Nejat Olgac

List of Publications by Year in Descending Order

147 papers	3,178 citations	31 h-index	53 g-index
183 ext. papers	3,796 ext. citations	2.5 avg, IF	5.53 L-index

#	Paper	IF	Citations
147	Actively Tuned Noncollocated Vibration Absorption: An Unexplored Venue in Vibration Science and a Benchmark Problem. *IEEE Transactions on Control Systems Technology*, **2021**, 29, 294-304	4.8	3
146	Time-Delayed Tuning of Vibration Absorbers for Non-collocated Suppression **2020**,		1
145	Real-time tunable single-degree of freedom, multiple-frequency vibration absorber. *Mechanical Systems and Signal Processing*, **2019**, 133, 106244	7.8	7
144	Rigorous treatment of wave-based control concept, structured procedures and critical observations. *IET Control Theory and Applications*, **2019**, 13, 2620-2629	2.5	
143	Real-Time Tuning of Delayed Resonator-Based Absorbers for Spectral and Spatial Variations. *Journal of Vibration and Acoustics, Transactions of the ASME*, **2019**, 141,	1.6	4
142	Analytical and Experimental Study on Passive Stabilization of Thermoacoustic Dynamics in a Rijke Tube. *Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME*, **2018**, 140,	1.6	3
141	Delayed feedback control scheme for improved energy harvesting using piezoelectric networks. *Journal of Intelligent Material Systems and Structures*, **2018**, 29, 1546-1559	2.3	6
140	Stability analysis for LTI systems with multiple time delays using the bounds of its imaginary spectra. *Systems and Control Letters*, **2017**, 102, 112-118	2.4	23
139	Extended delayed resonators Design and experimental verification. *Mechatronics*, **2017**, 41, 29-44	3	15
138	Zero magnitude error tracking control for servo system with extremely low-resolution digital encoder. *International Journal of Mechatronics and Manufacturing Systems*, **2017**, 10, 355	0.8	3
137	Analysis of Thermoacoustic Instability: A Time-Delay System Approach. *Advances in Delays and Dynamics*, **2017**, 349-362	0.3	
136	Bounds of imaginary spectra of LTI systems in the domain of two of the multiple time delays. *Automatica*, **2016**, 72, 235-241	5.7	30
135	Delayed resonator concept for vibration suppression using piezoelectric networks. *Smart Materials and Structures*, **2016**, 25, 115008	3.4	5
134	Placement of Helmholtz resonators in series for passive control of thermoacoustic instabilities from a time-delay perspective **2016**,		1
133	Stability of formation control using a consensus protocol under directed communications with two time delays and delay scheduling. *International Journal of Systems Science*, **2016**, 47, 433-449	2.3	13
132	Delayed Resonator With Distributed Delay in Acceleration Feedback Design and Experimental Verification. *IEEE/ASME Transactions on Mechatronics*, **2016**, 21, 2120-2131	5.5	15
131	Blade/Casing Rub Interaction in Turbomachinery: Structural Parameters Influence on Stability. *Journal of Propulsion and Power*, **2016**, 32, 929-938	1.8	5

130	Delayed-feedback vibration absorbers to enhance energy harvesting. *Journal of Sound and Vibration*, **2016**, 363, 54-67	3.9	34
129	Deployment of Time-Delayed Integral Control for Suppressing Thermoacoustic Instabilities. *Journal of Guidance, Control, and Dynamics*, **2016**, 39, 2284-2296	2.1	6
128	A study of Helmholtz resonators to stabilize thermoacoustically driven pressure oscillations. *Journal of the Acoustical Society of America*, **2016**, 139, 1962	2.2	18
127	Predicting the secondary dynamic mode interference phenomenon in thermoacoustic instability control. *Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences*, **2016**, 472, 20160182	2.4	3
126	Differentiability of imaginary spectra and determination of its bounds for multiple-delay LTI systems **2016**,		2
125	Delayed Feedback Control Laws for Rijke Tube Thermoacoustic Instability, Synthesis, and Experimental Validation. *IEEE Transactions on Control Systems Technology*, **2016**, 24, 1861-1868	4.8	15
124	Passive suppression of thermoacoustic instability in a Rijke tube. *IFAC-PapersOnLine*, **2016**, 49, 59-64	0.7	3
123	Electromechanical Delayed Resonator Implementation using Piezoelectric Networks. *IFAC-PapersOnLine*, **2016**, 49, 71-76	0.7	2
122	Critical Effects of the Polarity Change in Delayed States Within an LTI Dynamics With Multiple Delays. *IEEE Transactions on Automatic Control*, **2015**, 60, 3018-3022	5.9	24
121	Thermo-acoustic instability: Theory and experiments. *IFAC-PapersOnLine*, **2015**, 48, 75-80	0.7	3
120	Non-conservative stability assessment of LTI dynamics with distributed delay using CTCR paradigm **2015**,		6
119	Eigenvalue assignment for systems with multiple time-delays **2015**, 146-152		1
118	A New Perspective in Designing Delayed Feedback Control for Thermo-Acoustic Instabilities (TAI). *Combustion Science and Technology*, **2015**, 187, 697-720	1.5	17
117	Optimal sign inverting control for time-delayed systems, a concept study with experiments. *International Journal of Control*, **2015**, 88, 113-122	1.5	9
116	The Influence of Structural Parameters on the Stability of Blade-Casing Interactions in Turbomachinery. *IFAC-PapersOnLine*, **2015**, 48, 69-74	0.7	1
115	Dixon Resultant for Cluster Treatment of LTI Systems with Multiple Delays. *IFAC-PapersOnLine*, **2015**, 48, 21-26	0.7	2
114	Parametric Investigation of Thermoacoustic Instability (TAI) in a Rijke Tube: A Time-Delay Perspective. *International Journal of Spray and Combustion Dynamics*, **2015**, 7, 39-68	1.3	8
113	Combination of sign inverting and delay scheduling control concepts for multiple-delay dynamics. *Systems and Control Letters*, **2015**, 77, 55-62	2.4	21

112	A consensus protocol under directed communications with two time delays and delay scheduling. *International Journal of Control*, **2014**, 87, 291-300	1.5	9
111	On blade/casing rub problems in turbomachinery: An efficient delayed differential equation approach. *Journal of Sound and Vibration*, **2014**, 333, 6662-6675	3.9	15
110	A test platform for cognitive delays: target tracking problem with multiple time-delayed feedback control. *International Journal of Dynamics and Control*, **2014**, 2, 77-85	1.7	4
109	Delayed resonator with acceleration feedback Complete stability analysis by spectral methods and vibration absorber design. *Journal of Sound and Vibration*, **2014**, 333, 6781-6795	3.9	39
108	Stabilisation of open-loop unstable plants under feedback control with distributed delays. *IET Control Theory and Applications*, **2014**, 8, 813-820	2.5	7
107	Predicting Thermoacoustic Instability: A Novel Analytical Approach and Its Experimental Validation. *Journal of Propulsion and Power*, **2014**, 30, 1005-1015	1.8	18
106	Investigation of Local Stability Transitions in the Spectral Delay Space and Delay Space. *Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME*, **2014**, 136,	1.6	12
105	Stability of Blade-Casing Interference in Turbomachinery and the Design Alternatives on Damping Characteristics **2014**,		1
104	Second-Order Leaderless Consensus Protocols with Multiple Communication and Input Delays from Stability Perspective. *Advances in Delays and Dynamics*, **2014**, 113-126	0.3	
103	Exact stability analysis of second-order leaderless and leader follower consensus protocols with rationally-independent multiple time delays. *Systems and Control Letters*, **2013**, 62, 482-495	2.4	18
102	Adaptive gain scheduling for rotationally oscillating drill, with low-resolution feedback. *International Journal of Mechatronics and Manufacturing Systems*, **2013**, 6, 397	0.8	1
101	An Adaptive Control Method for Ros-Drill Cellular Microinjector with Low-Resolution Encoder. *Journal of Medical Engineering*, **2013**, 2013, 418068		1
100	Control of antagonistic swarm dynamics via Lyapunov's method. *Asian Journal of Control*, **2012**, 14, 23-35	1.7	4
99	Swarm herding using a region holding sliding mode controller. *JVC/Journal of Vibration and Control*, **2012**, 18, 1056-1066	2	11
98	Stability Analysis for the Group Dynamics Consensus with Time Delayed Communications. *European Journal of Control*, **2012**, 18, 456-468	2.5	9
97	Formation control based on a consensus protocol under directed communications with two time delays **2012**,		2
96	Exact Stability Analysis of a Second-Order Leaderless Consensus Protocol with Multiple Communication and Input Delays. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2012**, 45, 185-190		
95	The Homicidal Chauffeur Problem with Multiple Time Delayed Feedback. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2012**, 45, 97-101		0

94	Stability Analysis for a Consensus System of a Group of Autonomous Agents with Time Delays. *Lecture Notes in Control and Information Sciences*, **2012**, 119-133	0.5	1
93	Consensus analysis with large and multiple communication delays using spectral delay space concept. *International Journal of Control*, **2011**, 84, 1996-2007	1.5	15
92	Exhaustive stability analysis in a consensus system with time delay and irregular topologies. *International Journal of Control*, **2011**, 84, 746-757	1.5	19
91	An Exact Method for the Stability Analysis of Linear Consensus Protocols With Time Delay. *IEEE Transactions on Automatic Control*, **2011**, 56, 1734-1740	5.9	74
90	Application of sliding mode control to swarms under conflict. *IET Control Theory and Applications*, **2011**, 5, 1167-1175	2.5	5
89	Full-state feedback controller design with delay scheduling for cart-and-pendulum dynamics. *Mechatronics*, **2011**, 21, 38-47	3	12
88	Dynamic response of micropipettes during piezo-assisted intracytoplasmic sperm injection. *Physical Review E*, **2011**, 84, 041908	2.4	9
87	Exhaustive stability analysis in a consensus system with time delay and irregular topologies **2011**,		1
86	A Lyapunov treatment of swarm coordination under conflict. *JVC/Journal of Vibration and Control*, **2011**, 17, 641-650	2	5
85	Swarm Coordination Under Conflict and Use of Enhanced Lyapunov Control. *Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME*, **2011**, 133,	1.6	2
84	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
83	Geometric characterization of cell membrane of mouse oocytes for ICSI. *Journal of Biomechanical Engineering*, **2010**, 132, 121002	2.1	4
82	Consensus of a group of second order agents with switching irregular communication topologies and time-delay **2010**,		5
81	Robust Region-Tracking for Multi-Agent Systems Using Sliding Mode Control **2010**,		1
80	Discussion on: Stability Analysis of Time Delayed System with Coefficient Uncertainty and Time Delay Uncertainty *European Journal of Control*, **2010**, 16, 14-15	2.5	
79	Stability of the Consensus of a Group of Second Order Agents With Time Delayed Communications **2010**,		2
78	Visual Feedback Automation for ICSI With Rotationally Oscillating Drill (Ros-Drill). *Journal of Medical Devices, Transactions of the ASME*, **2010**, 4,	1.3	1
77	Stability Analysis for a Consensus System of a Group of Second Order Dynamics with Time Delays. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2010**, 43, 126-131		

76	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
75	An actively controlled harmonic force generator. *Control Engineering Practice*, **2009**, 17, 210-220	3.9	
74	FULL-STATE FEEDBACK CONTROL DESIGN WITH "DELAY SCHEDULING" FOR CART-and-PENDULUM DYNAMICS. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2009**, 42, 296-302		
73	Robust Control for Multiple Time Delay MIMO Systems with Delay - Decouplability Concept. *Lecture Notes in Control and Information Sciences*, **2009**, 37-47	0.5	
72	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
71	Trajectory tracking of cart-pendulum dynamics using multiple time-delayed feedback. *IET Control Theory and Applications*, **2008**, 2, 458-466	2.5	6
70	Sign Inverting Control logic for time delayed systems, with experiments. *International Journal of Mechatronics and Manufacturing Systems*, **2008**, 1, 68	0.8	3
69	Robust control of cart-pendulum dynamics against uncertain multiple time delays **2008**,		1
68	INVERTING CONTROL, A NEW STRATEGY ON TIME DELAYED SYSTEMS. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2008**, 41, 13367-13372		
67	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
66	Rotationally oscillating drill (Ros-Drill) for mouse ICSI without using mercury. *Molecular Reproduction and Development*, **2008**, 75, 1744-51	2.6	16
65	Stability Robustness Analysis of Multiple Time- Delayed Systems Using "Building Block" Concept. *IEEE Transactions on Automatic Control*, **2007**, 52, 799-810	5.9	107
64	Complete Stability Map of Neutral Type First Order - Two Time Delay Systems. *Proceedings of the American Control Conference*, **2007**,	1.2	2
63	Delay-decoupling control, a novel method for mimo systems with multiple input delays. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2007**, 40, 274-279		1
62	New technology for cellular piercing: rotationally oscillating mu-injector, description and validation tests. *Biomedical Microdevices*, **2007**, 9, 885-91	3.7	21
61	"Delay scheduling", an unconventional use of time delay for trajectory tracking. *Mechatronics*, **2007**, 17, 199-206	3	30
60	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
59	A New Micro Injector and an Optical Sensor. *Proceedings of the American Control Conference*, **2007**,	1.2	1

58	Dynamics and Stability of Variable-pitch Milling. *JVC/Journal of Vibration and Control*, **2007**, 13, 1031-1043	1.2	66
57	Extended Kronecker Summation for Cluster Treatment of LTI Systems with Multiple Delays. *SIAM Journal on Control and Optimization*, **2007**, 46, 143-155	1.9	70
56	New optical sensor for monitoring the micropipette motion. *IEEE Transactions on Information Technology in Biomedicine*, **2006**, 10, 775-81		
55	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
54	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
53	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
52	Optical Fiber Sensor for Non-Contact Monitoring of ICSI-Pipettes **2006**, 1457		
51	EXTENDED KRONECKER SUMMATION FOR DETERMINING THE KERNEL AND OFFSPRING OF LTI SYSTEMS WITH MULTIPLE DELAYS. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2006**, 39, 157-162		1
50	EXACT STABILITY ANALYSIS OF NEUTRAL SYSTEMS WITH CROSS-TALKING DELAYS. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2006**, 39, 175-180		1
49	Stability in Variable-Pitch Milling Regarding Regenerative Chatter **2006**, 1037		
48	A unique methodology for the stability robustness of multiple time delay systems. *Systems and Control Letters*, **2006**, 55, 819-825	2.4	80
47	Optimum Conditions for Variable Pitch Milling **2006**,		1
46	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
45	Delay Scheduling A New Concept for Stabilization in Multiple Delay Systems. *JVC/Journal of Vibration and Control*, **2005**, 11, 1159-1172	2	50
44	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
43	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
42	Effect of mercury column on the microdynamics of the piezo-driven pipettes. *Journal of Biomechanical Engineering*, **2005**, 127, 531-5	2.1	33
41	Complete stability robustness of third-order LTI multiple time-delay systems. *Automatica*, **2005**, 41, 1413-1422	3.1	142

40	Chatter Stability Mapping for Simultaneous Machining **2005**,		1
39	Microdynamics of the piezo-driven pipettes in ICSI. *IEEE Transactions on Biomedical Engineering*, **2004**, 51, 1262-8	5	32
38	A practical method for analyzing the stability of neutral type LTI-time delayed systems. *Automatica*, **2004**, 40, 847-853	5.7	91
37	The Cluster Treatment of Characteristic Roots and the Neutral Type Time-Delayed Systems **2004**, 1359		6
36	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
35	Active Vibration Suppression With Time Delayed Feedback. *Journal of Vibration and Acoustics, Transactions of the ASME*, **2003**, 125, 384-388	1.6	39
34	Degenerate Cases in Using the Direct Method **2003**, 2201		1
33	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
32	Direct method for analyzing the stability of neutral type LTI-time delayed systems. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2003**, 36, 29-34		2
31	A Message From the Special Issue Editor. *Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME*, **2003**, 125, 157-157	1.6	1
30	Stability Analysis of Multiple Time Delayed Systems Using the Direct Method **2003**,		10
29	Delayed resonator with speed feedback □design and performance analysis. *Mechatronics*, **2002**, 12, 393-413	3	45
28	A New Perspective for Time Delayed Control Systems With Application to Vibration Suppression **2002**, 355		4
27	On the Stability of a Tuned Vibration Absorber for Time Varying Multiple Frequencies. *JVC/Journal of Vibration and Control*, **2002**, 8, 451-465	2	2
26	A single-step automatic tuning algorithm for the delayed resonator vibration absorber. *IEEE/ASME Transactions on Mechatronics*, **2002**, 7, 245-255	5.5	31
25	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
24	Identification and Retuning of Optimum Delayed Feedback Vibration Absorber. *Journal of Guidance, Control, and Dynamics*, **2000**, 23, 961-970	2.1	15
23	A Sensitivity Study on Optimum Delayed Feedback Vibration Absorber. *Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME*, **2000**, 122, 314-321	1.6	30

22	Experimental Comparison of Delayed Resonator and PD Controlled Vibration Absorbers Using Electromagnetic Actuators. *Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME*, **2000**, 122, 514-520	1.6	25
21	Analysis and Design of Delayed Resonator in Discrete Domain. *JVC/Journal of Vibration and Control*, **2000**, 6, 273-289	2	12
20	The Centrifugal Delayed Resonator as a Tunable Torsional Vibration Absorber for Multi-Degree-of-Freedom Systems. *JVC/Journal of Vibration and Control*, **1999**, 5, 299-322	2	14
19	Robust control of the delayed resonator vibration absorber. *IEEE Transactions on Control Systems Technology*, **1999**, 7, 683-691	4.8	25
18	Pole placement for linear time-varying non-lexicographically fixed MIMO systems. *Automatica*, **1999**, 35, 101-108	5.7	23
17	MULTIPLE DELAYED RESONATOR VIBRATION ABSORBERS FOR MULTI-DEGREE-OF-FREEDOM MECHANICAL STRUCTURES. *Journal of Sound and Vibration*, **1999**, 223, 567-585	3.9	63
16	A new perspective and analysis for regenerative machine tool chatter. *International Journal of Machine Tools and Manufacture*, **1998**, 38, 783-798	9.4	47
15	MODAL ANALYSIS OF FLEXIBLE BEAMS WITH DELAYED RESONATOR VIBRATION ABSORBER: THEORY AND EXPERIMENTS. *Journal of Sound and Vibration*, **1998**, 218, 307-331	3.9	55
14	Time-optimal/sliding mode control implementation for robust tracking of uncertain flexible structures. *Mechatronics*, **1998**, 8, 121-142	3	17
13	Torsional delayed resonator with velocity feedback. *IEEE/ASME Transactions on Mechatronics*, **1998**, 3, 67-72	5.5	26
12	Sliding Mode Control With Sliding Perturbation Observer. *Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME*, **1997**, 119, 657-665	1.6	88
11	Sliding Mode Control With Perturbation Estimation (SMCPE) and Frequency Shaped Sliding Surfaces. *Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME*, **1997**, 119, 584-588	1.6	6
10	Frequency-shaped sliding modes: analysis and experiments. *IEEE Transactions on Control Systems Technology*, **1997**, 5, 394-401	4.8	5
9	Active Vibration Control of Distributed Systems Using Delayed Resonator With Acceleration Feedback. *Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME*, **1997**, 119, 380-389	1.6	89
8	Implementation of sliding mode control using the concept of perturbation. *Mechatronics*, **1997**, 7, 723-736	3	5
7	A TUNABLE TORSIONAL VIBRATION ABSORBER: THE CENTRIFUGAL DELAYED RESONATOR. *Journal of Sound and Vibration*, **1997**, 205, 151-165	3.9	39
6	Tunable Active Vibration Absorber: The Delayed Resonator. *Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME*, **1995**, 117, 513-519	1.6	46
5	Design Considerations for Delayed-Resonator Vibration Absorbers. *Journal of Engineering Mechanics - ASCE*, **1995**, 121, 80-89	2.4	28

4	Efficient eigenvalue assignments for general linear MIMO systems. *Automatica*, **1995**, 31, 1605-1617	5.7	42
3	Sliding mode control with perturbation estimation (SMCPE): a new approach. *International Journal of Control*, **1992**, 56, 923-941	1.5	119
2	Robust output tracking control of nonlinear MIMO systems via sliding mode technique. *Automatica*, **1992**, 28, 145-151	5.7	121
1	A Relative Stability Study on the Dynamics of the Turning Mechanism. *Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME*, **1987**, 109, 164-170	1.6	4