Ian Postlethwaite

List of Publications by Citations

117 papers	**2,170** citations
23 h-index	**41** g-index
128 ext. papers	**2,596** ext. citations
3.4 avg, IF	**4.96** L-index

#	Paper	IF	Citations
117	Linear conditioning for systems containing saturating actuators. *Automatica*, **2000**, 36, 1347-1354	5.7	144
116	Anti-windup and bumpless-transfer schemes. *Automatica*, **1998**, 34, 199-210	5.7	141
115	A new perspective on static and low order anti-windup synthesis. *International Journal of Control*, **2004**, 77, 27-44	1.5	128
114	Survey and application of sensor fault detection and isolation schemes. *Control Engineering Practice*, **2011**, 19, 658-674	3.9	113
113	Incorporating Robustness Requirements Into Antiwindup Design. *IEEE Transactions on Automatic Control*, **2007**, 52, 1842-1855	5.9	105
112	A Probabilistically Robust Path Planning Algorithm for UAVs Using Rapidly-Exploring Random Trees. *Journal of Intelligent and Robotic Systems: Theory and Applications*, **2013**, 71, 231-253	2.9	83
111	Square Root Cubature Information Filter. *IEEE Sensors Journal*, **2013**, 13, 750-758	4	81
110	Real-time path planning with limited information for autonomous unmanned air vehicles. *Automatica*, **2008**, 44, 696-712	5.7	53
109	Real-Time Optimal Mission Scheduling and Flight Path Selection. *IEEE Transactions on Automatic Control*, **2007**, 52, 1119-1123	5.9	52
108	An anti-windup scheme with closed-loop stability considerations. *Automatica*, **1999**, 35, 761-765	5.7	51
107	Clearance of Nonlinear Flight Control Laws Using Hybrid Evolutionary Optimization. *IEEE Transactions on Evolutionary Computation*, **2006**, 10, 689-699	15.6	50
106	Discrete-time and sampled-data anti-windup synthesis: stability and performance. *International Journal of Systems Science*, **2006**, 37, 91-113	2.3	46
105	On the Existence of Stable, Causal Multipliers for Systems With Slope-Restricted Nonlinearities. *IEEE Transactions on Automatic Control*, **2009**, 54, 2697-2702	5.9	43
104	UAV Path Following in Windy Urban Environments. *Journal of Intelligent and Robotic Systems: Theory and Applications*, **2014**, 74, 1013-1028	2.9	36
103	Elucidating the mechanisms of cooperative calcium-calmodulin interactions: a structural systems biology approach. *BMC Systems Biology*, **2008**, 2, 48	3.5	36
102	Model reduction with balanced realizations. *International Journal of Control*, **1995**, 62, 33-64	1.5	36
101	Feedforward control: a full-information approach. *Automatica*, **2001**, 37, 17-28	5.7	34

100	. *Automatica*, **2008**, 44, 2081-2089	5.7	31
99	New Tools for Computing Tight Bounds on the Real Structured Singular Value. *Journal of Guidance, Control, and Dynamics*, **2001**, 24, 1204-1213	2.1	31
98	Stochastic noise and synchronisation during dictyostelium aggregation make cAMP oscillations robust. *PLoS Computational Biology*, **2007**, 3, e218	5	29
97	Multi-UAV path planning in obstacle rich environments using Rapidly-exploring Random Trees **2009** ,		28
96	Design and flight testing of various controllers for the Bell 205 helicopter. *Control Engineering Practice*, **2005**, 13, 383-398	3.9	28
95	Anti-windup synthesis for systems with rate-limits using Riccati equations. *International Journal of Control*, **2010**, 83, 233-245	1.5	23
94	Nonlinear robustness analysis of flight control laws for highly augmented aircraft. *Control Engineering Practice*, **2007**, 15, 655-662	3.9	23
93	Adaptive Neural Network Controller Design for Flexible Joint Robots using Singular Perturbation Technique. *Transactions of the Institute of Measurement and Control*, **1995**, 17, 120-131	1.8	23
92	An H∞minimax approach to the design of robust control systems. *Systems and Control Letters*, **1984** , 5, 81-88	2.4	23
91	Coprime factor based anti-windup synthesis for parameter-dependent systems. *Systems and Control Letters*, **2009**, 58, 810-817	2.4	22
90	Anti-windup compensation of rate saturation in an experimental aircraft. *Proceedings of the American Control Conference*, **2007**,	1.2	20
89	A Simple Robust Control Scheme for Robot Manipulators With Only Joint Position Measurements. *International Journal of Robotics Research*, **1993**, 12, 490-496	5.7	20
88	On J-Lossless coprime factorizations and H∞control. *International Journal of Robust and Nonlinear Control*, **1991**, 1, 47-68	3.6	20
87	Scheduling schemes for an integrated flight and propulsion control system. *Control Engineering Practice*, **2002**, 10, 685-696	3.9	19
86	A comparison of rate-limit compensation schemes for pilot-induced-oscillation avoidance. *Aerospace Science and Technology*, **2006**, 10, 37-47	4.9	18
85	Nonlinear robust performance analysis using complex-step gradient approximation. *Automatica*, **2006**, 42, 177-182	5.7	18
84	A UAV Waypoint Generator **2004**,		18
83	Design and Piloted Simulation of a Robust Integrated Flight and Propulsion Controller. *Journal of Guidance, Control, and Dynamics*, **2000**, 23, 269-277	2.1	18

82	Case Studies Using Linear Matrix Inequalities for Optimal Anti-Windup Synthesis*. *European Journal of Control*, **2003**, 9, 463-473	2.5	17
81	A cubature H filter and its square-root version. *International Journal of Control*, **2014**, 87, 764-776	1.5	16
80	Robust control applications. *Annual Reviews in Control*, **2007**, 31, 27-39	10.3	16
79	Performance-oriented antiwindup for a class of linear control systems with augmented neural network controller. *IEEE Transactions on Neural Networks*, **2007**, 18, 449-65		16
78	An Architecture for Design and Analysis of High-Performance Robust Antiwindup Compensators. *IEEE Transactions on Automatic Control*, **2007**, 52, 1672-1679	5.9	16
77	Cooperative Multiple Pursuers against a Single Evader. *Journal of Intelligent and Robotic Systems: Theory and Applications*, **2017**, 86, 551-567	2.9	15
76	Discrete Robust Anti-Windup to Improve a Novel Dual-Stage Large-Span Track-Seek/Following Method. *IEEE Transactions on Control Systems Technology*, **2008**, 16, 1342-1351	4.8	14
75	Multiple calcium binding sites make calmodulin multifunctional. *Molecular BioSystems*, **2008**, 4, 66-73		13
74	An H minimax approach to the design of robust control systems, part II: All solutions, all-pass form solutions and the Best solution. *Systems and Control Letters*, **1986**, 7, 261-268	2.4	13
73	A robust anti-windup design procedure for SISO systems. *International Journal of Control*, **2011**, 84, 351-369		12
72	Linear time-varying models can reveal non-linear interactions of biomolecular regulatory networks using multiple time-series data. *Bioinformatics*, **2008**, 24, 1286-92	7.2	12
71	Design of Static H8 Linear Parameter Varying Controllers for Unmanned Aircraft. *Journal of Guidance, Control, and Dynamics*, **2007**, 30, 1829-1835	2.1	12
70	Modeling and Computing Worst-Case Uncertainty Combinations for Flight Control Systems Analysis. *Journal of Guidance, Control, and Dynamics*, **2002**, 25, 1029-1039	2.1	12
69	Authors Reply to Comments on On the Existence of Stable, Causal Multipliers for Systems With Slope-Restricted Nonlinearities *IEEE Transactions on Automatic Control*, **2012**, 57, 2428-2430	5.9	11
68	A comparative study of NN- and EKF-based SFDA schemes with application to a nonlinear UAV model. *International Journal of Control*, **2010**, 83, 1025-1043	1.5	11
67	A Cooperative Pursuit-Evasion Game for Non-holonomic Systems. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2014**, 47, 1977-1984		10
66	Experimental Implementation of a Nonlinear Dynamic Inversion Controller with Antiwindup. *Journal of Guidance, Control, and Dynamics*, **2013**, 36, 1035-1046	2.1	10
65	A Continuous Local Motion Planning Framework for Unmanned Vehicles in Complex Environments. *Journal of Intelligent and Robotic Systems: Theory and Applications*, **2012**, 66, 477-494	2.9	10

64	A robust override scheme enforcing strict output constraints for a class of strictly proper systems. *Automatica*, **2008**, 44, 753-760	5.7	9
63	Computation of Worst-Case Pilot Inputs for Nonlinear Flight Control System Analysis. *Journal of Guidance, Control, and Dynamics*, **2006**, 29, 195-199	2.1	9
62	Anti-windup synthesis for PIO avoidance in an experimental aircraft **2006**,		9
61	Multivariable override control for systems with output and state constraints. *International Journal of Robust and Nonlinear Control*, **2004**, 14, 1105-1131	3.6	9
60	Cubature H∞ Information filter and its extensions. *European Journal of Control*, **2016**, 29, 17-32	2.5	8
59	Pilot-Involved-Oscillation Suppression Using Low-Order Antiwindup: Flight-Test Evaluation. *Journal of Guidance, Control, and Dynamics*, **2012**, 35, 471-483	2.1	8
58	Nonlinear Worst-Case Analysis of an LPV Controller for Approach-Phase of a Re-Entry Vehicle **2009**,		8
57	Crosstalk between G-protein and Ca2+ pathways switches intracellular cAMP levels. *Molecular BioSystems*, **2009**, 5, 43-51		8
56	**2008**,		8
55	General Anti-windup synthesis for input constrained nonlinear systems controlled using nonlinear dynamic inversion **2006**,		8
54	Discrete-time anti-windup: Part 1 Stability and performance **2003**,		8
53	Nonlinear Adaptive Control of Robots Including Motor Dynamics **1993**,		8
52	Subsonic Tests of a Flush Air Data Sensing System Applied to a Fixed-Wing Micro Air Vehicle. *Journal of Intelligent and Robotic Systems: Theory and Applications*, **2009**, 54, 275-295	2.9	7
51	An LPV Loop Shaping Controller Design for the NASA-HL-20 Re-Entry Vehicle **2009**,		7
50	Piloted Assessment of a Fault Diagnosis Algorithm on the ATTAS Aircraft **2009**,		7
49	Computational modelling suggests dynamic interactions between Ca2+, IP3 and G protein-coupled modules are key to robust Dictyostelium aggregation. *Molecular BioSystems*, **2009**, 5, 612-28		7
48	Robust Integrated Flight and Propulsion Controller for the Harrier Aircraft. *Journal of Guidance, Control, and Dynamics*, **1999**, 22, 286-290	2.1	7
47	Inner functions and a pseudo-singular-value decomposition in super-optimal H∞ control. *International Journal of Control*, **1990**, 51, 1119-1131	1.5	7

46	A feedforward control synthesis approach for LPV systems **2008**,		6
45	Evaluation of Stochastic Effects on Biomolecular Networks Using the Generalized Nyquist Stability Criterion. *IEEE Transactions on Automatic Control*, **2008**, 53, 1937-1941	5.9	6
44	Neural network based sensor validation scheme demonstrated on an unmanned air vehicle (UAV) model **2008**,		6
43	Design of Flight Controllers based on Simplified LPV model of a UAV **2006**,		6
42	ANTI-WINDUP SYNTHESIS FOR NONLINEAR DYNAMIC INVERSION CONTROLLERS. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2006**, 39, 471-476		6
41	A partitioned integrated flight and propulsion control system with engine safety limiting. *Control Engineering Practice*, **2000**, 8, 845-859	3.9	6
40	Anti-windup Compensation and the Control of Input-Constrained Systems **2007**, 143-173		6
39	L2 gain bounds for systems with slope-restricted nonlinearities **2010**,		5
38	Continuous Local Motion Planning & Control for Micro- Air-Vehicles in Complex Environments **2010**,		5
37	Enabling the Operation of Multiple Micro-Air-Vehicles in Increasingly Complex Obstacle-Rich Environments **2010**,		5
36	A case study on spacecraft attitude control **2009**,		5
35	Practical approaches to low-order anti-windup compensator design: a flight control comparison. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2008**, 41, 14162-14167		5
34	IMPROVING LOCAL ANTI-WINDUP PERFORMANCE: PRELIMINARY RESULTS ON A TWO-STAGE APPROACH. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2005**, 38, 210-215		5
33	Input/Output Conditioning of Robust Integrated Flight and Propulsion Controller. *Journal of Guidance, Control, and Dynamics*, **2001**, 24, 1089-1099	2.1	5
32	A Discrete Time H∞ Observer-Based Controller & Its Application to a Glass Tube Production Process. *European Journal of Control*, **1996**, 2, 112-125	2.5	5
31	. *IEEE Access*, **2019**, 7, 4327-4337	3.5	5
30	Subspace and Bootstrap-Based Techniques for Helicopter Model Identification. *Journal of the American Helicopter Society*, **2011**, 56, 12002-1200213	1.2	4
29	An intelligent suboptimal path planning algorithm using Rapidly-exploring Random Trees **2009**,		4

28	Parameter Estimation Techniques for Helicopter Dynamic Modelling. *Proceedings of the American Control Conference*, **2007**,	1.2	4
27	ROBUSTNESS ANALYSIS OF NONLINEAR FLIGHT CONTROL LAWS OVER CONTINUOUS REGIONS OF THE FLIGHT ENVELOPE. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2006**, 39, 53-58		4
26	SFDIA of consecutive sensor faults using neural networks demonstrated on a UAV. *International Journal of Control*, **2010**, 83, 2308-2327	1.5	3
25	Design and Implementation of a Digital Multimode H Controller for the Spey Turbofan Engine. *Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME*, **2010**, 132,	1.6	3
24	Situation Aware Trajectory Tracking for Micro Air Vehicles in Obstacle Rich Environments **2009**,		3
23	ROBUSTIFICATION OF STATIC AND LOW ORDER ANTI-WINDUP DESIGNS. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2006**, 39, 375-380		3
22	Further results on full-order anti-windup synthesis: exploiting the stability multiplier. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2004**, 37, 1105-1110		3
21	EXACT NONLINEAR MODELLING USING SYMBOLIC LINEAR FRACTIONAL TRANSFORMATIONS. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2005**, 38, 190-195		3
20	LOCAL ANTI-WINDUP COMPENSATION USING OUTPUT LIMITING. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2002**, 35, 97-102		3
19	Real-Time Optimal Time-Critical Target Assignment for UAVs **2007**, 265-280		3
18	Discrete-time adaptive control of uncertain sampled-data systems with uncertain input delay: a reduction. *IET Control Theory and Applications*, **2020**, 14, 1681-1691	2.5	3
17	Nonlinear Dynamic Inversion Based Anti-windup - An Aerospace Application. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2008**, 41, 14156-14161		2
16	ANTI-WINDUP SYNTHESIS USING RICCATI EQUATIONS. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2005**, 38, 171-176		2
15	VARIOUS H CONTROLLERS FOR THE BELL 205: DESIGN AND FLIGHT TEST. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2002**, 35, 217-222		2
14	A robustness test for distributed feedback systems *International Journal of Control*, **1985**, 41, 973-980	1.5	2
13	Multi-agent motion planning for nonlinear Gaussian systems. *International Journal of Control*, **2013**, 86, 2075-2089	1.5	1
12	On the existence of stable, causal multipliers for systems with slope-restricted nonlinearities **2009**,		1
11	Improving sector-based results for systems with dead-zone nonlinearities and constrained control applications. *Automatica*, **2009**, 45, 155-160	5.7	1

10	Estimation of the Uncertainty in a Helicopter Dynamic Model Identified by the Subspace-based Method Using Bootstrap Techniques. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2008**, 41, 8852-8859	1
9	STABILITY CRITERIA FOR RATE LIMITED LUR'E SYSTEMS WITH CONNECTIONS TO MAGNITUDE LIMITS AND ANTI-WINDUP. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2007**, 40, 681-686	1
8	WORST-CASE UNCERTAIN PARAMETER COMBINATIONS FOR FLIGHT CONTROL SYSTEMS ANALYSIS. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2002**, 35, 253-258	1
7	Partitioning and re-design of H-infinity loop shaping integrated flight and propulsion control systems **2001**,	1
6	H Super-Optimal Solutions. *Control and Dynamic Systems*, **1992**, 183-246	1
5	Case Study on Anti-windup Compensation - Micro-actuator Control in a Hard-Disk Drive **2007**, 413-430	0
4	Structural adaptation and robustness of Dictyostelium ligand receptor kinetics for low and high ligand concentrations. *International Journal of Robust and Nonlinear Control*, **2010**, 20, 1047-1058	3.6
3	Improving sector-based results for systems with deadzone nonlinearities. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2008**, 41, 7729-7734	
2	ROBUST CONTROL APPLICATIONS. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2006**, 39, 713-725	
1	Stochastic noise and synchronisation during Dictyostelium aggregation make cAMP oscillations robust. *PLoS Computational Biology*, **2005**, preprint, e218	5