Dana Copot

List of Publications by Year
in descending order

89 papers	1,245 citations	471509 17 h-index	395702 33 g-index
90 all docs	90 docs citations	90 times ranked	741 citing authors

#	Article	IF	Citations
1	The role of fractional calculus in modeling biological phenomena: A review. Communications in Nonlinear Science and Numerical Simulation, 2017, 51, 141-159.	3.3	448
2	Closed-Loop Control of Anesthesia: Survey on Actual Trends, Challenges and Perspectives. IEEE Access, 2020, 8, 206264-206279.	4.2	52
3	Data-driven modelling of drug tissue trapping using anomalous kinetics. Chaos, Solitons and Fractals, 2017, 102, 441-446.	5.1	43
4	An Open Source Patient Simulator for Design and Evaluation of Computer Based Multiple Drug Dosing Control for Anesthetic and Hemodynamic Variables. IEEE Access, 2021, 9, 8680-8694.	4.2	42
5	The 5W's for Control as Part of Industry 4.0: Why, What, Where, Who, and When—A PID and MPC Control Perspective. Inventions, 2019, 4, 10.	2.5	39
6	An industrially relevant formulation of a distributed model predictive control algorithm based on minimal process information. Journal of Process Control, 2018, 68, 240-253.	3.3	31
7	A Review of Recent Advances in Fractional-Order Sensing and Filtering Techniques. Sensors, 2021, 21, 5920.	3.8	31
8	Structural changes in the COPD lung and related heterogeneity. PLoS ONE, 2017, 12, e0177969.	2.5	30
9	Evaluation of respiratory properties by means of fractional order models. Biomedical Signal Processing and Control, 2017, 34, 206-213.	5.7	29
10	Models for Nociception Stimulation and Memory Effects in Awake and Aware Healthy Individuals. IEEE Transactions on Biomedical Engineering, 2019, 66, 718-726.	4.2	28
11	Bioimpedance Sensor and Methodology for Acute Pain Monitoring. Sensors, 2020, 20, 6765.	3.8	26
12	Monitoring respiratory impedance by wearable sensor device: Protocol and methodology. Biomedical Signal Processing and Control, 2017, 36, 57-62.	5.7	23
13	Anesthesiologist in the Loop and Predictive Algorithm to Maintain Hypnosis While Mimicking Surgical Disturbance. IFAC-PapersOnLine, 2017, 50, 15080-15085.	0.9	23
14	Lung cancer dynamics using fractional order impedance modeling on a mimicked lung tumor setup. Journal of Advanced Research, 2021, 32, 61-71.	9.5	22
15	Reducing bias in fractional order impedance estimation for lung function evaluation. Biomedical Signal Processing and Control, 2018, 39, 74-80.	5.7	20
16	Pain Detection with Bioimpedance Methodology from 3-Dimensional Exploration of Nociception in a Postoperative Observational Trial. Journal of Clinical Medicine, 2020, 9, 684.	2.4	20
17	Liquid–to–solid ratio control as an advanced process control solution for continuous twin–screw wet granulation. AICHE Journal, 2018, 64, 2500-2514.	3.6	19
18	Simple Alternatives to PID-Type Control for Processes with Variable Time-Delay. Processes, 2019, 7, 146.	2.8	18

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19	A Minimal PKPD Interaction Model for Evaluating Synergy Effects of Combined NSCLC Therapies. Journal of Clinical Medicine, 2020, 9, 1832.	2.4	17
20	Estimation of Patient Sensitivity to Drug Effect during Propofol Hypnosis. , 2015, , .		16
21	Context Aware Control Systems: An Engineering Applications Perspective. IEEE Access, 2020, 8, 215550-215569.	4.2	16
22	A two-compartment fractional derivative model for Propofol diffusion in anesthesia. , 2013, , .		14
23	Drug delivery system for general anesthesia: Where are we?. , 2014, , .		14
24	Low Frequency Forced Oscillation Lung Function Test Can Distinguish Dynamic Tissue Non-linearity in COPD Patients. Frontiers in Physiology, 2019, 10, 1390.	2.8	12
25	Identification for Control of Suspended Objects in Non-Newtonian Fluids. Fractional Calculus and Applied Analysis, 2019, 22, 1378-1394.	2.2	12
26	A Low Computational Cost, Prioritized, Multi-Objective Optimization Procedure for Predictive Control Towards Cyber Physical Systems. IEEE Access, 2020, 8, 128152-128166.	4.2	12
27	Robust Fractional Order PI Control for Cardiac Output Stabilisation. IFAC-PapersOnLine, 2019, 52, 994-999.	0.9	11
28	Tailored Pharmacokinetic model to predict drug trapping in long-term anesthesia. Journal of Advanced Research, 2021, 32, 27-36.	9.5	11
29	Patient specific model based induction of hypnosis using fractional order control. IFAC-PapersOnLine, 2017, 50, 15097-15102.	0.9	8
30	From batch to continuous tablet manufacturing: a control perspective. IFAC-PapersOnLine, 2021, 54, 562-567.	0.9	8
31	Model Calibration of Pharmacokinetic-Pharmacodynamic Lung Tumour Dynamics for Anticancer Therapies. Journal of Clinical Medicine, 2022, 11, 1006.	2.4	8
32	Fractional-order feedback control of a poorly damped system. , 2014, , .		6
33	Modelling Doxorubicin effect in various cancer therapies by means of fractional calculus. , 2016, , .		6
34	Anesthesia regulation: Towards completing the picture. , 2018, , .		6
35	An overview of computer-guided total intravenous anesthesia and monitoring devicesâ€"drug infusion control strategies and analgesia assessment in clinical use and research. , 2020, , 7-50.		6
36	Robust Hemodynamic Control Under General Anesthesia Conditions. IFAC-PapersOnLine, 2020, 53, 16179-16184.	0.9	6

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37	Using convolutional neural network online estimators for predicting pain-level variability enables predictive control of anesthesia. , 2021, , .		6
38	Closed-loop control of anesthesia and hemodynamic system: a Model Predictive Control approach. IFAC-PapersOnLine, 2021, 54, 37-42.	0.9	6
39	Respiratory impedance model with lumped fractional order diffusion compartment. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2013, 46, 260-265.	0.4	5
40	Experimental Measurement of Pain Stimulus Effects in Skin Impedance. , 2019, , .		5
41	Three Compartmental Model for Propofol Diffusion During General Anesthesia. Discontinuity, Nonlinearity, and Complexity, 2013, 2, 357-368.	0.2	5
42	Modelling drug interaction using a fractional order pharmacokinetic model. , 2014, , .		4
43	A fractional order impedance model to capture the structural changes in lungs. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2014, 47, 5363-5368.	0.4	4
44	Robust autotuning MPC for a class of process control applications. , 2016, , .		4
45	Multivariable control of sextuple tank system with non-minimum phase dynamics. , 2016, , .		4
46	Online identification of pain model in postanesthesia care unit for drug infusion optimization. , 2021, , .		4
47	Relation between fractional order models and diffusion in the body. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2014, 47, 9277-9282.	0.4	3
48	Constrained Multivariable Predictive Control of a Train of Cryogenic 13C Separation Columns. IFAC-PapersOnLine, 2016, 49, 1103-1108.	0.9	3
49	Online weight estimation in a robotic gripper arm. , 2016, , .		3
50	Fractional order modeling of diffusion processes: A new approach for glucose concentration estimation. , 2016, , .		3
51	Modelling for control of depth of hypnosis - a patient friendly approach. , 2016, , .		3
52	In vitro glucose concentration estimation by means of fractional order impedance models. , 2016, , .		3
53	Guided closed loop control of analgesia: Are we there yet?. , 2017, , .		3
54	Benchmark Challenge: a robust fractional order control autotuner for the Refrigeration Systems based on Vapor Compression. IFAC-PapersOnLine, 2018, 51, 31-36.	0.9	3

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55	A medical information system for monitoring respiratory function and related nonlinear dynamics. , 2019, , .		3
56	Design and Practical Implementation of a Fractional Order Proportional Integral Controller (FOPI) for a Poorly Damped Fractional Order Process with Time Delay. , 2019, , .		3
57	Lung Tumor Growth Modeling in Patients with NSCLC Undergoing Radiotherapy. IFAC-PapersOnLine, 2021, 54, 233-238.	0.9	3
58	Model-Based Management of Lung Cancer Radiation Therapy. IFAC-PapersOnLine, 2020, 53, 15928-15933.	0.9	3
59	Ergonomic and Economic Office Light Level Control. Energies, 2022, 15, 734.	3.1	3
60	Hypnosis regulation in presence of saturation, surgical stimulation and additional bolus infusion âŽ âŽThis work is part of a research funded by Flanders Research Centre, grant nr G026514N, 1501517N, 12B3415N.. IFAC-PapersOnLine, 2018, 51, 84-89.	0.9	2
61	A fractional order impedance individualised model of nociceptor stimulation. IFAC-PapersOnLine, 2018, 51, 416-421.	0.9	2
62	An Interdisciplinary, Low-Cost Methodological Framework for Analysing Dynamical Material Properties For Control-Related Applications. IFAC-PapersOnLine, 2019, 52, 159-164.	0.9	2
63	Model predictive control for simultaneous regulation of hypnosis and hemodynamic states. , 2019, , .		2
64	Computer-guided control of the complete anesthesia paradigm. , 2020, , 197-232.		2
65	Impedance Spectroscopy Sensing Material Properties for Self-Tuning Ratio Control in Pharmaceutical Industry. Applied Sciences (Switzerland), 2022, 12, 509.	2.5	2
66	Fractional-Order PI Controller Design Based on Referenceâ€"toâ€"Disturbance Ratio. Fractal and Fractional, 2022, 6, 224.	3.3	2
67	Parameterization through fractional calculus of the stress-strain relation in lungs. , 2014, , .		1
68	Development of a control strategy for efficient operation of a CSTR reactor. , 2015, , .		1
69	A methodology for control structure adaptation in presence of varying, unknown sub-system interaction degree. , 2017, , .		1
70	Distributed model predictive control for hypnosis-hemodynamic maintenance during anesthesia. , 2019, , .		1
71	A Fractional Order Controller for Delay Dominant Systems. Application to a Continuous Casting Line. Journal of Applied Nonlinear Dynamics, 2018, 8, 67-78.	0.3	1
72	Modeling and Analysis of Monitored vs. Self-reported Postsurgical Acute Pain in a Clinical Trial. IFAC-PapersOnLine, 2021, 54, 67-72.	0.9	1

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73	Pharmaco-impedance modelling for lung cancer therapy with predictive control. , 2021, , .		1
74	Fractional order impedance models as rising tools for quantification of unconscious analgesia. , 2013, , .		0
75	Bridging the gap between modelling and control of anesthesia: An ambitious ideal. , 2014, , .		0
76	On the use of fractional order PK-PD models. Journal of Physics: Conference Series, 2017, 783, 012050.	0.4	0
77	Experimental validation of a hypothesis for lung tumour dynamic characterisation*. , 2019, , .		0
78	Challenges, gaps and milestones in general anesthesia regulation. , 2019, , .		0
79	Electrical circuits to mimic respiratory diseases: an interdisciplinary bachelor project. , 2019, , .		0
80	Experiment Design and Estimation Methodology of Varying Properties for Non-Newtonian Fluids. , 2019, , .		0
81	Fractional-order modeling of impedance measurements in a blood-resembling experimental setup*. , 2019, , .		0
82	Information From Time-Based Signals. , 2019, , 109-123.		0
83	Diffusion in Small Airways. , 2019, , 127-151.		0
84	Perspectives on Hybrid Control of the Anesthesia-Hemodynamic System in the Pandemic Context*. , 2021, , .		0
85	Parametric models for monitoring respiratory properties in lung cancer. , 2021, , .		0
86	Development and validation of preliminary fractional order impedance models for experimental pain assessment. , 2021, , .		0
87	Outlining the Landscape of Personalized Lung Cancer Treatment in the Era of Cyber-Physical Systems[*]. , 2021, , .		0
88	Time-frequency varying tissue impedance properties from noxious stimulation protocols. , 2022, , .		0
89	Optimizing radiotherapy with chemotherapy using PKPD modeling for lung cancer [*]. , 2022, , .		0