Rifat Sipahi

List of Publications by Year in Descending Order

127 papers	2,559 citations	25 h-index	48 g-index
144 ext. papers	3,097 ext. citations	2.8 avg, IF	5.48 L-index

#	Paper	IF	Citations
127	Sub-platooning via Agent Separation for Improved Traffic Flow Metrics in a Car-Following Model. *Advances in Delays and Dynamics*, **2022**, 71-85	0.3	0
126	Consensus Stability of a Large Scale Robotic Network under Input and Transmission Delays. *IEEE Transactions on Control of Network Systems*, **2021**, 1-1	4	1
125	Damping Power System Electromechanical Oscillations Using Time Delays. *IEEE Transactions on Circuits and Systems I: Regular Papers*, **2021**, 68, 2725-2735	3.9	0
124	Cellular automata modeling suggests symmetric stem-cell division, cell death, and cell drift as key mechanisms driving adult spinal cord growth in teleost fish. *Journal of Theoretical Biology*, **2021**, 509, 110474	2.3	2
123	A Scalable Approach to Compute Delay Margin of a Class of Neutral-Type Time Delay Systems. *SIAM Journal on Control and Optimization*, **2021**, 59, 805-824	1.9	3
122	Improving on transfer entropy-based network reconstruction using time-delays: Approach and validation. *Chaos*, **2020**, 30, 023125	3.3	3
121	Stability Analysis of a Large-scale Single-Lane Connected Vehicle Model with Multiple Sensing, Communication, and Human Reaction Delays **2020**,		1
120	Predictor-Based Stabilization of Multiple Differential-wheeled Robots under Measurement Delays: Controller Gain Design for Fast Consensus **2020**,		2
119	Stability of a Large-Scale Connected Vehicle Network in Ring Configuration and With Multiple Delays. *IEEE Transactions on Intelligent Transportation Systems*, **2020**, 1-5	6.1	
118	Stochastic cellular automata model of tumorous neurosphere growth: Roles of developmental maturity and cell death. *Journal of Theoretical Biology*, **2019**, 467, 100-110	2.3	8
117	Media coverage and firearm acquisition in the aftermath of a mass shooting. *Nature Human Behaviour*, **2019**, 3, 913-921	12.8	21
116	Single-Delay and Multiple-Delay Proportional-Retarded (PR) Protocols for Fast Consensus in a Large-Scale Network. *IEEE Transactions on Automatic Control*, **2019**, 64, 2142-2149	5.9	7
115	Fast consensus in a large-scale multi-agent system with directed graphs using time-delayed measurements. *Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences*, **2019**, 377, 20180130	3	4
114	Proportional-Retarded (PR) Protocol for a Large Scale Multi-agent Network with Noisy Measurements; Stability and Performance. *Advances in Delays and Dynamics*, **2019**, 249-263	0.3	
113	Portable Motion-Analysis Device for Upper-Limb Research, Assessment, and Rehabilitation in Non-Laboratory Settings. *IEEE Journal of Translational Engineering in Health and Medicine*, **2019**, 7, 2800314	3	5
112	Stability of Human-in-the-Loop Multiagent Systems with Time Delays **2019**,		1
111	An approach to compute and design the delay margin of a large-scale matrix delay equation. *International Journal of Robust and Nonlinear Control*, **2019**, 29, 1101-1121	3.6	7

110	Multiple Intentional Delays Can Facilitate Fast Consensus and Noise Reduction in a Multiagent System. *IEEE Transactions on Cybernetics*, **2019**, 49, 1224-1235	10.2	17
109	Effects of Edge Elimination on the Delay Margin of a Class of LTI Consensus Dynamics. *IEEE Transactions on Automatic Control*, **2018**, 63, 4397-4404	5.9	5
108	Stochastic cellular automata model of neurosphere growth: Roles of proliferative potential, contact inhibition, cell death, and phagocytosis. *Journal of Theoretical Biology*, **2018**, 445, 151-165	2.3	11
107	Stability limit of human-in-the-loop model reference adaptive control architectures. *International Journal of Control*, **2018**, 91, 2314-2331	1.5	11
106	Growth of adult spinal cord in knifefish: Development and parametrization of a distributed model. *Journal of Theoretical Biology*, **2018**, 437, 101-114	2.3	6
105	Development of a combined time-frequency technique for accurate extraction of pNN50 metric from noisy heart rate measurements. *International Journal of Intelligent Robotics and Applications*, **2018**, 2, 193-208	1.7	0
104	Fast Consensus Against Noise in a Large-Scale Multi-Agent System with Distributed Proportional-Retarded (PR) Controllers **2018**,		2
103	Input/output stability of a damped string equation coupled with ordinary differential system. *International Journal of Robust and Nonlinear Control*, **2018**, 28, 6053-6069	3.6	11
102	An Analytical Approach to Tuning of Delay-Based Controllers for LTI-SISO Systems. *SIAM Journal on Control and Optimization*, **2017**, 55, 397-412	1.9	31
101	Toward Monitoring Parkinson's Through Analysis of Static Handwriting Samples: A Quantitative Analytical Framework. *IEEE Journal of Biomedical and Health Informatics*, **2017**, 21, 488-495	7.2	10
100	Analysis of Subjects' Vulnerability in a Touch Screen Game Using Behavioral Metrics. *Applied Psychophysiology Biofeedback*, **2017**, 42, 269-282	3.4	3
99	Design of a Delay-based Controller for Fast Stabilization in a Network System with Input Delays via the Lambert W function 1. *Procedia IUTAM*, **2017**, 22, 83-90		2
98	Creating two disjoint stability intervals along the delay axis via controller design: a class of LTI SISO systems. *International Journal of Dynamics and Control*, **2017**, 5, 1156-1171	1.7	0
97	Stability Analysis of a Human-in-the-Loop Telerobotics System with Two Independent Time-Delays. *IFAC-PapersOnLine*, **2017**, 50, 6519-6524	0.7	2
96	Design of Imaginary Spectrum of LTI Systems with Delays to Manipulate Stability Regions. *Advances in Delays and Dynamics*, **2017**, 127-140	0.3	2
95	Design of Proportional-Integral-Retarded (PIR) Controllers for Second-Order LTI Systems. *IEEE Transactions on Automatic Control*, **2016**, 61, 1688-1693	5.9	67
94	Consensus Control Under Communication Delay in a Three-Robot System: Design and Experiments. *IEEE Transactions on Control Systems Technology*, **2016**, 24, 687-694	4.8	34
93	Experimental Evaluation of a Braille-Reading-Inspired Finger Motion Adaptive Algorithm. *PLoS ONE* , **2016**, 11, e0148356	3.7	1

92	Can improved specialty access moderate emergency department overuse?: Effect of neurology appointment delays on ED visits. *Neurology: Clinical Practice*, **2016**, 6, 498-505	1.7	5
91	A consensus dynamics with delay-induced instability can self-regulate for stability via agent regrouping. *Chaos*, **2016**, 26, 116313	3.3	8
90	Design of Maximum Decay Rate for SISO Systems with Delayed Output Feedback Using Elimination Theory**This work has been supported by CONACYT grant 180725 and PNPC, and developed in part during A. Ramírez's visit to R. Sipahi at Northeastern University.. *IFAC-PapersOnLine*, **2015**, 48, 221-226	0.7	7
89	Stability Analysis of a Constant Time-Headway Driving Strategy with Driver Memory Effects Modeled by Distributed Delays. *IFAC-PapersOnLine*, **2015**, 48, 376-381	0.7	8
88	Stability Analysis and Control Design of a Vibration Control System with Uncertain and Tunable Delays**The presented research has been supported by the Ministry of Education of the Czech Republic under the program KONTAKT II LH12066.. *IFAC-PapersOnLine*, **2015**, 48, 123-128	0.7	
87	Assessment of Human Vulnerability in a Touch-Screen Game; Metrics and Analysis **2015**,		2
86	Control Design for a Hand Tremor Suppression Pen **2015**,		2
85	Delay-dependent coupling for a multi-agent LTI consensus system with inter-agent delays. *Physica D: Nonlinear Phenomena*, **2014**, 267, 112-122	3.3	15
84	Towards the design of a human-machine interface via disturbance adaptive control: An analogous machine-to-machine system **2014**,		1
83	**2014**,		1
82	Delay-margin design for the general class of single-delay retarded-type LTI systems. *International Journal of Dynamics and Control*, **2014**, 2, 198-209	1.7	12
81	On some features of core hypersurfaces related to stability switching of LTI systems with multiple delays. *IMA Journal of Mathematical Control and Information*, **2014**, 31, 257-272	1.1	6
80	Combined Time-Frequency Calculation of pNN50 Metric From Noisy Heart Rate Measurements **2014**,		2
79	**2014**,		3
78	Small-signal stability analysis of delayed power system stabilizers **2014**,		9
77	A touchscreen game to induce mental workload on human subjects **2014**,		2
76	Graph Laplacian Design of a LTI Consensus System for the Largest Delay Margin: Case Studies. *Advances in Delays and Dynamics*, **2014**, 101-112	0.3	
75	Controller design for delay-independent stability of linear time-invariant vibration systems with multiple delays. *Journal of Sound and Vibration*, **2013**, 332, 3589-3604	3.9	16

74	A Linear Time-Invariant Consensus Dynamics with Homogeneous Delays: Analytical Study and Synthesis of Rightmost Eigenvalues. *SIAM Journal on Control and Optimization*, **2013**, 51, 3971-3992	1.9	14
73	A Predictor-Compensator Design to Assist Human Decision-Making Process in an Air-Traffic-Control Simulator **2013**,		1
72	Graph Laplacian Design for Fast Consensus of a LTI System With Heterogeneous Agent Couplings and Homogeneous Inter-Agent Delays **2013**,		7
71	On controller design for delay-independent stability of linear time-invariant systems with multiple delays **2013**,		2
70	Delay-Independent Stability Test for Systems With Multiple Time-Delays. *IEEE Transactions on Automatic Control*, **2012**, 57, 963-972	5.9	56
69	Rules and limitations of building delay-tolerant topologies for coupled systems. *Physical Review E*, **2012**, 85, 016104	2.4	13
68	Model-free approach to controlling nonlinear systems with single output delay **2012**,		1
67	Analytical Boundaries of Controller Gains for Delay-independent Stability of LTI Systems with Single Output Delay. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2012**, 45, 225-230		2
66	The Largest Achievable Delay Margin of a Class of Coupled LTI Systems Synthesized by Graph Operations. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2012**, 45, 179-184		3
65	Dependence of Delay Margin on Network Topology: Single Delay Case. *Lecture Notes in Control and Information Sciences*, **2012**, 395-405	0.5	
64	Stability and Stabilization of Systems with Time Delay. *IEEE Control Systems*, **2011**, 31, 38-65	2.9	365
63	Advanced Clustering With Frequency Sweeping Methodology for the Stability Analysis of Multiple Time-Delay Systems. *IEEE Transactions on Automatic Control*, **2011**, 56, 467-472	5.9	38
62	Stability intricacies of two-delay linear systems in the presence of delay cross-talk. *IET Control Theory and Applications*, **2011**, 5, 990-998	2.5	4
61	Responsible eigenvalue concept for the stability of a class of single-delay consensus dynamics with fixed topology. *IET Control Theory and Applications*, **2011**, 5, 622-629	2.5	30
60	An algebraic approach to design observers for delay-independent stability of systems with single output delay **2011**,		2
59	Responsible-Eigenvalue Control for Creating Autonomy in Coupled Systems With Delays **2011**,		5
58	A stability study on first-order neutral systems with three rationally independent time delays. *International Journal of Systems Science*, **2010**, 41, 1445-1455	2.3	10
57	Early-stage firms and delay-based inventory control using decision-making tableaux. *International Journal of Production Research*, **2010**, 48, 5497-5521	7.8	3

56	Advanced clustering with frequency sweeping (ACFS) methodology for the stability analysis of multiple time-delay systems **2010**,		8
55	Dependence of Delay Margin on Network Topology: Single Delay Case. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2010**, 43, 93-98		2
54	Controller Design for Delay-Independent Stability of Multiple Time-Delay Systems via D-decomposition and Circles's Rule of Signs. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2010**, 43, 144-149		4
53	Stability of car following with human memory effects and automatic headway compensation. *Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences*, **2010**, 368, 4563-83	3	23
52	Stability of inventory dynamics in supply chains with three delays. *International Journal of Production Economics*, **2010**, 123, 107-117	9.3	27
51	Responsible Eigenvalue Approach for Stability Analysis and Control Design of a Single-Delay Large-Scale System With Random Coupling Strengths **2010**,		5
50	Asymptotic stability of constant time headway driving strategy with multiple driver reaction delays **2009**,		3
49	Stability Analysis of LTI Systems With Three Independent Delays: A Computationally Efficient Procedure. *Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME*, **2009**, 131,	1.6	6
48	On Stability Problems of Supply Networks Constrained With Transport Delay. *Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME*, **2009**, 131,	1.6	19
47	An actively controlled harmonic force generator. *Control Engineering Practice*, **2009**, 17, 210-220	3.9	
46	Extraction of 3D stability switching hypersurfaces of a time delay system with multiple fixed delays. *Automatica*, **2009**, 45, 1449-1454	5.7	30
45	Exact Upper and Lower Bounds of Crossing Frequency Set and Delay Independent Stability Test for Multiple Time Delayed Systems. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2009**, 42, 107-111		3
44	Deterministic Time-Delayed Traffic Flow Models: A Survey. *Understanding Complex Systems*, **2009**, 297-322	2.4	7
43	Inventory Dynamics Models of Supply Chains with Delays; System-Level Connection & Stability. *Lecture Notes in Control and Information Sciences*, **2009**, 349-358	0.5	3
42	A New Perspective in the Stability Assessment of Neutral Systems with Multiple and Cross-Talking Delays. *SIAM Journal on Control and Optimization*, **2008**, 47, 327-344	1.9	27
41	Characterizing stability of inventories in supply chains with delays in early-stage firms **2008**,		1
40	Stability of Traffic Flow Behavior with Distributed Delays Modeling the Memory Effects of the Drivers. *SIAM Journal on Applied Mathematics*, **2008**, 68, 738-759	1.8	105
39	Chain stability in traffic flow with driver reaction delays **2008**,		8

38	Stability Analysis of Three-Agent Consensus Dynamics With Fixed Topology and Three Non-Identical Delays **2008**,		5
37	Supply Network Dynamics and Delays; Performance, Synchronization, Stability. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2008**, 41, 6330-6335		2
36	Supply Chain Dynamics With Decision Making and Production Delays: Stability Analysis and Optimum Controller Selection **2008**,		1
35	Generalization of cluster treatment of characteristic roots for robust stability of multiple time-delayed systems. *International Journal of Robust and Nonlinear Control*, **2008**, 18, 1430-1449	3.6	7
34	Stability Robustness Analysis of Multiple Time- Delayed Systems Using Building Block Concept. *IEEE Transactions on Automatic Control*, **2007**, 52, 799-810	5.9	107
33	Complete Stability Map of Neutral Type First Order - Two Time Delay Systems. *Proceedings of the American Control Conference*, **2007**,	1.2	2
32	An efficient numerical approach for the stability analysis of a class of lti systems with arbitrary number of delays. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2007**, 40, 292-297		2
31	Delay scheduling an unconventional use of time delay for trajectory tracking. *Mechatronics*, **2007**, 17, 199-206	3	30
30	Effects of Short-Term Memory of Drivers on Stability Interpretations of Traffic Flow Dynamics. *Proceedings of the American Control Conference*, **2007**,	1.2	4
29	Kernel and Offspring Concepts for the Stability Robustness of Multiple Time Delayed Systems (MTDS). *Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME*, **2007**, 129, 245-251	1.6	7
28	Dynamics and Stability of Variable-pitch Milling. *JVC/Journal of Vibration and Control*, **2007**, 13, 1031-1043	2	66
27	Slow time-varying delay effects - robust stability characterization of deterministic car following models **2006**,		1
26	Stability Robustness of Retarded LTI Systems with Single Delay and Exhaustive Determination of Their Imaginary Spectra. *SIAM Journal on Control and Optimization*, **2006**, 45, 1680-1696	1.9	38
25	Complete Stability Analysis of Neutral-Type First Order Two-Time-Delay Systems with Cross-Talking Delays. *SIAM Journal on Control and Optimization*, **2006**, 45, 957-971	1.9	20
24	An improved procedure in detecting the stability robustness of systems with uncertain delay. *IEEE Transactions on Automatic Control*, **2006**, 51, 1164-1165	5.9	31
23	EXACT STABILITY ANALYSIS OF NEUTRAL SYSTEMS WITH CROSS-TALKING DELAYS. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2006**, 39, 175-180		1
22	ANALYTICAL STABILITY STUDY OF A DETERMINISTIC CAR FOLLOWING MODEL UNDER MULTIPLE DELAY INTERACTIONS. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2006**, 39, 187-192		8
21	Stability in Variable-Pitch Milling Regarding Regenerative Chatter **2006**, 1037		

20	A unique methodology for the stability robustness of multiple time delay systems. *Systems and Control Letters*, **2006**, 55, 819-825	2.4	80
19	Slow Time-Varying Delay Effects - Robust Stability Characterization of Deterministic Car Following Models **2006**,		3
18	On Stability Analysis and Parametric Design of Supply Networks Under the Presence of Transportation Delays **2006**,		10
17	The Cluster Treatment of Characteristic Roots and the Neutral Type Time-Delayed Systems. *Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME*, **2005**, 127, 88-97	1.6	41
16	Delay Scheduling A New Concept for Stabilization in Multiple Delay Systems. *JVC/Journal of Vibration and Control*, **2005**, 11, 1159-1172	2	50
15	A Unique Methodology for Chatter Stability Mapping in Simultaneous Machining. *Journal of Manufacturing Science and Engineering, Transactions of the ASME*, **2005**, 127, 791-800	3.3	53
14	A COMPARATIVE SURVEY IN DETERMINING THE IMAGINARY CHARACTERISTIC ROOTS OF LTI TIME DELAYED SYSTEMS. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2005**, 38, 390-399		9
13	Complete stability robustness of third-order LTI multiple time-delay systems. *Automatica*, **2005**, 41, 1413-1422	5.7	142
12	Chatter Stability Mapping for Simultaneous Machining **2005**,		1
11	A practical method for analyzing the stability of neutral type LTI-time delayed systems. *Automatica*, **2004**, 40, 847-853	5.7	91
10	The Cluster Treatment of Characteristic Roots and the Neutral Type Time-Delayed Systems **2004**, 1359		6
9	Improvements on the Cluster Treatment of Characteristic Roots and the Case Studies. *Lecture Notes in Computational Science and Engineering*, **2004**, 61-73	0.3	1
8	Active Vibration Suppression With Time Delayed Feedback. *Journal of Vibration and Acoustics, Transactions of the ASME*, **2003**, 125, 384-388	1.6	39
7	Degenerate Cases in Using the Direct Method **2003**, 2201		1
6	Degenerate Cases in Using the Direct Method. *Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME*, **2003**, 125, 194-201	1.6	33
5	Stability Analysis of Multiple Time Delayed Systems Using the Direct Method **2003**,		10
4	A New Perspective for Time Delayed Control Systems With Application to Vibration Suppression **2002**, 355		4
3	An exact method for the stability analysis of time-delayed linear time-invariant (LTI) systems. *IEEE Transactions on Automatic Control*, **2002**, 47, 793-797	5.9	430

2	Delay margin comparison in a velocity-only versus headway-only connected vehicle model. *Proceedings of the Institution of Mechanical Engineers Part I: Journal of Systems and Control Engineering*,095965182110555	1	
1	Derivative-dependent control of a fuel cell system with a safe implementation: An artificial delay approach. *Proceedings of the Institution of Mechanical Engineers Part I: Journal of Systems and Control Engineering*,095965182110127	1	0