

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

201674
27
h-index

161849
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.	2.6	624
2	A dual Craig-Bampton method for dynamic substructuring. Journal of Computational and Applied Mathematics, 2004, 168, 383-391.	2.0	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.	3.9	208
4	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
5	Feasibility of monitoring large wind turbines using photogrammetry. Energy, 2010, 35, 4802-4811.	8.8	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.	2.8	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.	4.2	102
8	A family of substructure decoupling techniques based on a dual assembly approach. Mechanical Systems and Signal Processing, 2012, 27, 379-396.	8.0	84
9	A quadratic manifold for model order reduction of nonlinear structural dynamics. Computers and Structures, 2017, 188, 80-94.	4.4	76
10	Challenges in testing and monitoring the in-operation vibration characteristics of wind turbines. Mechanical Systems and Signal Processing, 2013, 41, 649-666.	8.0	70
11	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
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.	2.8	68
13	Multiscale domain decomposition analysis of quasi-brittle heterogeneous materials. International Journal for Numerical Methods in Engineering, 2012, 89, 1337-1366.	2.8	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.	2.8	52
15	Monolithic modelling of electro-mechanical coupling in micro-structures. International Journal for Numerical Methods in Engineering, 2006, 65, 461-493.	2.8	51
16	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
17	Dynamic Nonlinear Aeroelastic Model of a Kite for Power Generation. Journal of Guidance, Control, and Dynamics, 2014, 37, 1426-1436.	2.8	44
18	Generalization of quadratic manifolds for reduced order modeling of nonlinear structural dynamics. Computers and Structures, 2017, 192, 196-209.	4.4	43

#	ARTICLE	IF	CITATIONS
19	Generalized Methodology for Assembly and Reduction of Component Models for Dynamic Substructuring. AIAA Journal, 2011, 49, 1010-1020.	2.6	40
20	Evaluation of Substructure Reduction Techniques with Fixed and Free Interfaces. Strojnicki Vestnik/Journal of Mechanical Engineering, 2016, 62, 452-462.	1.1	39
21	An Impulse Based Substructuring approach for impact analysis and load case simulations. Journal of Sound and Vibration, 2013, 332, 7174-7190.	3.9	37
22	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
23	Effect of Stent-Graft Compliance on Endotension After EVAR. Journal of Endovascular Therapy, 2009, 16, 105-113.	1.5	36
24	Vibration testing of a fresh-frozen human pelvis: The role of the pelvic ligaments. Journal of Biomechanics, 2007, 40, 1599-1605.	2.1	34
25	Real-Time Path Planning in Unknown Environments for Bipedal Robots. IEEE Robotics and Automation Letters, 2017, 2, 1856-1863.	5.1	32
26	Experimental twelve degree of freedom rubber isolator models for use in substructuring assemblies. Journal of Sound and Vibration, 2020, 474, 115253.	3.9	32
27	Modified SSTD method to account for harmonic excitations during operational modal analysis. Mechanism and Machine Theory, 2004, 39, 1247-1255.	4.5	30
28	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
29	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
30	Vibration source description in substructuring: A theoretical depiction. Mechanical Systems and Signal Processing, 2015, 60-61, 498-511.	8.0	26
31	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
32	Extended preconditioners for the FETI method applied to constrained problems. International Journal for Numerical Methods in Engineering, 2002, 54, 1-26.	2.8	23
33	A "nodeless" 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
34	Accurate and efficient modeling of complex offshore wind turbine support structures using augmented superelements. Wind Energy, 2014, 17, 1035-1054.	4.2	21
35	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
36	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

#	ARTICLE	IF	CITATIONS
37	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
38	Discrete Empirical Interpolation Method for Finite Element Structural Dynamics. Conference Proceedings of the Society for Experimental Mechanics, 2013, , 203-212.	0.5	19
39	Vision-Based 3D Modeling of Unknown Dynamic Environments for Real-Time Humanoid Navigation. International Journal of Humanoid Robotics, 2019, 16, 1950002.	1.1	17
40	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
41	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
42	Versatile and robust bipedal walking in unknown environments: real-time collision avoidance and disturbance rejection. Autonomous Robots, 2019, 43, 1957-1976.	4.8	14
43	Including directly measured rotations in the virtual point transformation. Mechanical Systems and Signal Processing, 2020, 141, 106440.	8.0	12
44	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
45	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
46	ALE beam using reference dynamics. Multibody System Dynamics, 2019, 46, 127-146.	2.7	10
47	Comparison of Different Approaches to Include Connection Elements into Frequency-Based Substructuring. Experimental Techniques, 2020, 44, 425-433.	1.5	10
48	Electrostatic simulation using XFEM for conductor and dielectric interfaces. International Journal for Numerical Methods in Engineering, 2011, 85, 1207-1226.	2.8	9
49	Electromagnetomechanical Coupled Vibration Analysis of a Direct-Drive Off-Shore Wind Turbine Generator. Journal of Computational and Nonlinear Dynamics, 2015, 10, .	1.2	9
50	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
51	Contactless Vibrational Analysis of Transparent Hydrogel Structures Using Laser-Doppler Vibrometry. Experimental Mechanics, 2020, 60, 1067-1078.	2.0	9
52	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
53	Reduction methods for MEMS nonlinear dynamic analysis. Conference Proceedings of the Society for Experimental Mechanics, 2011, , 53-65.	0.5	9
54	Aging tolerant control of direct injection engines. Control Engineering Practice, 2018, 77, 201-212.	5.5	8

#	ARTICLE	IF	CITATIONS
55	Robust and high fidelity real-time hybrid substructuring. Mechanical Systems and Signal Processing, 2021, 157, 107720.	8.0	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.	0.5	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.	0.5	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 elastohydrodynamic lubricated revolute joints. Multibody System Dynamics, 2018, 42, 79-96.	2.7	7
60	Modal Analysis of a 7 DoF Sweet Pepper Harvesting Robot. Conference Proceedings of the Society for Experimental Mechanics, 2020, , 163-170.	0.5	7
61	A hybrid testing method based on adaptive feed-forward filters. Mechanical Systems and Signal Processing, 2020, 139, 106586.	8.0	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.	2.8	7
63	Practical Aspects of Dynamic Substructuring in Wind Turbine Engineering. Conference Proceedings of the Society for Experimental Mechanics, 2011, , 163-185.	0.5	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.	0.5	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.	2.8	6
66	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
67	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
68	Nonlinear Substructuring Using Fixed Interface Nonlinear Normal Modes. Conference Proceedings of the Society for Experimental Mechanics, 2017, , 205-213.	0.5	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.	2.8	4
71	Numerical Modeling of the Electromechanical Interaction in MEMS. Lecture Notes in Computational Science and Engineering, 2009, , 315-342.	0.3	4
72	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

#	ARTICLE	IF	CITATIONS
73	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
74	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
75	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
76	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
77	A general mixed boundary model reduction method for component mode synthesis. IOP Conference Series: Materials Science and Engineering, 2010, 10, 012116.	0.6	3
78	Normalized passivity control for hardware-in-the-loop with contact. International Journal of Dynamics and Control, 2021, 9, 1471-1477.	2.5	3
79	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
80	Dual Craig-Bampton Method with Reduction of Interface Coordinates. Conference Proceedings of the Society for Experimental Mechanics, 2017, , 143-163.	0.5	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. International Journal for Numerical Methods in Engineering, 2012, 89, 1317-1336.	2.8	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. International Journal for Numerical Methods in Engineering, 2019, 120, 105-124.	2.8	2
85	Fast Approximation of Over-Determined Second-Order Linear Boundary Value Problems by Cubic and Quintic Spline Collocation. Robotics, 2020, 9, 48.	3.5	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. Experimental Techniques, 0, , 1.	1.5	2
88	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
89	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
90	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

#	ARTICLE	IF	CITATIONS
91	Effects of Magneto-Mechanical Coupling on Structural Modal Parameters. Conference Proceedings of the Society for Experimental Mechanics, 2014, , 11-18.	0.5	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.	0.5	2
93	Multiphysical Simulation, Model Order Reduction (ECSW) and Experimental Validation of an Active Magnetic Bearing. Actuators, 2022, 11, 169.	2.3	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.	0.5	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.	2.8	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.	1.5	1
100	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
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. Experimental Mechanics, 2005, 45, 213-220.	2.0	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.	2.5	1
105	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
106	Simultaneous Identification of Free and Supported Frequency Response Functions of a Rotor in Active Magnetic Bearings. Actuators, 2022, 11, 144.	2.3	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.	0.6	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.	0.3	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.	2.3	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.	0.5	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.	0.5	0
123	Towards Dynamic Substructuring Using Measured Impulse Response Functions. Conference Proceedings of the Society for Experimental Mechanics, 2014, , 73-82.	0.5	0
124	Towards a Parallel Time Integration Method for Nonlinear Systems. Conference Proceedings of the Society for Experimental Mechanics, 2014, , 135-145.	0.5	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.	0.3	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.	0.5	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.	0.5	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.	0.5	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.	8.0	0