Fabian R Wirth

List of Publications by Year in Descending Order

133 papers	3,092 citations	22 h-index	53 g-index
138 ext. papers	3,677 ext. citations	2.6 avg, IF	5.58 L-index

#	Paper	IF	Citations
133	Remarks on the tail order on moment sequences. *Journal of Mathematical Analysis and Applications*, **2022**, 512, 126135	1.1	0
132	A relaxed small-gain theorem for discrete-time infinite networks. *Automatica*, **2022**, 142, 110363	5.7	
131	Local Stabilization of an Unstable Parabolic Equation via Saturated Controls. *IEEE Transactions on Automatic Control*, **2021**, 66, 2162-2176	5.9	5
130	Control of discrete-time nonlinear systems via finite-step control Lyapunov functions. *Systems and Control Letters*, **2020**, 138, 104631	2.4	2
129	A relaxed small-gain theorem for discrete-time infinite networks **2020**,		2
128	Distributed Algorithms for Internet-of-Things-Enabled Prosumer Markets: A Control Theoretic Perspective **2020**, 125-149		1
127	Noncoercive Lyapunov Functions for Input-to-State Stability of Infinite-Dimensional Systems. *SIAM Journal on Control and Optimization*, **2020**, 58, 2952-2978	1.9	10
126	Integral Input-to-State Stability of Networked Control Systems. *IEEE Transactions on Automatic Control*, **2020**, 65, 1203-1210	5.9	8
125	Nonhomogeneous Place-dependent Markov Chains, Unsynchronised AIMD, and Optimisation. *Journal of the ACM*, **2019**, 66, 1-37	2	3
124	Existence of non-coercive Lyapunov functions is equivalent to integral uniform global asymptotic stability. *Mathematics of Control, Signals, and Systems*, **2019**, 31, 1-26	1.3	8
123	On the ergodic control of ensembles. *Automatica*, **2019**, 108, 108483	5.7	2
122	On noise-to-state stability of stochastic discrete-time systems via finite-step Lyapunov functions **2019**,		1
121	Design of saturated controls for an unstable parabolic PDE. *IFAC-PapersOnLine*, **2019**, 52, 310-315	0.7	1
120	Stability of infinitely many interconnected systems. *IFAC-PapersOnLine*, **2019**, 52, 550-555	0.7	7
119	Non-coercive Lyapunov functions for infinite-dimensional systems. *Journal of Differential Equations*, **2019**, 266, 7038-7072	2.1	20
118	On Synchronization in Continuous-Time Networks of Nonlinear Nodes With State-Dependent and Degenerate Noise Diffusion. *IEEE Transactions on Automatic Control*, **2019**, 64, 389-395	5.9	22
117	Characterizations of Input-to-State Stability for Infinite-Dimensional Systems. *IEEE Transactions on Automatic Control*, **2018**, 63, 1692-1707	5.9	78

116	Barabanov norms, Lipschitz continuity and monotonicity for the max algebraic joint spectral radius. *Linear Algebra and Its Applications*, **2018**, 550, 37-58	0.9	4
115	Lyapunov characterization of input-to-state stability for semilinear control systems over Banach spaces. *Systems and Control Letters*, **2018**, 119, 64-70	2.4	14
114	Nonconservative Discrete-Time ISS Small-Gain Conditions for Closed Sets. *IEEE Transactions on Automatic Control*, **2018**, 63, 1231-1242	5.9	19
113	Communication-efficient Distributed Multi-resource Allocation **2018**,		2
112	Remarks on Input-to-State Stability and Non-Coercive Lyapunov Functions **2018**,		9
111	Compositional construction of abstractions via relaxed small-gain conditions Part I: continuous case **2018**,		3
110	Compositional construction of abstractions via relaxed small-gain conditions Part II: discrete case **2018**,		5
109	Persistence, Periodicity and Privacy for Positive Systems in Epidemiology and Elsewhere. *Lecture Notes in Control and Information Sciences*, **2017**, 3-15	0.5	
108	A Note on Recursive Schur Complements, Block Hurwitz Stability of Metzler Matrices, and Related Results. *IEEE Transactions on Automatic Control*, **2017**, 62, 4167-4172	5.9	7
107	On the stability and convergence of a class of consensus systems with a nonlinear input. *Automatica*, **2017**, 86, 205-211	5.7	3
106	On classical control and smart cities **2017**,		8
105	On integral input-to-state stability analysis of networked control systems. *IFAC-PapersOnLine*, **2017**, 50, 10078-10083	0.7	1
104	Input-to-state stability of time-delay systems: Criteria and open problems **2017**,		5
103	A non-coercive Lyapunov framework for stability of distributed parameter systems **2017**,		3
102	Decomposition Approach for Background Leakage Assessment: BBLAWN Instance. *Journal of Water Resources Planning and Management - ASCE*, **2016**, 142,	2.8	1
101	. *IEEE Technology and Society Magazine*, **2016**, 35, 23-24	0.8	11
100	On the Design of Campus Parking Systems With QoS Guarantees. *IEEE Transactions on Intelligent Transportation Systems*, **2016**, 17, 1428-1437	6.1	23
99	. *IEEE Transactions on Intelligent Transportation Systems*, **2016**, 17, 1308-1318	6.1	10

98	Relaxed ISS Small-Gain Theorems for Discrete-Time Systems. *SIAM Journal on Control and Optimization*, **2016**, 54, 423-449	1.9	13
97	Nonlinear Scaling of (i)ISS-Lyapunov Functions. *IEEE Transactions on Automatic Control*, **2016**, 61, 1087-1092	3.9	10
96	Global converse Lyapunov theorems for infinite-dimensional systems. *IFAC-PapersOnLine*, **2016**, 49, 897-902	0.7	3
95	Zero Dynamics and Stabilization for Analytic Linear Systems. *Acta Applicandae Mathematicae*, **2015**, 138, 17-57	1.1	14
94	Stochastic optimization approach for the car placement problem in ridesharing systems. *Transportation Research Part B: Methodological*, **2015**, 80, 173-184	7.2	22
93	Stabilization of Switched Linear Differential Algebraic Equations and Periodic Switching. *IEEE Transactions on Automatic Control*, **2015**, 60, 2102-2113	5.9	17
92	Alleviating a form of electric vehicle range anxiety through on-demand vehicle access. *International Journal of Control*, **2015**, 88, 717-728	1.5	22
91	A Relaxed Small-Gain Theorem for Interconnected Discrete-Time Systems. *IEEE Transactions on Automatic Control*, **2015**, 60, 812-817	5.9	14
90	Asynchronous algorithms for network utility maximisation with a single bit **2015**,		1
89	An intelligent speed advisory system for electric vehicles **2015**,		1
88	The stability of Try-Once-Discard for stochastic communication channels: Theory and validation **2015**,		3
87	A note on input-to-state stability of linear and bilinear infinite-dimensional systems **2015**,		6
86	On Maximal Gains Guaranteeing a Small-Gain Condition. *SIAM Journal on Control and Optimization*, **2015**, 53, 262-286	1.9	6
85	Computation of local ISS Lyapunov functions with low gains via linear programming. *Discrete and Continuous Dynamical Systems - Series B*, **2015**, 20, 2477-2495	1.3	6
84	Realization of Try-Once-Discard in Wireless Multihop Networks. *IEEE Transactions on Industrial Informatics*, **2014**, 10, 17-26	11.9	32
83	Solving iterative functional equations for a class of piecewise linear K□functions. *Journal of Mathematical Analysis and Applications*, **2014**, 411, 652-664	1.1	10
82	Extremal norms for positive linear inclusions. *Linear Algebra and Its Applications*, **2014**, 444, 100-113	0.9	8
81	An alternative converse Lyapunov theorem for discrete-time systems. *Systems and Control Letters*, **2014**, 70, 49-59	2.4	42

80	Parked cars as a service delivery platform **2014**,		12
79	A Simulation-Optimization Approach for Reducing Background Leakage in Water Systems. *Procedia Engineering*, **2014**, 89, 59-68		10
78	Stability criteria for SIS epidemiological models under switching policies. *Discrete and Continuous Dynamical Systems - Series B*, **2014**, 19, 2865-2887	1.3	36
77	Stabilizability of linear time-varying systems. *Systems and Control Letters*, **2013**, 62, 747-755	2.4	44
76	Measurement and optimization of robust stability of multiclass queueing networks: Applications in dynamic supply chains. *European Journal of Operational Research*, **2013**, 229, 179-189	5.6	16
75	On the higher moments of TCP. *Linear Algebra and Its Applications*, **2013**, 439, 899-913	0.9	
74	Parsimonious event-triggered distributed control: A Zeno free approach. *Automatica*, **2013**, 49, 2116-2124	3.7	84
73	On Minimum Phase. *Automatisierungstechnik*, **2013**, 61, 805-817	0.8	3
72	On inter-sampling times for event-triggered large-scale linear systems **2013**,		2
71	Stabilization of switched linear differential-algebraic equations via time-dependent switching signals **2013**,		2
70	A Non‐conservative Small-Gain Theorem for GAS Discrete‐Time Systems. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2013**, 46, 26-31		
69	Input-to-State Stability, Integral Input-to-State Stability, and Unbounded Level Sets. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2013**, 46, 38-43		2
68	Capability and limitation of max- and sum-type construction of Lyapunov functions for networks of iISS systems. *Automatica*, **2012**, 48, 1197-1204	5.7	40
67	A converse Lyapunov theorem for switched DAEs. *Proceedings in Applied Mathematics and Mechanics*, **2012**, 12, 789-792	0.2	1
66	Small gain theorems for large scale systems and construction of ISS Lyapunov functions **2012**,		2
65	On converse Lyapunov theorems for fluid network models. *Queueing Systems*, **2012**, 70, 339-367	1.7	4
64	Numerical construction of LISS Lyapunov functions under a small-gain condition. *Mathematics of Control, Signals, and Systems*, **2012**, 24, 3-32	1.3	13
63	Linear switched DAEs: Lyapunov exponents, a converse Lyapunov theorem, and Barabanov norms **2012**,		7

62	A comparison of mathematical modelling approaches for stability analysis of supply chains. *International Journal of Logistics Systems and Management*, **2011**, 10, 208	0.7	3
61	On a small-gain approach to distributed event-triggered control. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2011**, 44, 2401-2406		18
60	Supply Network Engineering: An Approach to Robust Capacity Allocation for Stochastic Production Processes*. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2011**, 44, 441-446		1
59	Structure-preserving model reduction of large-scale logistics networks. *European Physical Journal B*, **2011**, 84, 501-520	1.2	2
58	Stability verification for monotone systems using homotopy algorithms. *Numerical Algorithms*, **2011**, 58, 529-543	2.1	7
57	Robust capacity allocation in dynamic production networks. *CIRP Annals - Manufacturing Technology* , **2011**, 60, 445-448	4.9	14
56	On a Small Gain Theorem for ISS Networks in Dissipative Lyapunov Form. *European Journal of Control*, **2011**, 17, 357-365	2.5	60
55	Commutativity and asymptotic stability for linear switched DAEs **2011**,		14
54	Stability and positivity of equilibria for subhomogeneous cooperative systems. *Nonlinear Analysis: Theory, Methods & Applications*, **2011**, 74, 6416-6426	1.3	21
53	A Small-Gain Condition for Interconnections of ISS Systems With Mixed ISS Characterizations. *IEEE Transactions on Automatic Control*, **2011**, 56, 1247-1258	5.9	30
52	Numerical construction of LISS Lyapunov functions under a small gain condition **2011**,		2
51	Comments on "A Multichannel IOS Small Gain Theorem for Systems With Multiple Time-Varying Communication Delays. *IEEE Transactions on Automatic Control*, **2010**, 55, 1722-1725	5.9	5
50	Multichannel small-gain theorems for large scale networked systems **2010**,		1
49	Small Gain Theorems for Large Scale Systems and Construction of ISS Lyapunov Functions. *SIAM Journal on Control and Optimization*, **2010**, 48, 4089-4118	1.9	228
48	Stability radii for positive linear time-invariant systems on time scales. *Systems and Control Letters*, **2010**, 59, 173-179	2.4	25
47	On a small gain theorem for networks of iISS systems **2009**,		12
46	A control design method for a class of switched linear systems. *Automatica*, **2009**, 45, 2592-2596	5.7	20
45	Domains of attraction of interconnected systems: A Zubov method approach **2009**,		3

44	On a small gain theorem for ISS networks in dissipative Lyapunov form **2009**,		5
43	Stabilization of nonlinear systems with delayed data-rate-limited feedback **2009**,		2
42	Control Lyapunov Functions and Zubov's Method. *SIAM Journal on Control and Optimization*, **2008**, 47, 301-326	1.9	31
41	Applications of the general Lyapunov ISS small-gain theorem for networks **2008**,		6
40	Growth Conditions for the Global Stability of High-Speed Communication Networks With a Single Congested Link. *IEEE Transactions on Automatic Control*, **2008**, 53, 1770-1774	5.9	7
39	Duality results for the joint spectral radius and transient behavior. *Linear Algebra and Its Applications*, **2008**, 428, 2368-2384	0.9	18
38	Application of Small Gain Type Theorems in Logistics of Autonomous Processes **2008**, 359-366		
37	Modelling TCP congestion control dynamics in drop-tail environments. *Automatica*, **2007**, 43, 441-449	5.7	57
36	An ISS small gain theorem for general networks. *Mathematics of Control, Signals, and Systems*, **2007**, 19, 93-122	1.3	247
35	Numerical verification of local input-to-state stability for large networks **2007**,		13
34	Stability Criteria for Switched and Hybrid Systems. *SIAM Review*, **2007**, 49, 545-592	7.4	667
33	Mathematical Models of Autonomous Logistic Processes **2007**, 121-138		3
32	STABILIZATION OF CONTROLLED DIFFUSIONS AND ZUBOV'S METHOD. *Stochastics and Dynamics*, **2006**, 06, 373-393	0.8	6
31	. *IEEE/ACM Transactions on Networking*, **2006**, 14, 616-629	3.8	299
30	Stochastic Equilibria of AIMD Communication Networks. *SIAM Journal on Matrix Analysis and Applications*, **2006**, 28, 703-723	1.5	16
29	A Converse Lyapunov Theorem for Linear Parameter-Varying and Linear Switching Systems. *SIAM Journal on Control and Optimization*, **2005**, 44, 210-239	1.9	51
28	Complex Polytope Extremality Results for Families of Matrices. *SIAM Journal on Matrix Analysis and Applications*, **2005**, 27, 721-743	1.5	40
27	THE GELFAND FORMULA FOR LINEAR PARAMETER-VARYING AND LINEAR SWITCHING SYSTEMS. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2005**, 38, 495-500		

26	The generalized spectral radius is strictly increasing. *Linear Algebra and Its Applications*, **2005**, 395, 141-153	0.9	7
25	ZUBOV'S METHOD FOR STOCHASTIC CONTROL SYSTEMS. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2005**, 38, 259-264		
24	ON LIPSCHITZ CONTINUITY OF THE TOP LYAPUNOV EXPONENT OF LINEAR PARAMETER VARYING AND LINEAR SWITCHING SYSTEMS. *Stochastics and Dynamics*, **2004**, 04, 461-481	0.8	0
23	Construction of lyapunov functions on the domain of asymptotic nullcontrollability: Theory. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2004**, 37, 709-714		
22	Construction of lyapunov functions on the domain of asymptotic nullcontrollability: Numerics. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2004**, 37, 715-720		2
21	Stability of Linear Parameter Varying and Linear Switching Systems. *Proceedings in Applied Mathematics and Mechanics*, **2003**, 3, 144-147	0.2	
20	The generalized spectral radius and extremal norms. *Linear Algebra and Its Applications*, **2002**, 342, 17-40	0.9	93
19	A Linearization Principle for Robustness with Respect to Time-Varying Perturbations **2002**, 191-200		
18	On controllability of the real shifted inverse power iteration. *Systems and Control Letters*, **2001**, 43, 9-23	2.4	7
17	Asymptotic Behavior of the Value Functions of Discrete-Time Discounted Optimal Control. *Journal of Optimization Theory and Applications*, **2001**, 110, 183-210	1.6	8
16	A Generalization of Zubov's Method to Perturbed Systems. *SIAM Journal on Control and Optimization*, **2001**, 40, 496-515	1.9	46
15	A regularization of Zubov□ equation for robust domains of attraction **2001**, 277-289		9
14	Controllability properties of numerical eigenvalue algorithms **2001**, 467-480		
13	On the rate of convergence of infinite horizon discounted optimal value functions. *Nonlinear Analysis: Real World Applications*, **2000**, 1, 499-515	2.1	2
12	Controllability of the shifted inverse power iteration: The case of real shifts **2000**, 859-864		2
11	Feedback stabilization of discrete-time homogeneous semi-linear systems. *Systems and Control Letters*, **1999**, 37, 19-30	2.4	6
10	Asymptotic stability equals exponential stability, and ISS equals finite energy gain □f you twist your eyes. *Systems and Control Letters*, **1999**, 38, 127-134	2.4	57
9	Remarks on □quivalence of stability concepts for discrete time-varying systems□*International Journal of Robust and Nonlinear Control*, **1998**, 8, 91-93	3.6	

8	On the calculation of time-varying stability radii. *International Journal of Robust and Nonlinear Control*, **1998**, 8, 1043-1058	3.6	21
7	Analysis of the local robustness of stability for flows. *Mathematics of Control, Signals, and Systems*, **1998**, 11, 289-302	1.3	8
6	Remarks on universal nonsingular controls for discrete-time systems. *Systems and Control Letters*, **1998**, 33, 81-88	2.4	16
5	Dynamics of Time-Varying Discrete-Time Linear Systems: Spectral Theory and the Projected System. *SIAM Journal on Control and Optimization*, **1998**, 36, 447-487	1.9	17
4	Dynamics and Controllability of Nonlinear Discrete-Time Control Systems. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **1998**, 31, 267-272		8
3	On stability radii of infinite□dimensional time□varying discrete□time systems. *IMA Journal of Mathematical Control and Information*, **1994**, 11, 253-276	1.1	17
2	Convergence of the Value Functions of Discounted Infinite Horizon Optimal Control Problems with Low Discount Rates. *Mathematics of Operations Research*, **1993**, 18, 1006-1019	1.5	11
1	Electric and Plug-in Hybrid Vehicle Networks		15