-015113-8.

https://books.google.com/books?hl=zh-CN&lr=&id=x0-RHMg-8_wC&oi=fnd&pg=PA1&dq=Sobolev+spaces+of+fractional+order,+Nemytskij+operators,+and+nonlinear+partial+differential+equations&ots=0XSFuexCli&sig=IVZyESCf4UleSx4glr_vjP9sK9s

1995

166. T. Chakraborty and P. Pietiläinen. *The Quantum Hall Effects: Integral and Fractional*. Vol. 85. Springer Science & Business Media, 1995, 302 pages, ISBN-10: 354058515X.

https://books.google.com/books?hl=zh-CN&lr=&id=v5nzCAAQBAJ&oi=fnd&pg=PA1&dq=The+quantum+Hall+effects:+integral+and+fractional&ots=4SuDoq_4Ud&sig=SPJ_6OOZ9IzJm2sMiPq9vtjTi3s

1993

167. V. S. Kiryakova. *Generalized Fractional Calculus and Applications*. CRC press, 1993, 360 pages, ISBN-10: 0582219779.
<https://books.google.com/books?hl=zh-CN&lr=&id=RvcONCIkFwoC&oi=fnd&pg=PP15&dq=Generalized+fractional+calculus+and+applications&ots=fE4EE7OmF7&sig=Jte-4O4klcAT5qzrCH8OP2o4CY>
168. K. S. Miller and B. Ross. *An Introduction to the Fractional Calculus and Fractional Differential Equations*. Wiley-Interscience, 1993, 384 pages, ISBN-10: 0471588849.
<https://www.amazon.com/Introduction-Fractional-Calculus-Differential-Equations/dp/0471588849>
169. S. G. Samko, A. A. Kilbas, and O. I. Marichev. *Fractional Integrals and Derivatives: Theory and Applications*. Gordon and Breach, 1993, 1006 pages, ISBN 2881248640.
<https://www.amazon.com/Fractional-Integrals-Derivatives-Theory-Applications/dp/2881248640>

1990

170. F. Wilczek. *Fractional Statistics and Anyon Superconductivity*. World scientific, 1990, 460 pages, ISBN-10: 9810200498. <https://doi.org/10.1142/0961>

1974

171. K. B. Oldham and J. Spanier. *The Fractional Calculus Theory and Applications of Differentiation and Integration to Arbitrary Order*. Dover Publications, 1974, 234 pages, ISBN-10: 0486450015.
[https://doi.org/10.1016/s0076-5392\(09\)x6012-1](https://doi.org/10.1016/s0076-5392(09)x6012-1)

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The most recent *unpublished* books for 2021 are not listed.

If there is omission, welcome to add!

Credits: Lihong Guo, YangQuan Chen, Richard L. Magin.

Time: Aug. 30, 2021