

# Marcin Witczak

## List of Publications by Year in descending order

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156  
papers

1,843  
citations

257357

24  
h-index

302012

39  
g-index

170  
all docs

170  
docs citations

170  
times ranked

1091  
citing authors

#	ARTICLE	IF	CITATIONS
1	Integrated fault-tolerant control of assembly and automated guided vehicle-based transportation layers. International Journal of Computer Integrated Manufacturing, 2022, 35, 409-426.	2.9	12
2	Simultaneous state and process fault estimation in linear parameter varying systems using robust quadratic parameter varying observers. International Journal of Robust and Nonlinear Control, 2021, 31, 8390-8407.	2.1	4
3	An ordered-fuzzy-numbers-driven approach to the milk-run routing and scheduling problem. Journal of Computational Science, 2021, 49, 101288.	1.5	10
4	Remaining Useful Life Prediction of MOSFETs via the Takagi-Sugeno Framework. Energies, 2021, 14, 2135.	1.6	9
5	Health-aware fault-tolerant control of multiple cooperating autonomous vehicles. , 2021, , .		1
6	Periodic planning of UAVs' fleet mission with the uncertainty of travel parameters. , 2021, , .		3
7	A Robust Takagi-Sugeno Fault Diagnostic Scheme for Remaining Useful Life Estimation. , 2021, , .		0
8	Fault-Tolerant Tracking Control and Remaining Useful Life Estimation for Takagi-Sugeno fuzzy system. , 2021, , .		0
9	A fuzzy logic approach to remaining useful life control and scheduling of cooperating forklifts. , 2021, , .		3
10	Fault-Tolerant Tracking Control for a Descriptor System under an Unknown Input Disturbances. Electronics (Switzerland), 2021, 10, 2247.	1.8	3
11	Health aware fault-tolerant forklift design and control in industry 4.0. , 2021, , .		2
12	A fault-tolerant iterative learning control for Takagi-Sugeno fuzzy systems*. , 2021, , .		0
13	A fuzzy logic approach to fault-tolerant scheduling of semi-automated assembly systems*. , 2021, , .		0
14	A quadratic boundedness approach to a neural network-based simultaneous estimation of actuator and sensor faults. Neural Computing and Applications, 2020, 32, 379-389.	3.2	14
15	Interval max-plus fault-tolerant control under resource conflicts and redundancies: application to the seat assembly. International Journal of Control, 2020, 93, 2662-2674.	1.2	13
16	A Diagnostic System for Remaining Useful Life of Ball Bearings. Advances in Intelligent Systems and Computing, 2020, , 125-134.	0.5	0
17	Takagi-Sugeno Observer Design for Remaining Useful Life Estimation of Li-Ion Battery System Under Faults. Electronics (Switzerland), 2020, 9, 1537.	1.8	3
18	Robust actuator and sensor fault estimation for Takagi-Sugeno fuzzy systems under ellipsoidal bounding. , 2020, , .		3

#	ARTICLE	IF	CITATIONS
19	Fuzzy modelling and robust fault-tolerant scheduling of cooperating forklifts. , 2020, , .		5
20	Milk-run Routing and Scheduling Subject to Fuzzy Pickup and Delivery Time Constraints: An Ordered Fuzzy Numbers Approach. , 2020, , .		12
21	Fault diagnosis of an automated guided vehicle with torque and motion forces estimation: A case study. ISA Transactions, 2020, 104, 370-381.	3.1	6
22	A fault-tolerant control strategy for multiple automated guided vehicles. Journal of Manufacturing Systems, 2020, 55, 56-68.	7.6	34
23	Towards Simultaneous Actuator and Sensor Faults Estimation for a Class of Takagi-Sugeno Fuzzy Systems: A Twin-Rotor System Application. Sensors, 2020, 20, 3486.	2.1	11
24	Simulation Versus an Ordered“Fuzzy-Numbers-Driven Approach to the Multi-depot Vehicle Cyclic Routing and Scheduling Problem. Lecture Notes in Computer Science, 2020, , 251-266.	1.0	3
25	Fault-tolerant design for increasing the reliability of an autonomous driving gear shifting system. Eksploatacja I Niezawodnosc, 2020, 22, 482-492.	1.1	7
26	Conflict Avoidance Within Max-Plus Fault-Tolerant Control: Application to a Seat Assembly System. Studies in Systems, Decision and Control, 2020, , 135-157.	0.8	0
27	A Fuzzy Logic Approach to Remaining Useful Life Estimation of Ball Bearings. Advances in Intelligent Systems and Computing, 2020, , 1411-1423.	0.5	2
28	Design of an integrated actuator fault-tolerant control under robust performance requirements. IFAC-PapersOnLine, 2020, 53, 13745-13750.	0.5	0
29	UAVs fleet mission planning robust to changing weather conditions. IFAC-PapersOnLine, 2020, 53, 10518-10524.	0.5	2
30	Fault-Tolerant Design of a Balanced Two-Wheel Scooter. Advances in Intelligent Systems and Computing, 2020, , 1399-1410.	0.5	2
31	Towards Robust Simultaneous Actuator and Sensor Fault Estimation for a Class of Nonlinear Systems: Design and Comparison. IEEE Access, 2019, 7, 97143-97158.	2.6	17
32	Fault-tolerant control-based flexible AGV transportation in a seat assembly system. IFAC-PapersOnLine, 2019, 52, 67-72.	0.5	2
33	Design for Monitoring of a Research Vehicle. Proceedings of the Design Society International Conference on Engineering Design, 2019, 1, 2833-2842.	0.6	1
34	A Combined &#x0D; &#x0D; &#x0D; &#x0D; H&#x0D; 2&#x0D; &#x0D; &#x0D; &#x0D; /&#x0D; &#x0D; &#x0D; &#x0D; H&#x0D; âˆž&#x0D; &#x0D; &#x0D; &#x0D; Approach for Robust Joint Actuator and Sensor Fault Estimation: Application to a DC Servo-Motor System. Sensors, 2019, 19, 2648.	2.1	3
35	Selected Estimation Strategies for Fault Diagnosis of Nonlinear Systems. , 2019, , 263-293.		1
36	A Neural Network-Based Approach to Sensor and Actuator Fault-Tolerant Control. Lecture Notes in Computer Science, 2019, , 515-526.	1.0	0

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37	Analysis and design of quadratically bounded QPV control systems. IFAC-PapersOnLine, 2019, 52, 76-81.	0.5	3
38	Multiple AGV fault-tolerant within an agile manufacturing warehouse. IFAC-PapersOnLine, 2019, 52, 1914-1919.	0.5	12
39	Robust unknown input observer design for simultaneous actuator and sensor faults. , 2019, , .		2
40	Feasible schedule-based predictive fault-tolerant control for an automated packing system. , 2019, , .		1
41	A mixed H2/H <sub>∞</sub> approach to robust actuator fault estimation. , 2019, , .		0
42	Fault estimation of wind turbines using combined adaptive and parameter estimation schemes. International Journal of Adaptive Control and Signal Processing, 2018, 32, 549-567.	2.3	28
43	Robust Guaranteed Cost Control for Nonlinear System Using Product Reduction Algorithm. Advances in Intelligent Systems and Computing, 2018, , 82-93.	0.5	0
44	A Process Fault-Tolerant Control for Non-linear Dynamic Systems. Advances in Intelligent Systems and Computing, 2018, , 33-44.	0.5	1
45	Virtual Diagnostic Sensors Design for an Automated Guided Vehicle. Applied Sciences (Switzerland), 2018, 8, 702.	1.3	24
46	Simultaneous estimation of multiple sensor and process faults for non-linear discrete-time systems. IFAC-PapersOnLine, 2018, 51, 82-87.	0.5	1
47	Design of diagnostic estimators for an automated guided vehicle. IFAC-PapersOnLine, 2018, 51, 1004-1009.	0.5	2
48	Constrained actuator fault tolerant control with the application to a wind turbine. IFAC-PapersOnLine, 2018, 51, 1157-1163.	0.5	5
49	Computer-based scheduling and resource conflict avoidance in assembly systems. , 2018, , .		0
50	Robust Multiple Sensor Fault-Tolerant Control For Dynamic Non-Linear Systems: Application To The Aerodynamical Twin-Rotor System. International Journal of Applied Mathematics and Computer Science, 2018, 28, 297-308.	1.5	26
51	Robust Time-Varying Sensor Bias Estimation for Bounded-Error Systems: Application to the Wind Turbine Benchmark. , 2018, , .		1
52	A neural network approach to simultaneous state and actuator fault estimation under unknown input decoupling. Neurocomputing, 2017, 250, 65-75.	3.5	28
53	A bounded-error approach to simultaneous state and actuator fault estimation for a class of nonlinear systems. Journal of Process Control, 2017, 52, 14-25.	1.7	53
54	Combined estimation of actuator and sensor faults for non-linear dynamic systems. , 2017, , .		1

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55	A predictive actuator fault-tolerant control strategy under input and state constraints. , 2017, , .		3
56	A quadratic boundedness approach to robust DC motor fault estimation. Control Engineering Practice, 2017, 66, 181-194.	3.2	32
57	Simultaneous estimation of multiple actuator and sensor faults for Takagi-Sugeno fuzzy systems. , 2017, , .		4
58	A necessary and sufficient condition for total observability of discrete-time linear time-varying systems. IFAC-PapersOnLine, 2017, 50, 729-734.	0.5	10
59	A quadratic boundedness approach to fault tolerant control for nonlinear system. IFAC-PapersOnLine, 2017, 50, 2101-2106.	0.5	1
60	Design of receding-horizon estimators for the battery assembly system. IFAC-PapersOnLine, 2017, 50, 9297-9302.	0.5	0
61	Neural Network-Based Simultaneous Estimation of Actuator and Sensor Faults. Lecture Notes in Computer Science, 2017, , 305-316.	1.0	2
62	Robust sensor fault-tolerant control for non-linear aero-dynamical MIMO system. Advances in Intelligent Systems and Computing, 2017, , 651-660.	0.5	0
63	An LMI approach to robust fault estimation for a class of nonlinear systems. International Journal of Robust and Nonlinear Control, 2016, 26, 1530-1548.	2.1	78
64	Predictive actuator fault-tolerant control under ellipsoidal bounding. International Journal of Adaptive Control and Signal Processing, 2016, 30, 375-392.	2.3	36
65	Robust adaptive simultaneous state and fault estimation for nonlinear systems: Application to an aerodynamical system. , 2016, , .		0
66	A neural network-based simultaneous state and actuator fault estimation under unknown input decoupling. , 2016, , .		0
67	Thrust balance estimation of an unmanned aerial vehicle: Application to fault detection. , 2016, , .		3
68	Towards Robust Fault-Tolerant Model Predictive Control with Constraints for Takagi-Sugeno Systems. Mathematical Engineering, 2016, , 309-333.	0.1	1
69	Robust unknown input observer for state and fault estimation in discrete-time Takagi-Sugeno systems. International Journal of Systems Science, 2016, 47, 3409-3424.	3.7	68
70	Towards robust process fault estimation for uncertain dynamic systems. , 2016, , .		4
71	A quadratic boundedness approach to adaptive simultaneous sensor and actuator fault estimation. , 2016, , .		0
72	Towards a practical reachability test for dynamic systems under process faults. , 2016, , .		1

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73	Robust multi-model fault detection and isolation with a state-space neural network. , 2016, , .		2
74	Fault-tolerant control and diagnosis for LPV system with H-infinity virtual sensor. , 2016, , .		9
75	Neural network-based robust actuator fault diagnosis for a non-linear multi-tank system. ISA Transactions, 2016, 61, 318-328.	3.1	53
76	Towards Robust Predictive Control for Non-linear Discrete Time System. Advances in Intelligent Systems and Computing, 2016, , 179-191.	0.5	0
77	Predictive fault-tolerant control for a battery assembly system. IFAC-PapersOnLine, 2015, 48, 476-483.	0.5	4
78	Predictive Fault Tolerant Control for LPV systems using model reference. IFAC-PapersOnLine, 2015, 48, 30-35.	0.5	3
79	Towards Robust Predictive Fault-Tolerant Control for a Battery Assembly System. International Journal of Applied Mathematics and Computer Science, 2015, 25, 849-862.	1.5	67
80	A robust predictive actuator fault-tolerant control scheme for Takagi-Sugeno fuzzy systems. Bulletin of the Polish Academy of Sciences: Technical Sciences, 2015, 63, 977-987.	0.8	4
81	Robust state estimation and control for nonlinear system with uncertain parameters. Journal of Physics: Conference Series, 2015, 659, 012025.	0.3	1
82	Robust fault and state estimation for Lipschitz systems: Three-tank system application. , 2015, , .		1
83	A quadratic boundedness approach to adaptive actuator fault estimation. , 2015, , .		0
84	A practical test for assessing the reachability of discrete-time Takagi-Sugeno fuzzy systems. Journal of the Franklin Institute, 2015, 352, 5936-5951.	1.9	13
85	Automated generation and comparison of Takagi-Sugeno and polytopic quasi-LPV models. Fuzzy Sets and Systems, 2015, 277, 44-64.	1.6	57
86	A Neural-Network-Based Robust Observer for Simultaneous Unknown Input Decoupling and Fault Estimation. Lecture Notes in Computer Science, 2015, , 535-548.	1.0	3
87	Towards Robust Neural-Network-Based Sensor and Actuator Fault Diagnosis: Application to a Tunnel Furnace. Neural Processing Letters, 2015, 42, 71-87.	2.0	18
88	Intelligent Systems for the Prognosis of Energy Consumption in Manufacturing and Assembly. Procedia CIRP, 2015, 33, 370-375.	1.0	4
89	A robust $\infty$ observer design for unknown input nonlinear systems: Application to fault diagnosis of a wind turbine. , 2015, , .		1
90	Adaptive fault tolerant control: Application to a DC servo motor. , 2015, , .		2

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91	A neural network-based robust unknown input observer design: Application to wind turbine. IFAC-PapersOnLine, 2015, 48, 263-270.	0.5	8
92	Robust fault identification of a polytopic LPV system with neural network. , 2014, , .		3
93	A robust fault-tolerant model predictive control for linear parameter-varying systems. , 2014, , .		8
94	A max-plus algebra predictive approach to a battery assembly system control. , 2014, , .		3
95	Design of robust predictive fault-tolerant control for Takagi-Sugeno fuzzy systems: Application to the twin-rotor system. , 2014, , .		3
96	An H <sub>∞</sub> approach to fault estimation of non-linear systems: Application to one-link manipulator. , 2014, , .		14
97	Neural-network based robust predictive fault-tolerant control for multi-tank system. , 2014, , .		8
98	Actuator fault diagnosis and fault-tolerant control: Application to the quadruple-tank process. Journal of Physics: Conference Series, 2014, 570, 082002.	0.3	11
99	Fault Diagnosis and Fault-Tolerant Control Strategies for Non-Linear Systems. Lecture Notes in Electrical Engineering, 2014, , .	0.3	140
100	Unknown Input Observers and Filters. Lecture Notes in Electrical Engineering, 2014, , 19-56.	0.3	14
101	A LMI-based strategy for $H_{\infty}$ fault estimation of non-linear systems: Application to the multi-tank system. , 2014, , .		1
102	Predictive and robust fault-tolerant control for Takagi-Sugeno systems. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2014, 47, 6735-6740.	0.4	0
103	Robust MPC for a non-linear system – a neural network approach. Journal of Physics: Conference Series, 2014, 570, 032002.	0.3	4
104	Degradation Modelling for Health Monitoring Systems. Journal of Physics: Conference Series, 2014, 570, 062002.	0.3	5
105	Integrated Fault Diagnosis and Control: Principles and Design Strategies. Lecture Notes in Electrical Engineering, 2014, , 119-142.	0.3	1
106	Robust $H_{\infty}$ Sensor Fault Diagnosis with Neural Network. Advances in Intelligent Systems and Computing, 2014, , 125-136.	0.5	2
107	Robust $H_{\infty}$ actuator fault diagnosis with neural network. , 2013, , .		2
108	Robust $H_{\infty}$ actuator fault diagnosis and fault-tolerant control for a multi-tank system. , 2013, , .		6

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109	A fault-tolerant control strategy for non-linear discrete-time systems: application to the twin-rotor system. International Journal of Control, 2013, 86, 1788-1799.	1.2	41
110	Robust unknown input filter for fault diagnosis of non-linear systems. , 2013, , .		4
111	Robust and efficient predictive FTC: Application to wind turbines. , 2013, , .		5
112	A H&lt;inf&gt;â&tilde&lt;/inf&gt; approach to robust fault estimation of non-linear discrete-time systems. , 2013, , .		2
113	Robust Sensor and Actuator Fault Diagnosis with GMDH Neural Networks. Lecture Notes in Computer Science, 2013, , 96-105.	1.0	0
114	Towards unknown input filters for non-linear stochastic systems without a fault decoupling effect*. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2012, 45, 612-617.	0.4	0
115	A predictive fuzzy fault-tolerant control scheme for tunnel furnace*. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2012, 45, 1005-1010.	0.4	0
116	Design of an unknown input observer for fault diagnosis of non-linear systems with state constraints*. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2012, 45, 1065-1070.	0.4	0
117	Actuators and sensors fault diagnosis with dynamic, state-space neural networks. , 2012, , .		16
118	Fault-tolerant control strategy for actuator faults using LPV techniques: Application to a two degree of freedom helicopter. International Journal of Applied Mathematics and Computer Science, 2012, 22, 161-171.	1.5	79
119	Determination of an unknown input distribution matrix for non-linear discrete-time stochastic systems. , 2012, , .		0
120	State-Space GMDH Neural Networks for Actuator Robust Fault Diagnosis. Advances in Electrical and Computer Engineering, 2012, 12, 65-72.	0.5	23
121	An unscented Kalman filter approach to designing GMDH neural networks: Application to the tunnel furnace. , 2011, , .		2
122	A predictive fault-tolerant control scheme for Takagi-Sugeno fuzzy systems*. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2011, 44, 4684-4689.	0.4	3
123	Design of an unscented unknown input filter with interacting multiple model algorithm. , 2011, , .		3
124	Active fault-tolerant control design for Takagi-Sugeno fuzzy systems. Bulletin of the Polish Academy of Sciences: Technical Sciences, 2011, 59, 93-102.	0.8	28
125	A pole estimation approach to the synthesis of the dynamic GMDH neural networks. , 2010, , .		0
126	A fault-tolerant control scheme for non-linear discrete-time systems: Application to the twin-rotor system. , 2010, , .		3

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127	A fault-tolerant control strategy for Lipschitz non-linear discrete-time systems. , 2010, , .		1
128	A fault-tolerant control scheme for non-linear discrete-time systems. , 2010, , .		1
129	Diagnostic Methods. , 2010, , 153-231.		3
130	Application of the DiaSter System. , 2010, , 295-367.		0
131	Impedance Measurement With the D-Optimum Experimental Conditions. IEEE Transactions on Instrumentation and Measurement, 2009, 58, 2535-2543.	2.4	7
132	A fault-tolerant control scheme with input constraints for Takagi-Sugeno fuzzy systems * *The work was financed as a research project with the science funds for years 2007â€“2010.. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2009, 42, 65-70.	0.4	0
133	Active fault-tolerant control design for Takagi-Sugeno fuzzy system. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2009, 42, 450-455.	0.4	0
134	Confidence estimation of the multi-layer perceptron and its application in fault detection systems. Engineering Applications of Artificial Intelligence, 2008, 21, 895-906.	4.3	47
135	Fault-Tolerant Control of a two-degree of freedom helicopter using LPV techniques. , 2008, , .		6
136	Design of a fault-tolerant control scheme for Takagi-Sugeno fuzzy systems. , 2008, , .		16
137	Towards Robustness in Neural Network Based Fault Diagnosis. International Journal of Applied Mathematics and Computer Science, 2008, 18, 443-454.	1.5	56
138	On fault detection under soft computing model uncertainty. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2008, 41, 7901-7906.	0.4	0
139	Design of an extended unknown input observer with stochastic robustness techniques and evolutionary algorithms. International Journal of Control, 2007, 80, 749-762.	1.2	39
140	AN EXTENDED UNKNOWN INPUT OBSERVER-BASED APPROACH TO FAULT DIAGNOSIS OF A TWO-TANK SYSTEM. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2007, 40, 922-927.	0.4	3
141	A STOCHASTIC ROBUSTNESS APPROACH TO DESIGNING UNKNOWN INPUT OBSERVERS FOR NON-LINEAR SYSTEMS. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2007, 40, 627-632.	0.4	1
142	An LMI Approach to Designing Observers and Unknown Input Observers for Nonlinear Systems. , 2007, , 198-203.		1
143	Robust Fault Detection with Unknown Input Set-Membership State Estimators and Interval Models Using Zonotopes. , 2007, , 1234-1239.		1
144	A GMDH neural network-based approach to passive robust fault detection using a constraint satisfaction backward test. Engineering Applications of Artificial Intelligence, 2007, 20, 886-897.	4.3	54

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145	Toward the Training of Feed-Forward Neural Networks With the D-Optimum Input Sequence. IEEE Transactions on Neural Networks, 2006, 17, 357-373.	4.8	24
146	AN LMI APPROACH TO DESIGNING OBSERVERS AND UNKNOWN INPUT OBSERVERS FOR NONLINEAR SYSTEMS. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2006, 39, 198-203.	0.4	0
147	A GMDH neural network-based approach to robust fault diagnosis: Application to the DAMADICS benchmark problem. Control Engineering Practice, 2006, 14, 671-683.	3.2	109
148	A neuro-fuzzy multiple-model observer approach to robust fault diagnosis based on the DAMADICS benchmark problem. Control Engineering Practice, 2006, 14, 699-717.	3.2	47
149	DEVELOPING D-OPTIMUM EXPERIMENTAL CONDITIONS FOR MODEL-BASED FAULT DETECTION SYSTEMS. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2005, 38, 37-42.	0.4	0
150	Confidence Estimation of GMDH Neural Networks. Lecture Notes in Computer Science, 2004, , 210-216.	1.0	0
151	A novel genetic programming approach to nonlinear system modelling: application to the DAMADICS benchmark problem. Engineering Applications of Artificial Intelligence, 2004, 17, 363-370.	4.3	39
152	A Hybrid Neuro-Fuzzy and De-Coupling Approach Applied to the DAMADICS Benchmark Problem. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2003, 36, 957-962.	0.4	6
153	Fault Detection with Observers and Genetic Programming: Application to the DAMADICS Benchmark Problem. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2003, 36, 1101-1106.	0.4	8
154	A BOUNDED-ERROR APPROACH TO DESIGNING UNKNOWN INPUT OBSERVERS. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2002, 35, 437-442.	0.4	9
155	Genetic programming based approaches to identification and fault diagnosis of non-linear dynamic systems. International Journal of Control, 2002, 75, 1012-1031.	1.2	38
156	An Evolutionary Approach to Identification of Nonlinear Dynamic Systems. , 2001, , 240-243.		2