# Igor Podlubny

List of Publications by Year
in descending order

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|---|---|---|---|
| 67<br>papers | 9,002<br>citations | 257450<br>24<br>h-index | 223800<br>46<br>g-index |
| 70<br>all docs | 70<br>docs citations | 70<br>times ranked | 4324<br>citing authors |

| # | Article | IF | Citations |
|---|---------|-----|-----------|
| 1 | Fractional-order systems and PI/sup /spl lambda//D/sup /spl mu//-controllers. IEEE Transactions on Automatic Control, 1999, 44, 208-214. | 5.7 | 2,628 |
| 2 | Mittag–Leffler stability of fractional order nonlinear dynamic systems. Automatica, 2009, 45, 1965-1969. | 5.0 | 1,330 |
| 3 | Stability of fractional-order nonlinear dynamic systems: Lyapunov direct method and generalized Mittag–Leffler stability. Computers and Mathematics With Applications, 2010, 59, 1810-1821. | 2.7 | 1,277 |
| 4 | Physical interpretation of initial conditions for fractional differential equations with Riemann-Liouville fractional derivatives. Rheologica Acta, 2006, 45, 765-771. | 2.4 | 568 |
| 5 | Analogue Realizations of Fractional-Order Controllers. Nonlinear Dynamics, 2002, 29, 281-296. | 5.2 | 484 |
| 6 | Matrix approach to discrete fractional calculus II: Partial fractional differential equations. Journal of Computational Physics, 2009, 228, 3137-3153. | 3.8 | 368 |
| 7 | Continued Fraction Expansion Approaches to Discretizing Fractional Order Derivatives?an Expository Review. Nonlinear Dynamics, 2004, 38, 155-170. | 5.2 | 287 |
| 8 | On the fractional signals and systems. Signal Processing, 2011, 91, 350-371. | 3.7 | 229 |
| 9 | Title is missing!. Nonlinear Dynamics, 2002, 29, 269-279. | 5.2 | 207 |
| 10 | Robust stability check of fractional order linear time invariant systems with interval uncertainties. Signal Processing, 2006, 86, 2611-2618. | 3.7 | 180 |
| 11 | Robust stability test of a class of linear time-invariant interval fractional-order system using Lyapunov inequality. Applied Mathematics and Computation, 2007, 187, 27-34. | 2.2 | 169 |
| 12 | Modelling heat transfer in heterogeneous media using fractional calculus. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2013, 371, 20120146. | 3.4 | 163 |
| 13 | Diffusion process modeling by using fractional-order models. Applied Mathematics and Computation, 2015, 257, 2-11. | 2.2 | 130 |
| 14 | Distributed-Order Dynamic Systems. Springer Briefs in Electrical and Computer Engineering, 2012, , . | 0.5 | 107 |
| 15 | Experimental Evidence of Variable-Order Behavior of Ladders and Nested Ladders. IEEE Transactions on Control Systems Technology, 2013, 21, 459-466. | 5.2 | 89 |
| 16 | Comparison of scientific impact expressed by the number of citations in different fields of science. Scientometrics, 2005, 64, 95-99. | 3.0 | 82 |
| 17 | Modeling of the national economies in state-space: A fractional calculus approach. Economic Modelling, 2012, 29, 1322-1327. | 3.8 | 80 |
| 18 | Fractional Order Disturbance Observer for Robust Vibration Suppression. Nonlinear Dynamics, 2004, 38, 355-367. | 5.2 | 70 |

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| 19 | Identification of Parameters of a Half-Order System. IEEE Transactions on Signal Processing, 2012, 60, 5561-5566. | 5.3 | 53 |
| 20 | Matrix approach to discrete fractional calculus III: non-equidistant grids, variable step length and distributed orders. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2013, 371, 20120153. | 3.4 | 49 |
| 21 | Niels Henrik Abel and the birth of fractional calculus. Fractional Calculus and Applied Analysis, 2017, 20, 1068-1075. | 2.2 | 39 |
| 22 | Fractional-order modeling of lithium-ion batteries using additive noise assisted modeling and correlative information criterion. Journal of Advanced Research, 2020, 25, 49-56. | 9.5 | 33 |
| 23 | Finite energy Lyapunov function candidate for fractional order general nonlinear systems. Communications in Nonlinear Science and Numerical Simulation, 2019, 78, 104886. | 3.3 | 30 |
| 24 | Towards a better list of citation superstars: compiling a multidisciplinary list of highly cited researchers. Research Evaluation, 2006, 15, 154-162. | 2.6 | 29 |
| 25 | A New Discretization Method for Fractional Order Differentiators via Continued Fraction Expansion. , 2003, , 761. | | 28 |
| 26 | Adjoint Fractional Differential Expressions and Operators. , 2007, , 1385. | | 27 |
| 27 | State space description of national economies: The V4 countries. Computational Statistics and Data Analysis, 2007, 52, 1223-1233. | 1.2 | 23 |
| 28 | On the Regional Controllability of the Sub-Diffusion Process with Caputo Fractional Derivative. Fractional Calculus and Applied Analysis, 2016, 19, 1262-1281. | 2.2 | 21 |
| 29 | Fitting of experimental data using Mittag-Leffler function. , 2012, , . | | 20 |
| 30 | Solitary travelling auto-waves in fractional reaction–diffusion systems. Communications in Nonlinear Science and Numerical Simulation, 2015, 23, 378-387. | 3.3 | 19 |
| 31 | Time-Fractional Diffusion-Wave Equation with Mass Absorption in a Sphere under Harmonic Impact. Mathematics, 2019, 7, 433. | 2.2 | 16 |
| 32 | On Fractional Order Disturbance Observer. , 2003, , 617. | | 12 |
| 33 | Recent advances in numerical methods for partial fractional differential equations. , 2014, , . | | 10 |
| 34 | 24H Rhythm of the Ventricular Fibrillation Threshold During Normal and Hypoventilation in Female Wistar Rats. Chronobiology International, 1997, 14, 363-370. | 2.0 | 9 |
| 35 | Matrix approach to discretization of fractional derivatives and to solution of fractional differential equations and their systems. , 2009, , . | | 9 |
| 36 | Least Squares or Least Circles?. Chance, 2010, 23, 38-42. | 0.2 | 9 |

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|---|---------|----|-----------|
| 37 | Modeling Heat Transfer in Heterogeneous Media Using Fractional Calculus. , 2011, , . | | 9 |
| 38 | Data fitting using solutions of differential equations: Fractional-order model versus integer-order model. , 2012, , . | | 8 |
| 39 | Toolboxes and programs for fractional-order system identification, modeling, simulation, and control. , 2016, , . | | 8 |
| 40 | What Euler could further write, or the unnoticed â€œbig bangâ€•of the fractional calculus. Fractional Calculus and Applied Analysis, 2013, 16, 501-506. | 2.2 | 7 |
| 41 | Porous functions. Fractional Calculus and Applied Analysis, 2019, 22, 1502-1516. | 2.2 | 6 |
| 42 | Monte Carlo method for fractional-order differentiation extended to higher orders. Fractional Calculus and Applied Analysis, 2022, 25, 841-857. | 2.2 | 6 |
| 43 | Matrix Approach to Discretization of Ordinary and Partial Differential Equations of Arbitrary Real Order: The Matlab Toolbox. , 2009, , . | | 5 |
| 44 | Fractional order control model of steel casting process. , 2011, , . | | 5 |
| 45 | Modulatory influences of ventilatory disorders on electrical stability of the rat heart. Biomedicine and Pharmacotherapy, 2002, 56, 327-332. | 5.6 | 4 |
| 46 | ROBUST STABILITY CHECKING OF A CLASS OF LINEAR INTERVAL FRACTIONAL ORDER SYSTEM USING LYAPUNOV INEQUALITY. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2006, 39, 89-94. | 0.4 | 4 |
| 47 | A Special Issue in ISA Transactions â€œFractional Order Signals, Systems, and Controls: Theory and Applicationâ€. ISA Transactions, 2018, 82, 1. | 5.7 | 4 |
| 48 | Anomalous diffusion modeling using ultracapacitors in domino ladder circuit. Microelectronics Journal, 2019, 84, 136-141. | 2.0 | 4 |
| 49 | Robustness of Boundary Control of Fractional Wave Equations With Delayed Boundary Measurement Using Fractional Order Controller and the Smith Predictor. , 2005, , . | | 4 |
| 50 | Software application for GPS devices using Google Maps. , 2011, , . | | 3 |
| 51 | Monte Carlo method for fractional-order differentiation. Fractional Calculus and Applied Analysis, 2022, 25, 346-361. | 2.2 | 3 |
| 52 | Least squares or least circles?. Chance, 2010, 23, 38-42. | 0.2 | 2 |
| 53 | Discrete Fractional Calculus: Non-Equidistant Grids and Variable Step Length. , 2011, , . | | 2 |
| 54 | FCAA special issue (FCAAâ€“volume 20â€“5â€“2017). Fractional Calculus and Applied Analysis, 2017, 20, 1053-1067. | 2.2 | 2 |

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| 55 | Reply to â€œComments on â€˜Mittag-Leffler stability of fractional order nonlinear dynamic systemsâ€™ [Automatica 45(8) (2009) 1965â€"1969]â€. Automatica, 2017, 75, 330. | 5.0 | 2 |
| 56 | Fractional Approach for Estimating Sap Velocity in Trees. Fractional Calculus and Applied Analysis, 2015, 18, 479-494. | 2.2 | 1 |
| 57 | Responsive graphical user interface (ReGUI) and its implementation in MATLAB. , 2018, , . | | 1 |
| 58 | FCAA special issue â€" In memory of late professor Wen Chen (FCAAâ€"Volume 22â€"6â€"2019). Fractional Calculus and Applied Analysis, 2019, 22, 1437-1448. | 2.2 | 1 |
| 59 | Porous functions â€" II. Fractional Calculus and Applied Analysis, 2020, 23, 307-323. | 2.2 | 1 |
| 60 | Robustness of Fractional-order Boundary Control of Time Fractional Wave Equations with Delayed Boundary Measurement Using the Simple Predictor. , 2007, , 543-552. | | 0 |
| 61 | Fractional models for measuring sap velocities in trees. , 2014, , . | | 0 |
| 62 | Is Our Universe Accelerating Dynamics Fractional Order?. , 2015, , . | | 0 |
| 63 | Porous Functions Toolbox for MATLAB. , 2020, , . | | 0 |
| 64 | Numerical Solution of Differential Equations of Distributed Order. Springer Briefs in Electrical and Computer Engineering, 2012, , 59-74. | 0.5 | 0 |
| 65 | Noncommensurate Constant Orders as Special Cases of DOLTIS. Springer Briefs in Electrical and Computer Engineering, 2012, , 29-37. | 0.5 | 0 |
| 66 | Distributed-Order Filtering and Distributed-Order Optimal Damping. Springer Briefs in Electrical and Computer Engineering, 2012, , 39-58. | 0.5 | 0 |
| 67 | Unified Software Interface for Numerical Evaluation of Integrals and Derivatives of Fractional Order. , 2020, , . | | 0 |