Tarunraj Singh

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

26 2,194 41 173 h-index g-index citations papers 2,719 2.4 5.01 245 avg, IF L-index ext. citations ext. papers

#	Paper	IF	Citations
173	Widening, transition and coalescence of local resonance band gaps in multi-resonator acoustic metamaterials: From unit cells to finite chains. <i>Journal of Sound and Vibration</i> , 2022 , 523, 116716	3.9	4
172	Input shaping for travelling wave generation. Smart Materials and Structures, 2022, 31, 055006	3.4	
171	Energy-Time Optimal Control of Wheeled Mobile Robots. <i>Journal of the Franklin Institute</i> , 2022 , 359, 5354-5354	4	
170	Minimum Energy Control of a Unicycle Model Robot. <i>Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME</i> , 2021 ,	1.6	2
169	Multi-step ahead predictive model for blood glucose concentrations of type-1 diabetic patients <i>Scientific Reports</i> , 2021 , 11, 24332	4.9	1
168	Global Sensitivity Analysis on the Bergman Minimal Model. IFAC-PapersOnLine, 2020, 53, 16112-16118	0.7	2
167	Recent Results in Reference Prefiltering for Precision Motion Control. <i>IFAC-PapersOnLine</i> , 2020 , 53, 865	66.8 <mark>6</mark> 66	7 ₀
166	Uncertainty quantification of tunable elastic metamaterials using polynomial chaos. <i>Journal of Applied Physics</i> , 2020 , 127, 015102	2.5	3
165	Joint chance constrained input shaping. <i>Journal of the Franklin Institute</i> , 2020 , 357, 10027-10053	4	1
164	Overlapping Clustering Based Technique for Scalable Uncertainty Quantification in Physical Systems. <i>SIAM-ASA Journal on Uncertainty Quantification</i> , 2020 , 8, 827-859	1.8	
163	Reduced-Order Modeling for Dynamic Mode Decomposition Without an Arbitrary Sparsity Parameter. <i>AIAA Journal</i> , 2020 , 58, 3919-3931	2.1	3
162	Dispersion and topological characteristics of permutative polyatomic phononic crystals. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2019, 475, 20190022	2 ^{2.4}	9
161	2019,		3
160	Glycemic Control of People With Type 1 Diabetes Based on Probabilistic Constraints. <i>IEEE Journal of Biomedical and Health Informatics</i> , 2019 , 23, 1773-1783	7.2	1
159	Nonintrusive Global Sensitivity Analysis for Linear Systems With Process Noise. <i>Journal of Computational and Nonlinear Dynamics</i> , 2019 , 14,	1.4	2
158	Dispersion transitions and pole-zero characteristics of finite inertially amplified acoustic metamaterials. <i>Journal of Applied Physics</i> , 2018 , 123, 105106	2.5	15
157	Conjugate Unscented Transformation: Applications to Estimation and Control. <i>Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME,</i> 2018 , 140,	1.6	20

(2015-2018)

156	Chance-Constraint-Based Design of Open-Loop Controllers for Linear Uncertain Systems. IEEE/ASME Transactions on Mechatronics, 2018, 23, 1952-1963	5.5	2
155	Band gap synthesis in elastic monatomic lattices via input shaping. <i>Meccanica</i> , 2018 , 53, 3105-3122	2.1	3
154	Periodic Signal Tracking for Lightly Damped Systems. <i>Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME</i> , 2017 , 139,	1.6	1
153	Pole distribution in finite phononic crystals: Understanding Bragg-effects through closed-form system dynamics. <i>Journal of the Acoustical Society of America</i> , 2017 , 142, 1399	2.2	17
152	Formation of local resonance band gaps in finite acoustic metamaterials: A closed-form transfer function model. <i>Journal of Sound and Vibration</i> , 2017 , 410, 429-446	3.9	38
151	A Mathematical Introduction to Control Theory, Second Edition. <i>AIAA Journal</i> , 2017 , 55, 691-692	2.1	1
150	Optimal meal time after bolusing for Type 1 diabetes patients under meal uncertainties 2017 ,		2
149	Chance constraint based design of input shapers 2017 ,		1
148	Chance constraint based design of controllers for linear uncertain systems 2017,		1
147	COMPARISON OF LINEARIZATION AND GRAPH CLUSTERING METHODS FOR UNCERTAINTY QUANTIFICATION OF LARGE SCALE DYNAMICAL SYSTEMS 2017 , 7, 23-56		2
146	Building an Uncertainty Modeling Framework for Real-Time VATD. <i>Geophysical Monograph Series</i> , 2016 , 57-87	1.1	
145	Sensitivity analysis of a one-dimensional model of a volcanic plume with particle fallout and collapse behavior. <i>Journal of Volcanology and Geothermal Research</i> , 2016 , 326, 43-53	2.8	11
144	Unscented Transformation based estimation of parameters of nonlinear models using heteroscedastic data. <i>Pattern Recognition</i> , 2016 , 55, 160-171	7.7	
143	Ground Target Tracking Applications. Design Examples for Military and Civil Domains. <i>Advances in Computer Vision and Pattern Recognition</i> , 2016 , 597-625	1.1	
142	. IEEE Transactions on Nuclear Science, 2016 , 63, 1169-1187	1.7	О
141	2016,		2
140	Zero-phase velocity tracking of vibratory systems. Control Engineering Practice, 2015, 40, 93-101	3.9	6
139	Application of a Time-Delay Pre-Filter Design for Periodic Signal Tracking of Lightly-Damped Multivariable Systems**The research leading to these results has received funding from the Dutch ministry of Economic afairs and is part of the joint Eindhoven University of Technology/Philips	0.7	1

138	Time-delay pre-filter design for vibration free tracking of periodic reference signals 2015,		1
137	Parameter Estimation of Atmospheric Release Incidents Using Maximal Information Collection. <i>Lecture Notes in Computer Science</i> , 2015 , 310-321	0.9	1
136	Multiscale Method for Hazard Map Construction. Lecture Notes in Computer Science, 2015, 41-53	0.9	
135	Fast Construction of Surrogates for UQ Central to DDDASIApplication to Volcanic Ash Transport. <i>Procedia Computer Science</i> , 2014 , 29, 1227-1235	1.6	8
134	Optimal information collection for source parameter estimation of atmospheric release phenomenon 2014 ,		5
133	Temporal, probabilistic mapping of ash clouds using wind field stochastic variability and uncertain eruption source parameters: Example of the 14 April 2010 Eyjafjallaj Lull eruption. <i>Journal of Advances in Modeling Earth Systems</i> , 2014 , 6, 1173-1184	7.1	13
132	Computation of probabilistic hazard maps and source parameter estimation for volcanic ash transport and dispersion. <i>Journal of Computational Physics</i> , 2014 , 271, 39-59	4.1	34
131	Evaluation of advanced Lukas-Kanade optical flow on thoracic 4D-CT. <i>Journal of Clinical Monitoring and Computing</i> , 2013 , 27, 433-41	2	10
130	Polynomial-Chaos-Based Bayesian Approach for State and Parameter Estimations. <i>Journal of Guidance, Control, and Dynamics</i> , 2013 , 36, 1058-1074	2.1	42
129	Blood glucose control algorithms for type 1 diabetic patients: A methodological review. <i>Biomedical Signal Processing and Control</i> , 2013 , 8, 107-119	4.9	75
128	Challenges in Developing DDDAS based Methodology for Volcanic Ash Hazard Analysis Effect of Numerical Weather Prediction Variability and Parameter Estimation. <i>Procedia Computer Science</i> , 2013 , 18, 1871-1880	1.6	12
127	Time-Optimal Output Transition for Minimum-Phase Systems. <i>Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME,</i> 2013 , 135,	1.6	1
126	Optimal information collection for nonlinear systems- An application to multiple target tracking and localization 2013 ,		7
125	Conjugate unscented transform rules for uniform probability density functions 2013,		6
124	Application of Conjugate Unscented Transform in source parameters estimation 2013,		4
123	eABS: Regenerative Anti-Lock Braking for Electric Motorcycles. SAE International Journal of Passenger Cars - Mechanical Systems, 2013 , 6, 1484-1492	0.3	1
122	Estimation and propagation of volcanic source parameter uncertainty in an ash transport and dispersal model: application to the Eyjafjallajokull plume of 14¶6 April 2010. <i>Bulletin of Volcanology</i> , 2012 , 74, 2321-2338	2.4	40
121	A DDDAS Framework for Volcanic Ash Propagation and Hazard Analysis. <i>Procedia Computer Science</i> , 2012 , 9, 1090-1099	1.6	16

(2010-2012)

120	Polynomial Chaos Quadrature-based Minimum Variance Approach for Source Parameters Estimation. <i>Procedia Computer Science</i> , 2012 , 9, 1129-1138	1.6	13	
119	Polynomial chaos based method for state and parameter estimation 2012 ,		3	
118	Conjugate Unscented Transform and its Application to Filtering and Stochastic Integral Calculation 2012 ,		5	
117	The Conjugate Unscented Transform IAn approach to evaluate multi-dimensional expectation integrals 2012 ,		11	
116	Uncertainty Propagation in Dynamic Systems using Polynomial Chaos based Multiresolution Approach 2012 ,		1	
115	Pole-Zero, Zero-Pole Canceling Input Shapers. <i>Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME</i> , 2012 , 134,	1.6	5	
114	Modeling of Glucose-Insulin System Dynamics in Diabetic Goettingen Minipigs. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , 2012 , 45, 414-419		3	
113	Adaptive Gaussian Sum Filter for Nonlinear Bayesian Estimation. <i>IEEE Transactions on Automatic Control</i> , 2011 , 56, 2151-2156	5.9	84	
112	. IEEE Transactions on Aerospace and Electronic Systems, 2011 , 47, 684-701	3.7	1	
111	Minimax design of vibration absorbers for linear damped systems. <i>Journal of Sound and Vibration</i> , 2011 , 330, 2437-2448	3.9	36	
110	State Uncertainty Propagation in the Presence of Parametric Uncertainty and Additive White Noise. Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME, 2011 , 133, 051009	1.6	11	
109	Research Opportunities in Contextualized Fusion Systems. The Harbor Surveillance Case. <i>Lecture Notes in Computer Science</i> , 2011 , 621-628	0.9	3	
108	Rest-to-Rest Motion of an Experimental Flexible Structure Subject to Friction: Linear Programming Approach. <i>Journal of Vibration and Acoustics, Transactions of the ASME</i> , 2010 , 132,	1.6	3	
107	Polynomial Chaos Based Design of Robust Input Shapers. <i>Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME</i> , 2010 , 132,	1.6	14	
106	Minimax State/Residual-Energy Constrained Shapers for Flexible Structures: Linear Programming Approach. <i>Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME</i> , 2010 , 132,	1.6	3	
105	Approximate interval method for epistemic uncertainty propagation using Polynomial Chaos and evidence theory 2010 ,		8	
104	Source identification of puff-based dispersion models using convex optimization 2010,		1	
103	Desired Order Continuous Polynomial Time Window Functions for Harmonic Analysis. <i>IEEE Transactions on Instrumentation and Measurement</i> , 2010 , 59, 2475-2481	5.2	11	

102	Uncertainty propagation in puff-based dispersion models using polynomial chaos. <i>Environmental Modelling and Software</i> , 2010 , 25, 1608-1618	5.2	17
101	Design of input shapers using modal cost for multi-mode systems. <i>Automatica</i> , 2010 , 46, 598-604	5.7	8
100	A Novel Coordinate Transformation for Obstacle Avoidance and Optimal Trajectory Planning 2008,		4
99	An Adaptive Attitude Control Formulation Under Angular Velocity Constraints 2008,		3
98	Uncertainty Propagation for Nonlinear Dynamical Systems Using Gaussian Mixture Models 2008,		7
97	Minimax Input Shaper Design Using Linear Programming. <i>Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME</i> , 2008 , 130,	1.6	6
96	Uncertainty Propagation for Nonlinear Dynamic Systems Using Gaussian Mixture Models. <i>Journal of Guidance, Control, and Dynamics</i> , 2008 , 31, 1623-1633	2.1	98
95	Input shaping design using sequential linear programming (SLP) for non-linear systems 2008,		1
94	Time-optimal control of flexible systems subject to friction. <i>Optimal Control Applications and Methods</i> , 2008 , 29, 257-277	1.7	5
93	Influence of grape juice and orange juice on the pharmacokinetics and pharmacodynamics of diltiazem in healthy human male subjects. <i>International Journal of Clinical Pharmacology and Therapeutics</i> , 2008 , 46, 511-8	2	2
92	Unscented Kalman Filter/Smoother for a CBRN puff-based dispersion model 2007,		10
91	. IEEE Transactions on Aerospace and Electronic Systems, 2007, 43, 1454-1469	3.7	37
90	Closed-form minimax time-delay filters for underdamped systems. <i>Optimal Control Applications and Methods</i> , 2007 , 28, 157-173	1.7	3
89	Design of noise and period-time robust high-order repetitive control, with application to optical storage. <i>Automatica</i> , 2007 , 43, 2086-2095	5.7	114
88	The effect of four different types of diet on the bioavailability of loracarbef. <i>European Journal of Drug Metabolism and Pharmacokinetics</i> , 2007 , 32, 205-11	2.7	
87	Sequential linear programming for design of time-optimal controllers 2007,		5
86	Ground target tracking using terrain information 2007,		4
85	Data assimilation in variable dimension dispersion models using particle filters 2007,		6

(2004-2007)

84	Efficient particle filtering for road-constrained target tracking. <i>IEEE Transactions on Aerospace and Electronic Systems</i> , 2007 , 43, 1454-1469	3.7	3	
83	Robust input shaper design using Linear Matrix Inequalities 2006,		1	
82	Enhanced Convergence in Distributed Design Processes 2006 , 95		3	
81	Cubic control for phase I smart base-isolated benchmark building with emphasis on nonstructural performance. <i>Structural Control and Health Monitoring</i> , 2006 , 13, 758-774	4.5	1	
80	Robust Input Shaper Design using Linear Matrix Inequalities 2006,		3	
79	Controller Design for Flexible Systems With Friction: Pulse Amplitude Control. <i>Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME,</i> 2005 , 127, 336-344	1.6	3	
78	2005,		6	
77	Parametric control of combustion thermo-acoustic instabilities. <i>IEEE Transactions on Control Systems Technology</i> , 2005 , 13, 1076-1083	4.8	3	
76	. IEEE Transactions on Aerospace and Electronic Systems, 2005, 41, 1373-1382	3.7	1	
75	Concurrent Feedback/Feedforward Design for Second Order Systems 2005,		1	
74	Equilibrium stability in decentralized design systems. <i>International Journal of Systems Science</i> , 2005 , 36, 651-662	2.3	24	
73	Modeling of Supply Chain Decision Logic Using PID Controllers 2004 , 755			
72	Jerk Limited Input Shapers. <i>Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME</i> , 2004 , 126, 215-219	1.6	32	
71	Efficient Minimax Control Design for Prescribed Parameter Uncertainty. <i>Journal of Guidance, Control, and Dynamics</i> , 2004 , 27, 1009-1016	2.1	6	
70	Desensitized control of vibratory systems with friction: linear programming approach. <i>Optimal Control Applications and Methods</i> , 2004 , 25, 165-180	1.7	9	
69	An Investigation of Equilibrium Stability in Decentralized Design Using Nonlinear Control Theory 2004 ,		4	
68	Potential Functions for En-Route Air Traffic Management and Flight Planning 2004,		7	
67	Controller Design for Flexible Systems with Friction: Pulse Amplitude Control 2004 ,		1	

66	On noise- and period-time sensitivity in high order repetitive control 2004,		7
65	Optimal Actuator/Sensor Placement for Control of Combustion Instabilities. <i>Journal of Propulsion</i> and Power, 2003 , 19, 148-151	8	5
64	Jerk Limited Time Optimal Control of Flexible Structures. <i>Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME</i> , 2003 , 125, 139-142	6	18
63	Minimax Design of Robust Controllers for Flexible Systems. <i>Journal of Guidance, Control, and Dynamics</i> , 2002 , 25, 868-875	1	33
62	Desensitized Jerk Limited-Time Optimal Control of Multi-Input Systems. <i>Journal of Guidance, Control, and Dynamics,</i> 2002 , 25, 474-481	1	6
61	Minimax design of robust controllers for flexible systems 2002,		2
60	Concurrent Feed-forward/Feed-back Design for Flexible Structures 2002,		2
59	Input shaping/time delay control of maneuvering flexible structures 2002,		60
58	. IEEE Transactions on Aerospace and Electronic Systems, 2002 , 38, 1072-1087	··7	32
57	The effects of adverse condition warning system characteristics on driver performance: An investigation of alarm signal type and threshold level. <i>Behaviour and Information Technology</i> , 2002 , 21, 235-248	4	33
56	Investigation of Factors Affecting Driver Performance Using Adverse Condition Warning Systems. Proceedings of the Human Factors and Ergonomics Society, 2001 , 45, 1699-1703)·4	6
55	Robust Minimum Power/Jerk Control of Maneuvering Structures. <i>Journal of Guidance, Control, and Dynamics</i> , 2001 , 24, 816-826	1	21
54	ON THE FEEDBACK CONTROL OF THE WAVE EQUATION. Journal of Sound and Vibration, 2000, 234, 625-5	5 4 0	15
53	Modeling of an Automotive Air-Conditioning System 2000,		1
52	Design of Hardware/Algorithms for Enhancement of Driver-Vehicle Performance in Inclement Conditions Using a Virtual Environment 2000 ,		2
51	Desensitized minimum power/jerk control profiles for rest-to-rest maneuvers 2000,		3
50	Adaptive track fusion in a multisensor environment 2000,		7
49	Target tracking via a dynamic circular filter/linear /spl alpha/-/spl beta/ filters in 2D 2000 ,		2

(1995-2000)

48	Optimal Size and Location of Piezoelectric Actuator/Sensors: Practical Considerations. <i>Journal of Guidance, Control, and Dynamics</i> , 2000 , 23, 509-515	2.1	41
47	Fuel/Time Optimal Control of Flexible Space Structures: A Frequency Domain Approach. JVC/Journal of Vibration and Control, 1999 , 5, 795-817	2	7
46	Passive Control of Overhead Cranes. JVC/Journal of Vibration and Control, 1999, 5, 443-459	2	8
45	Stability Analysis of Nonlinear Parametric and Coulomb Control Systems. <i>JVC/Journal of Vibration and Control</i> , 1999 , 5, 891-905	2	1
44	On-Off Control With Specified Fuel Usage. <i>Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME</i> , 1999 , 121, 206-212	1.6	21
43	Robust Time-Optimal Control of Flexible Structures With Parametric Uncertainty. <i>Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME</i> , 1997 , 119, 743-748	1.6	20
42	On-off control of flexible spacecraft with specified fuel usage 1997 ,		7
41	Fuel/Time Optimal Control of Spacecraft Maneuvers. <i>Journal of Guidance, Control, and Dynamics</i> , 1997 , 20, 394-397	2.1	37
40	Distributed Control of Laminated Beams: Timoshenko Theory vs. Euler-Bernoulli Theory. <i>Journal of Intelligent Material Systems and Structures</i> , 1997 , 8, 149-157	2.3	53
39	Machining condition optimization by genetic algorithms and simulated annealing. <i>Computers and Operations Research</i> , 1997 , 24, 647-657	4.6	64
38	Robust time-optimal control of flexible spacecraft with structured uncertainties 1996,		3
37	Exact time-optimal control of the wave equation. <i>Journal of Guidance, Control, and Dynamics</i> , 1996 , 19, 130-134	2.1	10
36	Effect of damping on the structure of the time-optimal control profile. <i>Journal of Guidance, Control, and Dynamics</i> , 1996 , 19, 1182-1184	2.1	4
35	Near-minimum-time maneuvers of large structures - Theory and experiments. <i>Journal of Guidance, Control, and Dynamics</i> , 1995 , 18, 1380-1385	2.1	7
34	Fuel/time optimal control of the benchmark problem. <i>Journal of Guidance, Control, and Dynamics</i> , 1995 , 18, 1225-1231	2.1	56
33	Robust time-delay control of multimode systems. <i>International Journal of Control</i> , 1995 , 62, 1319-1339	1.5	57
32	Exact time-optimal control of the wave equation 1995,		3
31	Optimum model size for minimum residual vibration 1995 ,		1

30	Computation of near-minimum-time maneuvers of flexible structures by parameter optimization. <i>Journal of Guidance, Control, and Dynamics</i> , 1994 , 17, 354-360	2.1	4
29	Sliding-Mode/Shaped-Input Control of Flexible/Rigid Link Robots. <i>Journal of Sound and Vibration</i> , 1994 , 171, 185-200	3.9	15
28	Robust time-optimal control - Frequency domain approach. <i>Journal of Guidance, Control, and Dynamics</i> , 1994 , 17, 346-353	2.1	121
27	Input-shaped control of three-dimensional maneuvers of flexible spacecraft. <i>Journal of Guidance, Control, and Dynamics</i> , 1993 , 16, 1061-1068	2.1	36
26	Robust Time-Delay Control. <i>Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME</i> , 1993 , 115, 303-306	1.6	86
25	Shaped Input Control of a System With Multiple Modes. <i>Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME</i> , 1993 , 115, 341-347	1.6	76
24	Effects of joint flexibility on the motion of a flexible-arm robot. <i>Dynamical Systems</i> , 1991 , 6, 235-254		3
23	A note on the kinematics of the tachyon fluid. <i>Astrophysics and Space Science</i> , 1985 , 110, 393-395	1.6	
22	On steady incompressible three-dimensional hydromagnetic flows. <i>Proceedings of the American Mathematical Society</i> , 1982 , 85, 79-79	0.8	1
21	A Multipurpose Transistorized Tachometer. <i>IETE Journal of Research</i> , 1970 , 16, 407-413	0.9	
20	A Thyristorized Proportional Controller for a Constant Temperature Bath. <i>IETE Journal of Research</i> , 1969 , 15, 521-528	0.9	
19	A Transistor Multivibrator with very Long Time Periods and Wide Mark to Space Ratio. <i>IETE Journal of Research</i> , 1967 , 13, 375-380	0.9	
18	A Digital Read out for Transistor Decade Counter. IETE Journal of Research, 1966, 12, 25-28	0.9	
17	A Highly Stable Multi-Decade Frequency Divider. <i>IETE Journal of Research</i> , 1965 , 11, 361-365	0.9	
16	Realistic determination of the optimal size and location of piezoelectric actuator/sensors		2
15	Passive control of overhead cranes		4
14	Adaptive pulse amplitude pulse width control of systems subject to coulomb and viscous friction		1
13	The higher order unscented filter		30

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12	Design of closed-loop input shaping controllers	15
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8	Adaptive fuzzy logic control of an anti-lock braking system	4
7	Fuel/time optimal control of the benchmark two-mass/spring system	1
6	Intelligent beam structures: Timoshenko theory vs. Euler-Bernoulli theory	5
5	On the feedback control of the wave equation	1
4	Optimal fuzzy logic control for an anti-lock braking system	1
3		4
2	Robust time-delay control of multimode systems	3
1	Optimal Reference Shaping for Dynamical Systems	11