

# Daniel J Rixen

## List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/3498263/publications.pdf>

Version: 2024-02-01

131  
papers

3,288  
citations

201385

27  
h-index

161609

54  
g-index

153  
all docs

153  
docs citations

153  
times ranked

1718  
citing authors

#	ARTICLE	IF	CITATIONS
1	General Framework for Dynamic Substructuring: History, Review and Classification of Techniques. AIAA Journal, 2008, 46, 1169-1181.	1.5	624
2	A dual Craig-Bampton method for dynamic substructuring. Journal of Computational and Applied Mathematics, 2004, 168, 383-391.	1.1	222
3	A comparison of model reduction techniques from structural dynamics, numerical mathematics and systems and control. Journal of Sound and Vibration, 2013, 332, 4403-4422.	2.1	208
4	General framework for transfer path analysis: History, theory and classification of techniques. Mechanical Systems and Signal Processing, 2016, 68-69, 217-244.	4.4	198
5	Feasibility of monitoring large wind turbines using photogrammetry. Energy, 2010, 35, 4802-4811.	4.5	133
6	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.	1.5	120
7	Operational modal analysis of a 2.5-MW wind turbine using optical measurement techniques and strain gauges. Wind Energy, 2013, 16, 367-381.	1.9	102
8	A family of substructure decoupling techniques based on a dual assembly approach. Mechanical Systems and Signal Processing, 2012, 27, 379-396.	4.4	84
9	A quadratic manifold for model order reduction of nonlinear structural dynamics. Computers and Structures, 2017, 188, 80-94.	2.4	76
10	Challenges in testing and monitoring the in-operation vibration characteristics of wind turbines. Mechanical Systems and Signal Processing, 2013, 41, 649-666.	4.4	70
11	Modified ERA method for operational modal analysis in the presence of harmonic excitations. Mechanical Systems and Signal Processing, 2006, 20, 114-130.	4.4	69
12	Automatic spectral coarse spaces for robust finite element tearing and interconnecting and balanced domain decomposition algorithms. International Journal for Numerical Methods in Engineering, 2013, 95, 953-990.	1.5	68
13	Multiscale domain decomposition analysis of quasi-brittle heterogeneous materials. International Journal for Numerical Methods in Engineering, 2012, 89, 1337-1366.	1.5	53
14	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.	1.5	52
15	Monolithic modelling of electro-mechanical coupling in micro-structures. International Journal for Numerical Methods in Engineering, 2006, 65, 461-493.	1.5	51
16	Identifying mode shapes and modal frequencies by operational modal analysis in the presence of harmonic excitation. Experimental Mechanics, 2005, 45, 213-220.	1.1	44
17	Dynamic Nonlinear Aeroelastic Model of a Kite for Power Generation. Journal of Guidance, Control, and Dynamics, 2014, 37, 1426-1436.	1.6	44
18	Generalization of quadratic manifolds for reduced order modeling of nonlinear structural dynamics. Computers and Structures, 2017, 192, 196-209.	2.4	43

#	ARTICLE	IF	CITATIONS
19	Generalized Methodology for Assembly and Reduction of Component Models for Dynamic Substructuring. <i>AIAA Journal</i> , 2011, 49, 1010-1020.	1.5	40
20	Evaluation of Substructure Reduction Techniques with Fixed and Free Interfaces. <i>Strojniski Vestnik/Journal of Mechanical Engineering</i> , 2016, 62, 452-462.	0.6	39
21	An Impulse Based Substructuring approach for impact analysis and load case simulations. <i>Journal of Sound and Vibration</i> , 2013, 332, 7174-7190.	2.1	37
22	Simultaneous FETI and block FETI: Robust domain decomposition with multiple search directions. <i>International Journal for Numerical Methods in Engineering</i> , 2015, 104, 905-927.	1.5	37
23	Effect of Stent-Graft Compliance on Endotension After EVAR. <i>Journal of Endovascular Therapy</i> , 2009, 16, 105-113.	0.8	36
24	Vibration testing of a fresh-frozen human pelvis: The role of the pelvic ligaments. <i>Journal of Biomechanics</i> , 2007, 40, 1599-1605.	0.9	34
25	Real-Time Path Planning in Unknown Environments for Bipedal Robots. <i>IEEE Robotics and Automation Letters</i> , 2017, 2, 1856-1863.	3.3	32
26	Experimental twelve degree of freedom rubber isolator models for use in substructuring assemblies. <i>Journal of Sound and Vibration</i> , 2020, 474, 115253.	2.1	32
27	Modified SSTD method to account for harmonic excitations during operational modal analysis. <i>Mechanism and Machine Theory</i> , 2004, 39, 1247-1255.	2.7	30
28	Solving generalized eigenvalue problems on the interfaces to build a robust two-level FETI method. <i>Comptes Rendus Mathematique</i> , 2013, 351, 197-201.	0.1	27
29	Dual Craig-Bampton component mode synthesis method for model order reduction of nonclassically damped linear systems. <i>Mechanical Systems and Signal Processing</i> , 2018, 111, 678-698.	4.4	27
30	Vibration source description in substructuring: A theoretical depiction. <i>Mechanical Systems and Signal Processing</i> , 2015, 60-61, 498-511.	4.4	26
31	An Autonomous and Flexible Robotic Framework for Logistics Applications. <i>Journal of Intelligent and Robotic Systems: Theory and Applications</i> , 2019, 93, 419-431.	2.0	24
32	Extended preconditioners for the FETI method applied to constrained problems. <i>International Journal for Numerical Methods in Engineering</i> , 2002, 54, 1-26.	1.5	23
33	A "nodeless"™ dual superelement formulation for structural and multibody dynamics application to reduction of contact problems. <i>International Journal for Numerical Methods in Engineering</i> , 2016, 106, 773-798.	1.5	23
34	Accurate and efficient modeling of complex offshore wind turbine support structures using augmented superelements. <i>Wind Energy</i> , 2014, 17, 1035-1054.	1.9	21
35	A lean and efficient snapshot generation technique for the Hyper-Reduction of nonlinear structural dynamics. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2017, 325, 330-349.	3.4	21
36	A non-intrusive model-order reduction of geometrically nonlinear structural dynamics using modal derivatives. <i>Mechanical Systems and Signal Processing</i> , 2021, 147, 107126.	4.4	21

#	ARTICLE	IF	CITATIONS
37	An Impulse Based Substructuring method for coupling impulse response functions and finite element models. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2014, 275, 113-137.	3.4	19
38	Discrete Empirical Interpolation Method for Finite Element Structural Dynamics. <i>Conference Proceedings of the Society for Experimental Mechanics</i> , 2013, , 203-212.	0.3	19
39	Vision-Based 3D Modeling of Unknown Dynamic Environments for Real-Time Humanoid Navigation. <i>International Journal of Humanoid Robotics</i> , 2019, 16, 1950002.	0.6	17
40	Experimental Joint Identification Using System Equivalent Model Mixing in a Bladed Disk. <i>Journal of Vibration and Acoustics, Transactions of the ASME</i> , 2020, 142, .	1.0	17
41	Contact stiffness of jointed interfaces: A comparison of dynamic substructuring techniques with frictional hysteresis measurements. <i>Mechanical Systems and Signal Processing</i> , 2022, 171, 108896.	4.4	16
42	Versatile and robust bipedal walking in unknown environments: real-time collision avoidance and disturbance rejection. <i>Autonomous Robots</i> , 2019, 43, 1957-1976.	3.2	14
43	Including directly measured rotations in the virtual point transformation. <i>Mechanical Systems and Signal Processing</i> , 2020, 141, 106440.	4.4	12
44	Numerical modelling of electromechanical coupling using fictitious domain and level set methods. <i>International Journal for Numerical Methods in Engineering</i> , 2009, 80, 478-506.	1.5	11
45	Feasibility of Laser Doppler Vibrometry as potential diagnostic tool for patients with abdominal aortic aneurysms. <i>Journal of Biomechanics</i> , 2013, 46, 1113-1120.	0.9	10
46	ALE beam using reference dynamics. <i>Multibody System Dynamics</i> , 2019, 46, 127-146.	1.7	10
47	Comparison of Different Approaches to Include Connection Elements into Frequency-Based Substructuring. <i>Experimental Techniques</i> , 2020, 44, 425-433.	0.9	10
48	Electrostatic simulation using XFEM for conductor and dielectric interfaces. <i>International Journal for Numerical Methods in Engineering</i> , 2011, 85, 1207-1226.	1.5	9
49	Electromagnetomechanical Coupled Vibration Analysis of a Direct-Drive Off-Shore Wind Turbine Generator. <i>Journal of Computational and Nonlinear Dynamics</i> , 2015, 10, .	0.7	9
50	Impulse-based substructuring in a floating frame to simulate high frequency dynamics in flexible multibody dynamics. <i>Multibody System Dynamics</i> , 2018, 42, 47-77.	1.7	9
51	Contactless Vibrational Analysis of Transparent Hydrogel Structures Using Laser-Doppler Vibrometry. <i>Experimental Mechanics</i> , 2020, 60, 1067-1078.	1.1	9
52	A simple and efficient extension of a class of substructure based preconditioners to heterogeneous structural mechanics problems. , 1999, 44, 489.		9
53	Reduction methods for MEMS nonlinear dynamic analysis. <i>Conference Proceedings of the Society for Experimental Mechanics</i> , 2011, , 53-65.	0.3	9
54	Aging tolerant control of direct injection engines. <i>Control Engineering Practice</i> , 2018, 77, 201-212.	3.2	8

#	ARTICLE	IF	CITATIONS
55	Robust and high fidelity real-time hybrid substructuring. Mechanical Systems and Signal Processing, 2021, 157, 107720.	4.4	8
56	A Comparison of Two Component TPA Approaches for Steering Gear Noise Prediction. Conference Proceedings of the Society for Experimental Mechanics, 2015, , 71-79.	0.3	8
57	Development of a Low Cost Automatic Modal Hammer for Applications in Substructuring. Conference Proceedings of the Society for Experimental Mechanics, 2020, , 77-86.	0.3	8
58	A reduced interface component mode synthesis method using coarse meshes. Procedia Engineering, 2017, 199, 348-353.	1.2	7
59	Interface reduction methods for mechanical systems with elasto-hydrodynamic lubricated revolute joints. Multibody System Dynamics, 2018, 42, 79-96.	1.7	7
60	Modal Analysis of a 7 DoF Sweet Pepper Harvesting Robot. Conference Proceedings of the Society for Experimental Mechanics, 2020, , 163-170.	0.3	7
61	A hybrid testing method based on adaptive feed-forward filters. Mechanical Systems and Signal Processing, 2020, 139, 106586.	4.4	7
62	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.	1.5	7
63	Practical Aspects of Dynamic Substructuring in Wind Turbine Engineering. Conference Proceedings of the Society for Experimental Mechanics, 2011, , 163-185.	0.3	7
64	Application of Residual Vectors to Superelement Modeling of an Offshore Wind Turbine Foundation. Conference Proceedings of the Society for Experimental Mechanics, 2012, , 149-163.	0.3	6
65	Recycling of solution spaces in multipreconditioned FETI methods applied to structural dynamics. International Journal for Numerical Methods in Engineering, 2018, 116, 141-160.	1.5	6
66	An augmented free-interface-based modal substructuring for nonlinear structural dynamics including interface reduction. Journal of Sound and Vibration, 2019, 462, 114915.	2.1	6
67	A new analysis methodology for estimating the eigenfrequencies of systems with high modal damping. Journal of Sound and Vibration, 2016, 361, 290-306.	2.1	5
68	Nonlinear Substructuring Using Fixed Interface Nonlinear Normal Modes. Conference Proceedings of the Society for Experimental Mechanics, 2017, , 205-213.	0.3	5
69	Evaluation of an External Vibration Damping Approach for Robot Manipulators Using a Flexible Multi Body Simulation. , 2019, , .		5
70	A domain decomposition strategy to efficiently solve structures containing repeated patterns. International Journal for Numerical Methods in Engineering, 2009, 78, 828-842.	1.5	4
71	Numerical Modeling of the Electromechanical Interaction in MEMS. Lecture Notes in Computational Science and Engineering, 2009, , 315-342.	0.1	4
72	Building and Reducing a Three-Field Finite-Element Model of a Damped Electromechanical Actuator. Journal of Microelectromechanical Systems, 2011, 20, 665-675.	1.7	4

#	ARTICLE	IF	CITATIONS
73	Dynamic Models for Load Calculation Procedures of Offshore Wind Turbine Support Structures: Overview, Assessment, and Outlook. <i>Journal of Computational and Nonlinear Dynamics</i> , 2015, 10, .	0.7	4
74	A strategy to stabilize the transient analysis and increase the approximation accuracy of dual Craig-Bampton reduced systems. <i>Finite Elements in Analysis and Design</i> , 2019, 160, 32-45.	1.7	4
75	Substituting Internal Forces for Blocked Forces or Free Interface Displacements in Substructured Simulations. <i>Conference Proceedings of the Society for Experimental Mechanics</i> , 2014, , 77-96.	0.3	4
76	Multi-DoF Interface Synchronization of Real-Time-Hybrid-Tests Using a Recursive-Least-Squares Adaption Law: A Numerical Evaluation. <i>Conference Proceedings of the Society for Experimental Mechanics</i> , 2016, , 7-14.	0.3	4
77	A general mixed boundary model reduction method for component mode synthesis. <i>IOP Conference Series: Materials Science and Engineering</i> , 2010, 10, 012116.	0.3	3
78	Normalized passivity control for hardware-in-the-loop with contact. <i>International Journal of Dynamics and Control</i> , 2021, 9, 1471-1477.	1.5	3
79	A Step Towards Testing of Foot Prostheses Using Real-Time Substructuring (RTS). <i>Conference Proceedings of the Society for Experimental Mechanics</i> , 2020, , 1-9.	0.3	3
80	Dual Craig-Bampton Method with Reduction of Interface Coordinates. <i>Conference Proceedings of the Society for Experimental Mechanics</i> , 2017, , 143-163.	0.3	3
81	The Influence of Structural Dynamics on Cascaded Joint Position Control of a Flexible Beam with a Compliant Gear. , 2019, , .		3
82	A level-set-based large sliding contact algorithm for easy analysis of implant positioning. <i>International Journal for Numerical Methods in Engineering</i> , 2012, 89, 1317-1336.	1.5	2
83	An Adaptive Approach to Coupling Vibration Tests and Simulation Models with Harmonic Excitation. , 2018, , .		2
84	Multifidelity component interface reduction and modal truncation augmentation. <i>International Journal for Numerical Methods in Engineering</i> , 2019, 120, 105-124.	1.5	2
85	Fast Approximation of Over-Determined Second-Order Linear Boundary Value Problems by Cubic and Quintic Spline Collocation. <i>Robotics</i> , 2020, 9, 48.	2.1	2
86	Hierarchical Motion Planning Framework for Manipulators in Human-Centered Dynamic Environments. , 2020, , .		2
87	Fidelity Assessment of Real-Time Hybrid Substructure Testing: a Review and the Application of Artificial Neural Networks. <i>Experimental Techniques</i> , 0, , 1.	0.9	2
88	In Vivo Measurement of the Human Thorax and Abdomen Surface Using Laser Vibrometry: A New Diagnostic Tool?. <i>Conference Proceedings of the Society for Experimental Mechanics</i> , 2012, , 235-245.	0.3	2
89	An Effective Method for Assembling Impulse Response Functions to Linear and Non-linear Finite Element Models. <i>Conference Proceedings of the Society for Experimental Mechanics</i> , 2012, , 123-135.	0.3	2
90	Model Order Reduction for Geometric Nonlinear Structures with Variable State-Dependent Basis. <i>Conference Proceedings of the Society for Experimental Mechanics</i> , 2014, , 455-462.	0.3	2

#	ARTICLE	IF	CITATIONS
91	Effects of Magneto-Mechanical Coupling on Structural Modal Parameters. Conference Proceedings of the Society for Experimental Mechanics, 2014, , 11-18.	0.3	2
92	Evaluating the Mechanical Redesign of a Biped Walking Robot Using Experimental Modal Analysis. Conference Proceedings of the Society for Experimental Mechanics, 2022, , 45-52.	0.3	2
93	Multiphysical Simulation, Model Order Reduction (ECSW) and Experimental Validation of an Active Magnetic Bearing. Actuators, 2022, 11, 169.	1.2	2
94	In-Situ Experimental Modal Analysis of a Direct-Drive Wind Turbine Generator. Conference Proceedings of the Society for Experimental Mechanics, 2015, , 157-165.	0.3	1
95	<i>vibro</i>â€Lanczos, a symmetric Lanczos solver for vibroâ€acoustic simulations. International Journal for Numerical Methods in Engineering, 2016, 107, 290-311.	1.5	1
96	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
97	Modal Substructuring of Geometrically Nonlinear Plates. Proceedings in Applied Mathematics and Mechanics, 2017, 17, 515-516.	0.2	1
98	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
99	Performance of the Expanded Virtual Point Transformation on a Complex Test Structure. Experimental Techniques, 2021, 45, 83-93.	0.9	1
100	Theoretical comparison of the FETI and algebraically partitioned FETI methods, and performance comparisons with a direct sparse solver. , 1999, 46, 501.		1
101	Using Remote Sensing Technologies for Wind Turbine/Farm Health Monitoring. , 2015, , 1045-1056.		1
102	Identifying mode shapes and modal frequencies by operational modal analysis in the presence of harmonic excitation. , 2005, 45, 213.		1
103	TIME INTEGRATION OF DUAL CRAIG-BAMPTON REDUCED SYSTEMS. , 2017, , .		1
104	Hardware-in-the-Loop Test of a Prosthetic Foot. Applied Sciences (Switzerland), 2021, 11, 9492.	1.3	1
105	Time-Optimization of Trajectories Using Zero-Clamped Cubic Splines and Their Analytical Gradients. IEEE Robotics and Automation Letters, 2022, 7, 4528-4534.	3.3	1
106	Simultaneous Identification of Free and Supported Frequency Response Functions of a Rotor in Active Magnetic Bearings. Actuators, 2022, 11, 144.	1.2	1
107	Stochastic finite element method for analyzing static and dynamic pull-in of microsystems. IOP Conference Series: Materials Science and Engineering, 2010, 10, 012202.	0.3	0
108	Modal Reduction in Co-Rotated Multi-Body Dynamics Based on the Dual Craig-Bampton Method. , 2011, , .		0

#	ARTICLE	IF	CITATIONS
109	Stability Control of Wind Turbines for Varying Operating Conditions Through Vibration Measurements. Springer Proceedings in Energy, 2015, , 137-148.	0.2	0
110	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
111	A Simplification of the RitzGenEO Recycling Strategy for Adaptive Multi-Preconditioned FETI Applied to Multiple Right-Hand Sides. Proceedings in Applied Mathematics and Mechanics, 2018, 18, e201800204.	0.2	0
112	Overview of Craig-Bampton Substructuring Approaches for Model Order Reduction of Nonclassically Damped Systems. Proceedings in Applied Mathematics and Mechanics, 2018, 18, e201800242.	0.2	0
113	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
114	An Approach for Stable Time Integration of Dual Craig-Bampton Reduced Systems. Proceedings in Applied Mathematics and Mechanics, 2018, 18, e201800276.	0.2	0
115	Stability Issues in Hardware-in-the-Loop Tests of Flexible Components. Proceedings in Applied Mathematics and Mechanics, 2018, 18, e201800361.	0.2	0
116	An academic approach to the multidisciplinary development of liquid-oxygen turbopumps for space applications. CEAS Space Journal, 2019, 11, 193-203.	1.1	0
117	External Vibration Damping of a Robot Manipulator's TCP Using Acceleration Feedback. Proceedings in Applied Mathematics and Mechanics, 2019, 19, e201900344.	0.2	0
118	Comparison of different Excitation Strategies in Operational Modal Analysis (OMA). Proceedings in Applied Mathematics and Mechanics, 2019, 19, e201900392.	0.2	0
119	How Housing Dynamics Affect the Monitoring of Rotor Unbalance: A Case Study. Proceedings in Applied Mathematics and Mechanics, 2019, 19, e201900250.	0.2	0
120	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.	0.3	0
121	Investigation of Torque Controlled Robots with Flexible Links Using a Flexible Multibody Simulation. , 2021, , .		0
122	A Spectrally Preconditioned Iterative Reduced Correction Algorithm for Vibro-acoustic Problems. Conference Proceedings of the Society for Experimental Mechanics, 2012, , 17-33.	0.3	0
123	Towards Dynamic Substructuring Using Measured Impulse Response Functions. Conference Proceedings of the Society for Experimental Mechanics, 2014, , 73-82.	0.3	0
124	Towards a Parallel Time Integration Method for Nonlinear Systems. Conference Proceedings of the Society for Experimental Mechanics, 2014, , 135-145.	0.3	0
125	Dynamic Stability Analysis of Wind Turbines Through In-Field Vibration Tests. , 2015, , 1057-1068.		0
126	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.	0.1	0



#	ARTICLE	IF	CITATIONS
127	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.	0.3	0
128	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.	0.3	0
129	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.	0.3	0
130	An External Stabilization Unit for High-Precision Applications of Robot Manipulators. , 2020, , .		0
131	Fidelity assessment of Real-Time Hybrid Substructuring based on convergence and extrapolation. Mechanical Systems and Signal Processing, 2022, 175, 109135.	4.4	0