

David Henry

List of Publications by Year in descending order

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117
papers

1,644
citations

331259

21
h-index

329751

37
g-index

121
all docs

121
docs citations

121
times ranked

818
citing authors

#	ARTICLE	IF	CITATIONS
1	Design and analysis of robust residual generators for systems under feedback control. Automatica, 2005, 41, 251-264.	3.0	177
2	Development of an Active Fault-Tolerant Flight Control Strategy. Journal of Guidance, Control, and Dynamics, 2008, 31, 135-147.	1.6	89
3	Fault Diagnosis of Microscope Satellite Thrusters Using H-infinity/H_ Filters. Journal of Guidance, Control, and Dynamics, 2008, 31, 699-711.	1.6	73
4	A Method for Designing Fault Diagnosis Filters for LPV Polytopic Systems. Journal of Control Science and Engineering, 2008, 2008, 1-11.	0.8	68
5	Norm-based design of robust FDI schemes for uncertain systems under feedback control: Comparison of two approaches. Control Engineering Practice, 2006, 14, 1081-1097.	3.2	67
6	Output tracking of systems subjected to perturbations and a class of actuator faults based on HOSM observation and identification. Automatica, 2015, 59, 200-205.	3.0	66
7	Design of fault diagnosis filters: A multi-objective approach. Journal of the Franklin Institute, 2005, 342, 421-446.	1.9	64
8	Fault Diagnosis and Fault-Tolerant Control and Guidance for Aerospace Vehicles. Advances in Industrial Control, 2014, , .	0.4	63
9	Sensor fault diagnosis using a non-homogeneous high-order sliding mode observer with application to a transport aircraft. IET Control Theory and Applications, 2015, 9, 598-607.	1.2	48
10	Design of nonlinear observers for fault diagnosis: A case study. Control Engineering Practice, 1996, 4, 1535-1544.	3.2	47
11	Robust Fault Diagnosis for Atmospheric Reentry Vehicles: A Case Study. IEEE Transactions on Systems, Man and Cybernetics, Part A: Systems and Humans, 2010, 40, 886-899.	3.4	43
12	An unknown input interval observer for LPV systems under L_2 norm bounded disturbances. IEEE Transactions on Systems, Man and Cybernetics, Part A: Systems and Humans, 2010, 40, 886-899.	3.0	43
13	Robust FDI for fault-tolerant thrust allocation with application to spacecraft rendezvous. Control Engineering Practice, 2015, 42, 12-27.	3.2	39
14	Supervisory fault-tolerant control with mutual performance optimization. International Journal of Adaptive Control and Signal Processing, 2013, 27, 251-279.	2.3	38
15	Actuator fault detection in aircraft systems: Oscillatory failure case study. Annual Reviews in Control, 2013, 37, 180-190.	4.4	34
16	Fault tolerant flight control: from theory to piloted flight simulator experiments. IET Control Theory and Applications, 2010, 4, 1451-1464.	1.2	32
17	LPV solutions for fault detection of aircraft actuator faults: Bridging the gap between theory and practice. International Journal of Robust and Nonlinear Control, 2015, 25, 649-672.	2.1	32
18	Development of an operational model-based warning system for tropospheric ozone concentrations in Bordeaux, France. Environmental Modelling and Software, 2004, 19, 369-382.	1.9	31

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19	A non-conservative H_{∞} solution for early and robust fault diagnosis in aircraft control surface servo-loops. Control Engineering Practice, 2014, 31, 183-199.	3.2	27
20	Transient management of a supervisory fault-tolerant control scheme based on dwell-time conditions. International Journal of Adaptive Control and Signal Processing, 2015, 29, 123-142.	2.3	27
21	Off-line robust fault diagnosis using the generalized structured singular value. Automatica, 2002, 38, 1347-1358.	3.0	24
22	Fault Detection and Diagnosis for Aeronautic and Aerospace Missions. Lecture Notes in Control and Information Sciences, 2010, , 91-128.	0.6	24
23	On the synthesis of a sliding-mode-observer-based adaptive fault-tolerant flight control scheme. ISA Transactions, 2021, 111, 8-23.	3.1	22
24	Structured fault detection filters for LPV systems modeled in an LFR manner. International Journal of Adaptive Control and Signal Processing, 2012, 26, 190-207.	2.3	21
25	Design of Robust Fault Detection Filters for Multivariable Feedback Systems. International Journal of Modelling and Simulation, 2006, 26, 17-26.	2.3	19
26	A class of nonlinear unknown input observer for fault diagnosis: Application to fault tolerant control of an autonomous spacecraft. , 2014, , .		19
27	Robust microvibration mitigation and pointing performance analysis for high stability spacecraft. International Journal of Robust and Nonlinear Control, 2018, 28, 5688-5716.	2.1	19
28	A 6-DOF sliding mode fault tolerant control solution for in-orbit autonomous rendezvous. Aerospace Science and Technology, 2021, 118, 107050.	2.5	19
29	Signal and model-based fault detection for aircraft systems. IFAC-PapersOnLine, 2015, 48, 1096-1101.	0.5	16
30	Robust Model-based Fault Diagnosis of Thruster Faults in Spacecraft. IFAC-PapersOnLine, 2015, 48, 1078-1083.	0.5	15
31	Structured H_{∞}/H_2 LPV filters for fault diagnosis: Some new results. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2009, 42, 420-425.	0.4	14
32	A new multi-objective filter design for guaranteed robust FDI performance. , 0, , .		12
33	Position and Attitude Model-Based Thruster Fault Diagnosis: A Comparison Study. Journal of Guidance, Control, and Dynamics, 2015, 38, 1012-1026.	1.6	12
34	A Boolean algebraic-based solution for multiple fault diagnosis: Application to a spatial mission. Aerospace Science and Technology, 2013, 28, 214-226.	2.5	11
35	A H_{∞} solution for microvibration mitigation in satellites: A case study. Journal of Sound and Vibration, 2017, 399, 21-44.	2.1	11
36	A Super-Twisting Sliding Mode Control in a Backstepping Setup for Rendezvous with a Passive Target. IFAC-PapersOnLine, 2019, 52, 25-30.	0.5	11

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37	DESIGN OF ROBUST FAULT DETECTION FILTERS FOR MULTIVARIABLE FEEDBACK SYSTEMS. International Journal of Modelling and Simulation, 2006, 26, .	2.3	11
38	Sliding Mode Control with Application to Fault-Tolerant Control: Assessment and Open Problems. Automation, 2021, 2, 1-30.	1.2	11
39	Robust fault diagnosis in uncertain linear parameter.-varying systems. , 0, , .		10
40	A LPV approach for early fault detection in aircraft control surfaces servo-loops. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2012, 45, 806-811.	0.4	10
41	Model-based fault diagnosis and tolerant control: the ESA's e.Deorbit mission. , 2019, , .		10
42	Fault diagnosis for LPV systems. , 2008, , .		9
43	A Model-based Solution to Robust and Early Detection of Control Surface Runaways. SAE International Journal of Aerospace, 0, 4, 1500-1505.	4.0	9
44	Design of a non-homogeneous differentiator for actuator oscillatory failure case reconstruction in noisy environment. Proceedings of the Institution of Mechanical Engineers Part I: Journal of Systems and Control Engineering, 2015, 229, 266-275.	0.7	9
45	Output-Feedback Sliding-Mode Controller for Blood Glucose Regulation in Critically Ill Patients Affected by Type 1 Diabetes. IEEE Transactions on Control Systems Technology, 2021, 29, 2704-2711.	3.2	9
46	INPUT ESTIMATION VIA SLIDING-MODE DIFFERENTIATION FOR EARLY OFC DETECTION. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2012, 45, 1143-1148.	0.4	8
47	Fault diagnosis in induction machines using the generalized structured singular value. Control Engineering Practice, 2002, 10, 587-598.	3.2	7
48	Fault Detection and Diagnosis in Electrical Aircraft Flight Control System. , 2011, , .		7
49	Model-based FDIR and Fault Accommodation for a Rendezvous Mission around the Mars Planet: the Mars Sample Return Case. IFAC-PapersOnLine, 2016, 49, 266-271.	0.5	7
50	Minimax Statistical Models for Air Pollution Time Series. Application to Ozone Time Series Data Measured in Bordeaux. Environmental Monitoring and Assessment, 2004, 98, 275-294.	1.3	6
51	Interval observer for Linear Time Invariant (LTI) uncertain systems with state and unknown input estimations. Journal of Physics: Conference Series, 2015, 659, 012023.	0.3	6
52	LPV Control for Active Vibration Mitigation in High Stability Space Missions: A Comparative Study. IFAC-PapersOnLine, 2015, 48, 88-94.	0.5	6
53	A Model-based diagnosis method for transient and multiple faults of AOCs thrusters. IFAC-PapersOnLine, 2016, 49, 82-87.	0.5	6
54	Theories for design and analysis of robust detectors. Journal of the Franklin Institute, 2021, 358, 1152-1183.		6

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55	Metzler matrix-based switching control scheme for linear systems with prescribed performance guarantees. IFAC-PapersOnLine, 2020, 53, 6428-6433.	0.5	6
56	A fault tolerant controller based on quasi-continuous high-order sliding mode technique. , 2016, , .		5
57	Unknown input interval observer with H^{∞} and D-stability performance. IFAC-PapersOnLine, 2017, 50, 6251-6258.	0.5	5
58	A Switching Fault-Hiding Mechanism based on Virtual Actuators and Dwell-Time Conditions. IFAC-PapersOnLine, 2018, 51, 703-708.	0.5	5
59	Robust fault accommodation strategy of the reentry vehicle: a disturbance estimate-triggered approach. Nonlinear Dynamics, 2021, 103, 2605-2625.	2.7	5
60	Fault diagnosis in satellites using H^{∞} estimators. , 0, , .		4
61	A METHODOLOGY FOR THE DESIGN OF ACTIVE FAULT TOLERANT CONTROL SYSTEMS. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2006, 39, 813-818.	0.4	4
62	Development of a robust model-based fault diagnosis technique for Reusable Launch Vehicles. A case study. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2008, 41, 12036-12041.	0.4	4
63	A solution for management of fault diagnosis and fault tolerance performances in active FTC schemes. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2010, 43, 410-415.	0.4	4
64	Supervisory fault tolerant control via common lyapunov function approach. , 2010, , .		4
65	Enhanced distinguishability in Supervisory Fault Tolerant Control. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2014, 47, 11117-11122.	0.4	4
66	LPV Control for Multi-harmonic Microvibration Attenuation: Application to High Stability Space Missions. IFAC-PapersOnLine, 2015, 48, 127-132.	0.5	4
67	A Tracking Backstepping Sliding-Mode Control for Spacecraft Rendezvous with a Passive Target. , 2018, , .		4
68	A Class of Unknown Input Observers Under H^{∞} Performance for Fault Diagnosis: Application to the Mars Sample Return Mission. , 2019, , 225-266.		4
69	A MULTI-OBJECTIVE FILTERING APPROACH FOR FAULT DIAGNOSIS WITH GUARANTEED SENSITIVITY PERFORMANCE.. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2002, 35, 467-472.	0.4	3
70	ROBUST FAULT DIAGNOSIS OF THE MICROSCOPE SATELLITE MICRO-THRUSTERS. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2006, 39, 342-347.	0.4	3
71	Design of Fault Tolerant Control Systems: a Flight Simulator Experiment. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2009, 42, 247-252.	0.4	3
72	Robust fault detection for systems with electronic induced delays: Application to the rendezvous phase of the MSR mission. , 2013, , .		3

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73	Microvibration Attenuation based on H^{∞}/LPV Theory for High Stability Space Missions. Journal of Physics: Conference Series, 2015, 659, 012026.	0.3	3
74	An LMI approach for the Integral Sliding Mode and H^{∞} State Feedback Control Problem. Journal of Physics: Conference Series, 2015, 659, 012052.	0.3	3
75	Unknown input interval observer for uncertain linear time invariant systems. , 2016, , .		3
76	A model-based solution for fault diagnosis of thruster faults: application to the rendezvous phase of the mars sample return mission. , 2013, , .		3
77	H^{∞}/H_2 filters for fault diagnosis in systems under feedback control. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2003, 36, 87-92.	0.4	2
78	A METHOD FOR DESIGNING FDI FILTERS FOR POLYTOPIC LPV MODELS. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2006, 39, 717-722.	0.4	2
79	DEVELOPMENT OF AN ON-BOARD FAULT TOLERANT CONTROL STRATEGY WITH APPLICATION TO THE GARTEUR AG16 BENCHMARK. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2007, 40, 97-102.	0.4	2
80	A Nonlinear Fault Identification scheme for Reusable Launch Vehicles Control Surfaces. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2009, 42, 53-58.	0.4	2
81	Observer-based structures to active fault tolerant control problem. , 2010, , .		2
82	Supervisory Fault Tolerant Control Scheme based on Bumpless scheme and Dwell-time Conditions. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2012, 45, 385-390.	0.4	2
83	Thruster Fault Detection, Isolation and Accommodation for an Autonomous Spacecraft. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2014, 47, 10543-10548.	0.4	2
84	Sliding Mode Observers for Fault Estimation in Multisensor Avionics Systems. , 2015, , 323-341.		2
85	Assessment of a Supervisory Fault-Hiding Scheme in a Classical Guidance, Navigation and Control Setup: the e.Deorbit mission. , 2019, , .		2
86	Model-Based FDIR for Space Applications. Advances in Industrial Control, 2014, , 151-207.	0.4	2
87	Design of Norm Based Fault Detection and Isolation LPV Filters. Lecture Notes in Control and Information Sciences, 2013, , 125-180.	0.6	2
88	Multiple and simultaneous fault isolation with minimal fault indicating signals: a case study. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2009, 42, 59-64.	0.4	1
89	Change detection in flat systems by constraint satisfaction techniques. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2011, 44, 12009-12014.	0.4	1
90	Fault tolerant controller for a class of additive faults: a quasi-continuous high-order sliding mode approach. Journal of Physics: Conference Series, 2015, 659, 012005.	0.3	1

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91	Multiobjective interval observer via LMI techniques for fault detection. , 2016, , .		1
92	An Active Fault-Tolerant Flight Control Strategy. Advances in Industrial Control, 2014, , 119-149.	0.4	1
93	A Methodology for the Design of Active Fault Tolerant Control Systems. , 2007, , 813-818.		1
94	Application of the H ∞ control theory to space missions in engineering education. IFAC-PapersOnLine, 2020, 53, 17132-17137.	0.5	1
95	A visualization system for sliding windows protocols. , 0, , .		0
96	A combined hard and soft computing approach for ground-level ozone monitoring. , 0, , .		0
97	Discussion on: "A Stacked Model Structure for Off-line Parameter Variation Estimation in Multi-equilibria Nonlinear Systems" European Journal of Control, 2006, 12, 371-372.	1.6	0
98	Robust Fault Diagnosis of the Microscope Satellite Micro-Thrusters. , 2007, , 342-347.		0
99	A method for multiple fault isolation: application to the rendez-vous phase of the Mars Sample Return mission. , 2010, , .		0
100	Fault diagnosis schemes for atmospheric re-entry vehicles actuators: comparison of two approaches. , 2010, , .		0
101	SUPERVISORY FAULT TOLERANT CONTROL BASED ON DWELL-TIME CONDITIONS. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2011, 44, 13717-13722.	0.4	0
102	Robust Detection of Oscillatory Failure Case in Aircraft Control Surface Servo-Loops. Advances in Industrial Control, 2014, , 29-71.	0.4	0
103	Adaptive Fault Tolerant Controller Based on Quasi-Continuous High-Order Sliding Modes. , 2015, , .		0
104	Robust Output Tracking of a 3DOF Helicopter via High-Order Sliding Mode Observers. , 2015, , 67-79.		0
105	Fault tolerant attitude controller for a class of additive faults via High-Order Sliding Modes**. Davila gratefully acknowledge the financial support from CONACyT under grant 151855, Fondo Institucional del CONACYT under grant 209247, and SIP-IPN under grant 20161192.. IFAC-PapersOnLine, 2016. 49, 254-259.	0.5	0
106	Disturbance Observer-Based Fault-Tolerant Control for a Class of Additive Faults. , 2019, , 337-355.		0
107	Corrections to "Output-Feedback Sliding-Mode Controller for Blood Glucose Regulation in Critically Ill Patients Affected by Type 1 Diabetes" [Nov 21 2704-2711]. IEEE Transactions on Control Systems Technology, 2021, 29, 2746-2746.	3.2	0
108	A generic model-based warning system for ground-level ozone monitoring. Journal Europeen Des Systemes Automatises, 2005, 39, 493-512.	0.3	0

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109	A Method for Designing FDI Filters for Polytopic LPV Models. , 2007, , 717-722.		0
110	Vers la gestion globale des interactions Â« commande-diagnostic Â». Analyse et synthÃ“se. Journal European Des Systemes Automatises, 2009, 43, 133-163.	0.3	0
111	A FTC Strategy for Safe Recovery against Trimmable Horizontal Stabilizer Failure with Guaranteed Nominal Performance. Lecture Notes in Control and Information Sciences, 2010, , 337-361.	0.6	0
112	Failure Detection and Compensation for Aircraft Inertial System. Advances in Industrial Control, 2014, , 91-117.	0.4	0
113	Robust Detection of Abnormal Aircraft Control Surface Position for Early System Reconfiguration. Advances in Industrial Control, 2014, , 73-89.	0.4	0
114	Review and Basic Concepts. Advances in Industrial Control, 2014, , 5-27.	0.4	0
115	Model-based fault diagnosis and fault-tolerant data fusion algorithms for the ESAâ€™s In-Orbit-Assembly project. , 2021, , .		0
116	Parameter identification and state estimation for a diabetic glucoseâ€“insulin model via an adaptive observer. International Journal of Robust and Nonlinear Control, 2023, 33, 5087-5104.	2.1	0
117	Guaranteed state estimation using H_∞ interval approaches for space applications: a case study. , 2022, , .		0