Indranil Pan

List of Publications by Year
in descending order

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95 papers	3,474 citations	230014 27 h-index	162838 57 g-index
103 all docs	103 docs citations	103 times ranked	3326 citing authors

#	Article	IF	Citations
1	Data-centric Engineering: integrating simulation, machine learning and statistics. Challenges and opportunities. Chemical Engineering Science, 2022, 249, 117271.	1.9	27
2	Multiphase flow applications of nonintrusive reduced-order models with Gaussian process emulation. Data-Centric Engineering, 2022, 3, .	1.2	2
3	Rule-based Bayesian regression. Statistics and Computing, 2022, 32, .	0.8	0
4	Latent-space time evolution of non-intrusive reduced-order models using Gaussian process emulation. Physica D: Nonlinear Phenomena, 2021, 416, 132797.	1.3	22
5	3D seismic interpretation with deep learning: A brief introduction. The Leading Edge, 2021, 40, 524-532.	0.4	16
6	Chloroplasts alter their morphology and accumulate at the pathogen interface during infection by Phytophthora infestans. Plant Journal, 2021, 107, 1771-1787.	2.8	25
7	Marginal Likelihood Based Model Comparison in Fuzzy Bayesian Learning. IEEE Transactions on Emerging Topics in Computational Intelligence, 2020, 4, 794-799.	3.4	2
8	Integration of an energy management tool and digital twin for coordination and control of multi-vector smart energy systems. Sustainable Cities and Society, 2020, 62, 102412.	5.1	71
9	Data-driven surrogate modeling and benchmarking for process equipment. Data-Centric Engineering, 2020, 1, .	1.2	5
10	Numerical simulation, clustering, and prediction of multicomponent polymer precipitation. Data-Centric Engineering, 2020, 1, .	1.2	7
11	Smart energy systems for sustainable smart cities: Current developments, trends and future directions. Applied Energy, 2019, 237, 581-597.	5.1	246
12	Evolving chaos: Identifying new attractors of the generalised Lorenz family. Applied Mathematical Modelling, 2018, 57, 391-405.	2.2	6
13	Fuzzy Bayesian Learning. IEEE Transactions on Fuzzy Systems, 2018, 26, 1719-1731.	6.5	10
14	Seismic facies analysis using machine learning. Geophysics, 2018, 83, O83-O95.	1.4	145
15	Impact of silica diagenesis on the porosity of fineâ€grained strata: An analysis of <scp>C</scp>enozoic mudstones from the <scp>N</scp>orth <scp>S</scp>ea. Geochemistry, Geophysics, Geosystems, 2017, 18, 1537-1549.	1.0	6
16	Artificial neural network based modelling approach for municipal solid waste gasification in a fluidized bed reactor. Waste Management, 2016, 58, 202-213.	3.7	107
17	CO2 storage well rate optimisation in the Forties sandstone of the Forties and Nelson reservoirs using evolutionary algorithms and upscaled geological models. International Journal of Greenhouse Gas Control, 2016, 50, 1-13.	2.3	11
18	Effect of random parameter switching on commensurate fractional order chaotic systems. Chaos, Solitons and Fractals, 2016, 91, 157-173.	2.5	5

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19	A systems based approach for financial risk modelling and optimisation of the mineral processing and metal production industry. Computers and Chemical Engineering, 2016, 89, 84-105.	2.0	11
20	Performance comparison of several response surface surrogate models and ensemble methods for water injection optimization under uncertainty. Computers and Geosciences, 2016, 91, 19-32.	2.0	40
21	Incorporating uncertainty in data driven regression models of fluidized bed gasification: A Bayesian approach. Fuel Processing Technology, 2016, 142, 305-314.	3.7	24
22	Fractional Order AGC for Distributed Energy Resources Using Robust Optimization. IEEE Transactions on Smart Grid, 2016, 7, 2175-2186.	6.2	183
23	Fractional order fuzzy control of hybrid power system with renewable generation using chaotic PSO. ISA Transactions, 2016, 62, 19-29.	3.1	248
24	Robust optimization of well location to enhance hysteretical trapping of CO₂: Assessment of various uncertainty quantification methods and utilization of mixed response surface surrogates. Water Resources Research, 2015, 51, 9402-9424.	1.7	15
25	Multi-gene genetic programming based predictive models for municipal solid waste gasification in a fluidized bed gasifier. Bioresource Technology, 2015, 179, 524-533.	4.8	56
26	Symbolic representation for analog realization of a family of fractional order controller structures via continued fraction expansion. ISA Transactions, 2015, 57, 390-402.	3.1	8
27	Fractional-order load-frequency control of interconnected power systems using chaotic multi-objective optimization. Applied Soft Computing Journal, 2015, 29, 328-344.	4.1	119
28	Multi-objective LQR with optimum weight selection to design FOPID controllers for delayed fractional order processes. ISA Transactions, 2015, 58, 35-49.	3.1	32
29	When Darwin meets Lorenz: Evolving new chaotic attractors through genetic programming. Chaos, Solitons and Fractals, 2015, 76, 141-155.	2.5	9
30	Brain connectivity analysis from EEG signals using stable phase-synchronized states during face perception tasks. Physica A: Statistical Mechanics and Its Applications, 2015, 434, 273-295.	1.2	27
31	Robust optimization of subsurface flow using polynomial chaos and response surface surrogates. Computational Geosciences, 2015, 19, 979-998.	1.2	29
32	Multi-objective active control policy design for commensurate and incommensurate fractional order chaotic financial systems. Applied Mathematical Modelling, 2015, 39, 500-514.	2.2	39
33	Towards a global controller design for guaranteed synchronization of switched chaotic systems. Applied Mathematical Modelling, 2015, 39, 2311-2331.	2.2	11
34	Kriging Based Surrogate Modeling for Fractional Order Control of Microgrids. IEEE Transactions on Smart Grid, 2015, 6, 36-44.	6.2	164
35	Integrating Queuing Theory and Finite Automata in a Systems Framework for Financial Risk Modelling of Engineering Process Systems. Computer Aided Chemical Engineering, 2014, , 1297-1302.	0.3	0
36	Artificial Neural Network based surrogate modelling for multi- objective optimisation of geological CO2 storage operations. Energy Procedia, 2014, 63, 3483-3491.	1.8	11

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37	Simulation studies on the design of optimum PID controllers to suppress chaotic oscillations in a family of Lorenz-like multi-wing attractors. Mathematics and Computers in Simulation, 2014, 100, 72-87.	2.4	18
38	Extending the concept of analog Butterworth filter for fractional order systems. Signal Processing, 2014, 94, 409-420.	2.1	71
39	On the Mixed <inline-formula><tex-math notation="TeX">${{m H}_2}/{{m H}_infty }$</tex-math></inline-formula> Loop-Shaping Tradeoffs in Fractional-Order Control of the AVR System. IEEE Transactions on Industrial Informatics, 2014, 10, 1982-1991.	7.2	53
40	A multi-period injection strategy based optimisation approach using kriging meta-models for CO2 storage technologies. Energy Procedia, 2014, 63, 3492-3499.	1.8	6
41	Evolutionary Optimisation for CO2 Storage Design Using Upscaled Models: Application on a Proximal Area of the Forties Fan System in the UK Central North Sea. Energy Procedia, 2014, 63, 5349-5356.	1.8	3
42	Design of hybrid regrouping PSOâ€“GA based sub-optimal networked control system with random packet losses. Memetic Computing, 2013, 5, 141-153.	2.7	18
43	Optimum weight selection based LQR formulation for the design of fractional order PI^λD^μ controllers to handle a class of fractional order systems. , 2013, , .		10
44	Global Optimization Based Frequency Domain Design of Fractional Order Controllers with Iso-damping Characteristics. Studies in Computational Intelligence, 2013, , 257-273.	0.7	0
45	Multi-objective optimization framework for networked predictive controller design. ISA Transactions, 2013, 52, 56-77.	3.1	15
46	Chaos Synchronization with a Fractional Order Controller and Swarm Intelligence. Studies in Computational Intelligence, 2013, , 275-295.	0.7	1
47	LQR based improved discrete PID controller design via optimum selection of weighting matrices using fractional order integral performance index. Applied Mathematical Modelling, 2013, 37, 4253-4268.	2.2	107
48	Frequency domain design of fractional order PID controller for AVR system using chaotic multi-objective optimization. International Journal of Electrical Power and Energy Systems, 2013, 51, 106-118.	3.3	125
49	Fractional order fuzzy control of nuclear reactor power with thermal-hydraulic effects in the presence of random network induced delay and sensor noise having long range dependence. Energy Conversion and Management, 2013, 68, 200-218.	4.4	64
50	Brief Introduction to Computational Intelligence Paradigms for Fractional Calculus Researchers. Studies in Computational Intelligence, 2013, , 63-85.	0.7	1
51	Enhancement of Fuzzy PID Controller with Fractional Calculus. Studies in Computational Intelligence, 2013, , 159-193.	0.7	6
52	Motivation for Application of Computational Intelligence Techniques to Fractional Calculus Based Control Systems. Studies in Computational Intelligence, 2013, , 1-8.	0.7	0
53	Applied Fractional Calculus for Computational Intelligence Researchers. Studies in Computational Intelligence, 2013, , 9-61.	0.7	0
54	Multi-objective Fractional Order Controller Design with Evolutionary Algorithms. Studies in Computational Intelligence, 2013, , 133-146.	0.7	0

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55	Gain and Order Scheduling for Fractional Order Controllers. Studies in Computational Intelligence, 2013, , 147-157.	0.7	4
56	Fractional Order Controller Tuning Using Swarm and Evolutionary Algorithms. Studies in Computational Intelligence, 2013, , 87-131.	0.7	3
57	Performance comparison of optimal fractional order hybrid fuzzy PID controllers for handling oscillatory fractional order processes with dead time. ISA Transactions, 2013, 52, 550-566.	3.1	97
58	Continuous order identification of PHWR models under step-back for the design of hyper-damped power tracking controller with enhanced reactor safety. Nuclear Engineering and Design, 2013, 257, 109-127.	0.8	20
59	Model Reduction of Higher Order Systems in Fractional Order Template. Studies in Computational Intelligence, 2013, , 241-256.	0.7	3
60	Global solar irradiation prediction using a multi-gene genetic programming approach. Journal of Renewable and Sustainable Energy, 2013, 5, .	0.8	21
61	Optimum PID control of multi-wing attractors in a family of Lorenz-like chaotic systems. , 2012, , .		1
62	Optimized quality factor of fractional order analog filters with band-pass and band-stop characteristics. , 2012, , .		7
63	Chaotic multi-objective optimization based design of fractional order PIÎ»DÎ¼ controller in AVR system. International Journal of Electrical Power and Energy Systems, 2012, 43, 393-407.	3.3	157
64	Impact of fractional order integral performance indices in LQR based PID controller design via optimum selection of weighting matrices. , 2012, , .		7
65	Basics of Fractional Order Signals and Systems. SpringerBriefs in Applied Sciences and Technology, 2012, , 13-30.	0.2	8
66	Fractional Order Integral Transforms. SpringerBriefs in Applied Sciences and Technology, 2012, , 51-65.	0.2	0
67	Identification of nonlinear systems from the knowledge around different operating conditions: A feed-forward multi-layer ANN based approach. , 2012, , .		2
68	Inverse optimal control formulation for guaranteed dominant pole placement with PI/PID controllers. , 2012, , .		6
69	Chaos suppression in a fractional order financial system using intelligent regrouping PSO based fractional fuzzy control policy in the presence of fractional Gaussian noise. Nonlinear Dynamics, 2012, 70, 2445-2461.	2.7	48
70	Comparative studies on decentralized multiloop PID controller design using evolutionary algorithms. , 2012, , .		1
71	Master-slave chaos synchronization via optimal fractional order PI Î» D Î¼ controller with bacterial foraging algorithm. Nonlinear Dynamics, 2012, 69, 2193-2206.	2.7	19
72	Improved model reduction and tuning of fractional-order <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si246.gif" display="inline" overflow="scroll"><mml:msup><mml:mrow><mml:mi>P</mml:mi><mml:mi>I</mml:mi></mml:mrow><mml:mrow><mml:mi>λ</mml:mi></mml:mrow></mml:msup></mml:math> controllers for analytical rule extraction with genetic programming. ISA Transactions, 2012, 51, 237-261.	3.1	70

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73	A novel fractional order fuzzy PID controller and its optimal time domain tuning based on integral performance indices. Engineering Applications of Artificial Intelligence, 2012, 25, 430-442.	4.3	218
74	Fractional Order Signal Processing. SpringerBriefs in Applied Sciences and Technology, 2012, , .	0.2	83
75	Long Range Dependence, Stable Distributions and Self-Similarity. SpringerBriefs in Applied Sciences and Technology, 2012, , 31-50.	0.2	0
76	MATLAB Based Simulation Tools. SpringerBriefs in Applied Sciences and Technology, 2012, , 97-101.	0.2	0
77	Genetic Algorithm Based Improved Sub-Optimal Model Reduction in Nyquist Plane for Optimal Tuning Rule Extraction of PID and PIlambdaDi Controllers via Genetic Programming. , 2011, , .		4
78	Simulation studies on multiple control loops over a bandwidth limited shared communication network with packet dropouts. , 2011, , .		4
79	Least square and Instrumental Variable system identification of ac servo position control system with fractional Gaussian noise. , 2011, , .		4
80	Optimizing Continued Fraction Expansion Based IIR Realization of Fractional Order Differ-Integrators with Genetic Algorithm. , 2011, , .		13
81	Denoising SPND signal by discrete wavelet analysis for efficient power feedback in regulating system of PHWRs under noisy environment. , 2011, , .		3
82	Estimation, Analysis and Smoothing of Self-Similar Network Induced Delays in Feedback Control of Nuclear Reactors. , 2011, , .		4
83	Control of nuclear reactor power with thermal-hydraulic effects via fuzzy PI^γD^μ controllers. , 2011, , .		1
84	Identification of the core temperature in a fractional order noisy environment for thermal feedback in nuclear reactors. , 2011, , .		6
85	Online identification of fractional order models with time delay: An experimental study. , 2011, , .		7
86	Adaptive Gain and Order Scheduling of Optimal Fractional Order PIlamdaDµ Controllers with Radial Basis Function Neural-Network. , 2011, , .		4
87	Real time implementation of a genetic algorithm based optimal PID controller to handle unreliable network conditions in NCS applications. , 2011, , .		3
88	Revisiting oustaloup's recursive filter for analog realization of fractional order differintegrators. , 2011, , .		13
89	Handling packet dropouts and random delays for unstable delayed processes in NCS by optimal tuning of controllers with evolutionary algorithms. ISA Transactions, 2011, 50, 557-572.	3.1	50
90	Tuning of an optimal fuzzy PID controller with stochastic algorithms for networked control systems with random time delay. ISA Transactions, 2011, 50, 28-36.	3.1	238

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91	Embedded Network Test-Bed for Validating Real-Time Control Algorithms to Ensure Optimal Time Domain Performance. , 2011, , .		2
92	Stabilizing Gain Selection of Networked Variable Gain Controller to Maximize Robustness Using Particle Swarm Optimization. , 2011, , .		7
93	A new Fractional Fourier transform based design of a band-pass FIR filter for power feedback in nuclear reactors under noisy environment. , 2011, , .		3
94	Gain and Order Scheduling of Optimal Fractional Order PID Controllers for Random Delay and Packet Dropout in Networked Control Systems. Advanced Materials Research, 2011, 403-408, 4814-4820.	0.3	3
95	Prediction of Power Signal in Nuclear Reactors with Neural Network Based Intelligent Predictors in the Presence of 1/fÎ± Type Sensor Noise. Advanced Materials Research, 0, 403-408, 4512-4521.	0.3	1