Daniel J Rixen

List of Publications by Year
in descending order

131 papers	3,288 citations	201674 27 h-index	161849 54 g-index
153 all docs	153 docs citations	153 times ranked	1718 citing authors

#	Article	IF	Citations
1	Evaluating the Mechanical Redesign of a Biped Walking Robot Using Experimental Modal Analysis. Conference Proceedings of the Society for Experimental Mechanics, 2022, , 45-52.	0.5	2
2	Time-Optimization of Trajectories Using Zero-Clamped Cubic Splines and Their Analytical Gradients. IEEE Robotics and Automation Letters, 2022, 7, 4528-4534.	5.1	1
3	Contact stiffness of jointed interfaces: A comparison of dynamic substructuring techniques with frictional hysteresis measurements. Mechanical Systems and Signal Processing, 2022, 171, 108896.	8.0	16
4	Fidelity assessment of Real-Time Hybrid Substructuring based on convergence and extrapolation. Mechanical Systems and Signal Processing, 2022, 175, 109135.	8.0	0
5	Simultaneous Identification of Free and Supported Frequency Response Functions of a Rotor in Active Magnetic Bearings. Actuators, 2022, 11, 144.	2.3	1
6	Multiphysical Simulation, Model Order Reduction (ECSW) and Experimental Validation of an Active Magnetic Bearing. Actuators, 2022, 11, 169.	2.3	2
7	A non-intrusive model-order reduction of geometrically nonlinear structural dynamics using modal derivatives. Mechanical Systems and Signal Processing, 2021, 147, 107126.	8.0	21
8	Performance of the Expanded Virtual Point Transformation on a Complex Test Structure. Experimental Techniques, 2021, 45, 83-93.	1.5	1
9	Normalized passivity control for hardware-in-the-loop with contact. International Journal of Dynamics and Control, 2021, 9, 1471-1477.	2.5	3
10	A fresh look at the dynamics of a flexible body application to substructuring for flexible multibody dynamics. International Journal for Numerical Methods in Engineering, 2021, 122, 3525-3582.	2.8	7
11	Investigation of Torque Controlled Robots with Flexible Links Using a Flexible Multibody Simulation. , 2021, , .		0
12	Robust and high fidelity real-time hybrid substructuring. Mechanical Systems and Signal Processing, 2021, 157, 107720.	8.0	8
13	Hardware-in-the-Loop Test of a Prosthetic Foot. Applied Sciences (Switzerland), 2021, 11, 9492.	2.5	1
14	Modal Analysis of a 7 DoF Sweet Pepper Harvesting Robot. Conference Proceedings of the Society for Experimental Mechanics, 2020, , 163-170.	0.5	7
15	Overview of Free Interface Substructuring Approaches for Systems with Arbitrary Viscous Damping in Dynamic Substructuring. Conference Proceedings of the Society for Experimental Mechanics, 2020, , 101-131.	0.5	0
16	Including directly measured rotations in the virtual point transformation. Mechanical Systems and Signal Processing, 2020, 141, 106440.	8.0	12
17	Contactless Vibrational Analysis of Transparent Hydrogel Structures Using Laser-Doppler Vibrometry. Experimental Mechanics, 2020, 60, 1067-1078.	2.0	9
18	Fast Approximation of Over-Determined Second-Order Linear Boundary Value Problems by Cubic and Quintic Spline Collocation. Robotics, 2020, 9, 48.	3.5	2

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19	Hierarchical Motion Planning Framework for Manipulators in Human-Centered Dynamic Environments. , 2020, , .		2
20	Experimental twelve degree of freedom rubber isolator models for use in substructuring assemblies. Journal of Sound and Vibration, 2020, 474, 115253.	3.9	32
21	A hybrid testing method based on adaptive feed-forward filters. Mechanical Systems and Signal Processing, 2020, 139, 106586.	8.0	7
22	Comparison of Different Approaches to Include Connection Elements into Frequency-Based Substructuring. Experimental Techniques, 2020, 44, 425-433.	1.5	10
23	A Step Towards Testing of Foot Prostheses Using Real-Time Substructuring (RTS). Conference Proceedings of the Society for Experimental Mechanics, 2020, , 1-9.	0.5	3
24	Experimental Joint Identification Using System Equivalent Model Mixing in a Bladed Disk. Journal of Vibration and Acoustics, Transactions of the ASME, 2020, 142, .	1.6	17
25	Hybrid Substructure Assembly Techniques for Efficient and Robust Optimization of Additional Structures in Late Phase NVH Design: A Comparison. Conference Proceedings of the Society for Experimental Mechanics, 2020, , 35-45.	0.5	0
26	Development of a Low Cost Automatic Modal Hammer for Applications in Substructuring. Conference Proceedings of the Society for Experimental Mechanics, 2020, , 77-86.	0.5	8
27	Investigating the Feasibility of Laser-Doppler Vibrometry for Vibrational Analysis of Living Mammalian Cells. Conference Proceedings of the Society for Experimental Mechanics, 2020, , 31-36.	0.5	0
28	An External Stabilization Unit for High-Precision Applications of Robot Manipulators. , 2020, , .		0
29	An augmented free-interface-based modal substructuring for nonlinear structural dynamics including interface reduction. Journal of Sound and Vibration, 2019, 462, 114915.	3.9	6
30	Evaluation of an External Vibration Damping Approach for Robot Manipulators Using a Flexible Multi Body Simulation. , 2019, , .		5
31	An academic approach to the multidisciplinary development of liquid-oxygen turbopumps for space applications. CEAS Space Journal, 2019, 11, 193-203.	2.3	0
32	Multifidelity component interface reduction and modal truncation augmentation. International Journal for Numerical Methods in Engineering, 2019, 120, 105-124.	2.8	2
33	ALE beam using reference dynamics. Multibody System Dynamics, 2019, 46, 127-146.	2.7	10
34	A strategy to stabilize the transient analysis and increase the approximation accuracy of dual Craig-Bampton reduced systems. Finite Elements in Analysis and Design, 2019, 160, 32-45.	3.2	4
35	Vision-Based 3D Modeling of Unknown Dynamic Environments for Real-Time Humanoid Navigation. International Journal of Humanoid Robotics, 2019, 16, 1950002.	1.1	17
36	Versatile and robust bipedal walking in unknown environments: real-time collision avoidance and disturbance rejection. Autonomous Robots, 2019, 43, 1957-1976.	4.8	14

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37	External Vibration Damping of a Robot Manipulator's TCP Using Acceleration Feedback. Proceedings in Applied Mathematics and Mechanics, 2019, 19, e201900344.	0.2	0
38	Comparison of different Excitation Strategies in Operational Modal Analysis (OMA). Proceedings in Applied Mathematics and Mechanics, 2019, 19, e201900392.	0.2	0
39	How Housing Dynamics Affect the Monitoring of Rotor Unbalance: A Case Study. Proceedings in Applied Mathematics and Mechanics, 2019, 19, e201900250.	0.2	0
40	An Autonomous and Flexible Robotic Framework for Logistics Applications. Journal of Intelligent and Robotic Systems: Theory and Applications, 2019, 93, 419-431.	3.4	24
41	The Influence of Structural Dynamics on Cascaded Joint Position Control of a Flexible Beam with a Compliant Gear. , 2019, , .		3
42	Interface reduction methods for mechanical systems with elastohydrodynamic lubricated revolute joints. Multibody System Dynamics, 2018, 42, 79-96.	2.7	7
43	Impulse-based substructuring in a floating frame to simulate high frequency dynamics in flexible multibody dynamics. Multibody System Dynamics, 2018, 42, 47-77.	2.7	9
44	A Simplification of the RitzGenEO Recycling Strategy for Adaptive Multiâ€Preconditioned FETI Applied to Multiple Rightâ€Hand Sides. Proceedings in Applied Mathematics and Mechanics, 2018, 18, e201800204.	0.2	0
45	Overview of Craigâ€Bampton Substructuring Approaches for Model Order Reduction of Nonclassically Damped Systems. Proceedings in Applied Mathematics and Mechanics, 2018, 18, e201800242.	0.2	0
46	Evaluation of the Reduced Order Models for Thermoelastodynamic Response of Geometrically Nonlinear Finite Element Models. Proceedings in Applied Mathematics and Mechanics, 2018, 18, e201800383.	0.2	0
47	An Approach for Stable Time Integration of Dual Craigâ€Bampton Reduced Systems. Proceedings in Applied Mathematics and Mechanics, 2018, 18, e201800276.	0.2	0
48	Stability Issues in Hardwareâ€inâ€theâ€Loop Tests of Flexible Components. Proceedings in Applied Mathematics and Mechanics, 2018, 18, e201800361.	0.2	0
49	An Adaptive Approach to Coupling Vibration Tests and Simulation Models with Harmonic Excitation. , 2018, , .		2
50	Aging tolerant control of direct injection engines. Control Engineering Practice, 2018, 77, 201-212.	5.5	8
51	Recycling of solution spaces in multipreconditioned FETI methods applied to structural dynamics. International Journal for Numerical Methods in Engineering, 2018, 116, 141-160.	2.8	6
52	Dual Craig-Bampton component mode synthesis method for model order reduction of nonclassically damped linear systems. Mechanical Systems and Signal Processing, 2018, 111, 678-698.	8.0	27
53	A quadratic manifold for model order reduction of nonlinear structural dynamics. Computers and Structures, 2017, 188, 80-94.	4.4	76
54	Nonlinear Substructuring Using Fixed Interface Nonlinear Normal Modes. Conference Proceedings of the Society for Experimental Mechanics, 2017, , 205-213.	0.5	5

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55	Real-Time Path Planning in Unknown Environments for Bipedal Robots. IEEE Robotics and Automation Letters, 2017, 2, 1856-1863.	5.1	32
56	Generalization of quadratic manifolds for reduced order modeling of nonlinear structural dynamics. Computers and Structures, 2017, 192, 196-209.	4.4	43
57	A reduced interface component mode synthesis method using coarse meshes. Procedia Engineering, 2017, 199, 348-353.	1.2	7
58	A lean and efficient snapshot generation technique for the Hyper-Reduction of nonlinear structural dynamics. Computer Methods in Applied Mechanics and Engineering, 2017, 325, 330-349.	6.6	21
59	Experimental-Numerical Substructuring: a Comparison of Assemblies in Primal and Dual Forms. Proceedings in Applied Mathematics and Mechanics, 2017, 17, 3-6.	0.2	0
60	Model Order Reduction for Parametric Non-linear Mechanical Systems: State of the Art and Future Research. Proceedings in Applied Mathematics and Mechanics, 2017, 17, 37-40.	0.2	1
61	Modal Substructuring of Geometrically Nonlinear Plates. Proceedings in Applied Mathematics and Mechanics, 2017, 17, 515-516.	0.2	1
62	A Dual Craig-Bampton State-Space Approach for Model Reduction of Damped Systems. Proceedings in Applied Mathematics and Mechanics, 2017, 17, 303-304.	0.2	1
63	Dual Craig-Bampton Method with Reduction of Interface Coordinates. Conference Proceedings of the Society for Experimental Mechanics, 2017, , 143-163.	0.5	3
64	TIME INTEGRATION OF DUAL CRAIG-BAMPTON REDUCED SYSTEMS. , 2017, , .		1
65	<i>vibro</i>â€Lanczos, a symmetric Lanczos solver for vibroâ€acoustic simulations. International Journal for Numerical Methods in Engineering, 2016, 107, 290-311.	2.8	1
66	A â€˜nodelessâ€™ dual superelement formulation for structural and multibody dynamics application to reduction of contact problems. International Journal for Numerical Methods in Engineering, 2016, 106, 773-798.	2.8	23
67	General framework for transfer path analysis: History, theory and classification of techniques. Mechanical Systems and Signal Processing, 2016, 68-69, 217-244.	8.0	198
68	A new analysis methodology for estimating the eigenfrequencies of systems with high modal damping. Journal of Sound and Vibration, 2016, 361, 290-306.	3.9	5
69	Multi-DoF Interface Synchronization of Real-Time-Hybrid-Tests Using a Recursive-Least-Squares Adaption Law: A Numerical Evaluation. Conference Proceedings of the Society for Experimental Mechanics, 2016, , 7-14.	0.5	4
70	Evaluation of Substructure Reduction Techniques with Fixed and Free Interfaces. Strojniski Vestnik/Journal of Mechanical Engineering, 2016, 62, 452-462.	1.1	39
71	Domain Decomposition and Parallel Direct Solvers as an Adaptive Multiscale Strategy for Damage Simulation in Quasi-Brittle Materials. Lecture Notes in Computational Science and Engineering, 2016, , 197-205.	0.3	0
72	Effect of Interface Substitute When Applying Frequency Based Substructuring to the Ampair 600 Wind Turbine Rotor Assembly. Conference Proceedings of the Society for Experimental Mechanics, 2016, , 117-122.	0.5	0

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73	Simultaneous FETI and block FETI: Robust domain decomposition with multiple search directions. International Journal for Numerical Methods in Engineering, 2015, 104, 905-927.	2.8	37
74	Vibration source description in substructuring: A theoretical depiction. Mechanical Systems and Signal Processing, 2015, 60-61, 498-511.	8.0	26
75	Electromagnetomechanical Coupled Vibration Analysis of a Direct-Drive Off-Shore Wind Turbine Generator. Journal of Computational and Nonlinear Dynamics, 2015, 10, .	1.2	9
76	Dynamic Models for Load Calculation Procedures of Offshore Wind Turbine Support Structures: Overview, Assessment, and Outlook. Journal of Computational and Nonlinear Dynamics, 2015, 10, .	1.2	4
77	Stability Control of Wind Turbines for Varying Operating Conditions Through Vibration Measurements. Springer Proceedings in Energy, 2015, , 137-148.	0.3	0
78	In-Situ Experimental Modal Analysis of a Direct-Drive Wind Turbine Generator. Conference Proceedings of the Society for Experimental Mechanics, 2015, , 157-165.	0.5	1
79	A Comparison of Two Component TPA Approaches for Steering Gear Noise Prediction. Conference Proceedings of the Society for Experimental Mechanics, 2015, , 71-79.	0.5	8
80	Using Remote Sensing Technologies for Wind Turbine/Farm Health Monitoring. , 2015, , 1045-1056.		1
81	Dynamic Stability Analysis of Wind Turbines Through In-Field Vibration Tests. , 2015, , 1057-1068.		0
82	Accurate and efficient modeling of complex offshore wind turbine support structures using augmented superelements. Wind Energy, 2014, 17, 1035-1054.	4.2	21
83	An Impulse Based Substructuring method for coupling impulse response functions and finite element models. Computer Methods in Applied Mechanics and Engineering, 2014, 275, 113-137.	6.6	19
84	Dynamic Nonlinear Aeroelastic Model of a Kite for Power Generation. Journal of Guidance, Control, and Dynamics, 2014, 37, 1426-1436.	2.8	44
85	Substituting Internal Forces for Blocked Forces or Free Interface Displacements in Substructured Simulations. Conference Proceedings of the Society for Experimental Mechanics, 2014, , 77-96.	0.5	4
86	Model Order Reduction for Geometric Nonlinear Structures with Variable State-Dependent Basis. Conference Proceedings of the Society for Experimental Mechanics, 2014, , 455-462.	0.5	2
87	Effects of Magneto-Mechanical Coupling on Structural Modal Parameters. Conference Proceedings of the Society for Experimental Mechanics, 2014, , 11-18.	0.5	2
88	Towards Dynamic Substructuring Using Measured Impulse Response Functions. Conference Proceedings of the Society for Experimental Mechanics, 2014, , 73-82.	0.5	0
89	Towards a Parallel Time Integration Method for Nonlinear Systems. Conference Proceedings of the Society for Experimental Mechanics, 2014, , 135-145.	0.5	0
90	Operational modal analysis of a 2.5â€‰MW wind turbine using optical measurement techniques and strain gauges. Wind Energy, 2013, 16, 367-381.	4.2	102

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91	Automatic spectral coarse spaces for robust finite element tearing and interconnecting and balanced domain decompositionâ€‰algorithms. International Journal for Numerical Methods in Engineering, 2013, 95, 953-990.	2.8	68
92	An Impulse Based Substructuring approach for impact analysis and load case simulations. Journal of Sound and Vibration, 2013, 332, 7174-7190.	3.9	37
93	Challenges in testing and monitoring the in-operation vibration characteristics of wind turbines. Mechanical Systems and Signal Processing, 2013, 41, 649-666.	8.0	70
94	Solving generalized eigenvalue problems on the interfaces to build a robust two-level FETI method. Comptes Rendus Mathematique, 2013, 351, 197-201.	0.3	27
95	A comparison of model reduction techniques from structural dynamics, numerical mathematics and systems and control. Journal of Sound and Vibration, 2013, 332, 4403-4422.	3.9	208
96	Feasibility of Laser Doppler Vibrometry as potential diagnostic tool for patients with abdominal aortic aneurysms. Journal of Biomechanics, 2013, 46, 1113-1120.	2.1	10
97	Discrete Empirical Interpolation Method for Finite Element Structural Dynamics. Conference Proceedings of the Society for Experimental Mechanics, 2013, , 203-212.	0.5	19
98	Application of Residual Vectors to Superelement Modeling of an Offshore Wind Turbine Foundation. Conference Proceedings of the Society for Experimental Mechanics, 2012, , 149-163.	0.5	6
99	A family of substructure decoupling techniques based on a dual assembly approach. Mechanical Systems and Signal Processing, 2012, 27, 379-396.	8.0	84
100	Multiscale domain decomposition analysis of quasiâ€brittle heterogeneous materials. International Journal for Numerical Methods in Engineering, 2012, 89, 1337-1366.	2.8	53
101	A levelâ€setâ€based large sliding contact algorithm for easy analysis of implant positioning. International Journal for Numerical Methods in Engineering, 2012, 89, 1317-1336.	2.8	2
102	In Vivo Measurement of the Human Thorax and Abdomen Surface Using Laser Vibrometry: A New Diagnostic Tool?. Conference Proceedings of the Society for Experimental Mechanics, 2012, , 235-245.	0.5	2
103	An Effective Method for Assembling Impulse Response Functions to Linear and Non-linear Finite Element Models. Conference Proceedings of the Society for Experimental Mechanics, 2012, , 123-135.	0.5	2
104	A Spectrally Preconditioned Iterative Reduced Correction Algorithm for Vibro-acoustic Problems. Conference Proceedings of the Society for Experimental Mechanics, 2012, , 17-33.	0.5	0
105	Generalized Methodology for Assembly and Reduction of Component Models for Dynamic Substructuring. AIAA Journal, 2011, 49, 1010-1020.	2.6	40
106	Modal Reduction in Co-Rotated Multi-Body Dynamics Based on the Dual Craig-Bampton Method. , 2011, , .		0
107	Electrostatic simulation using XFEM for conductor and dielectric interfaces. International Journal for Numerical Methods in Engineering, 2011, 85, 1207-1226.	2.8	9
108	Building and Reducing a Three-Field Finite-Element Model of a Damped Electromechanical Actuator. Journal of Microelectromechanical Systems, 2011, 20, 665-675.	2.5	4

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109	Practical Aspects of Dynamic Substructuring in Wind Turbine Engineering. Conference Proceedings of the Society for Experimental Mechanics, 2011, , 163-185.	0.5	7
110	Reduction methods for MEMS nonlinear dynamic analysis. Conference Proceedings of the Society for Experimental Mechanics, 2011, , 53-65.	0.5	9
111	Feasibility of monitoring large wind turbines using photogrammetry. Energy, 2010, 35, 4802-4811.	8.8	133
112	A general mixed boundary model reduction method for component mode synthesis. IOP Conference Series: Materials Science and Engineering, 2010, 10, 012116.	0.6	3
113	Stochastic finite element method for analyzing static and dynamic pull-in of microsystems. IOP Conference Series: Materials Science and Engineering, 2010, 10, 012202.	0.6	0
114	Effect of Stent-Graft Compliance on Endotension After EVAR. Journal of Endovascular Therapy, 2009, 16, 105-113.	1.5	36
115	A domain decomposition strategy to efficiently solve structures containing repeated patterns. International Journal for Numerical Methods in Engineering, 2009, 78, 828-842.	2.8	4
116	Numerical modelling of electromechanical coupling using fictitious domain and level set methods. International Journal for Numerical Methods in Engineering, 2009, 80, 478-506.	2.8	11
117	Numerical Modeling of the Electromechanical Interaction in MEMS. Lecture Notes in Computational Science and Engineering, 2009, , 315-342.	0.3	4
118	General Framework for Dynamic Substructuring: History, Review and Classification of Techniques. AIAA Journal, 2008, 46, 1169-1181.	2.6	624
119	Vibration testing of a fresh-frozen human pelvis: The role of the pelvic ligaments. Journal of Biomechanics, 2007, 40, 1599-1605.	2.1	34
120	Modified ERA method for operational modal analysis in the presence of harmonic excitations. Mechanical Systems and Signal Processing, 2006, 20, 114-130.	8.0	69
121	Monolithic modelling of electro-mechanical coupling in micro-structures. International Journal for Numerical Methods in Engineering, 2006, 65, 461-493.	2.8	51
122	Identifying mode shapes and modal frequencies by operational modal analysis in the presence of harmonic excitation. Experimental Mechanics, 2005, 45, 213-220.	2.0	44
123	Identifying Mode Shapes and Modal Frequencies by Operational Modal Analysis in the Presence of Harmonic Excitation. Experimental Mechanics, 2005, 45, 213-220.	2.0	1
124	Modified SSTD method to account for harmonic excitations during operational modal analysis. Mechanism and Machine Theory, 2004, 39, 1247-1255.	4.5	30
125	A dual Craigâ€"Bampton method for dynamic substructuring. Journal of Computational and Applied Mathematics, 2004, 168, 383-391.	2.0	222
126	Extended preconditioners for the FETI method applied to constrained problems. International Journal for Numerical Methods in Engineering, 2002, 54, 1-26.	2.8	23

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127	A simple and efficient extension of a class of substructure based preconditioners to heterogeneous structural mechanics problems. International Journal for Numerical Methods in Engineering, 1999, 44, 489-516.	2.8	120
128	Theoretical comparison of the FETI and algebraically partitioned FETI methods, and performance comparisons with a direct sparse solver. International Journal for Numerical Methods in Engineering, 1999, 46, 501-533.	2.8	52
129	A simple and efficient extension of a class of substructure based preconditioners to heterogeneous structural mechanics problems. International Journal for Numerical Methods in Engineering, 1999, 44, 489-516.	2.8	9
130	Theoretical comparison of the FETI and algebraically partitioned FETI methods, and performance comparisons with a direct sparse solver. International Journal for Numerical Methods in Engineering, 1999, 46, 501-533.	2.8	1
131	Fidelity Assessment of Real-Time Hybrid Substructure Testing: a Review and the Application of Artificial Neural Networks. Experimental Techniques, 0, , 1.	1.5	2