David A Romero

List of Publications by Year
in descending order

52 papers	1,043 citations	430874 18 h-index	477307 29 g-index
52 all docs	52 docs citations	52 times ranked	869 citing authors

#	Article	IF	Citations
1	A new mathematical programming approach to optimize wind farm layouts. Renewable Energy, 2014, 63, 674-680.	8.9	153
2	Wind farm layout optimization on complex terrains – Integrating a CFD wake model with mixed-integer programming. Applied Energy, 2016, 178, 404-414.	10.1	84
3	Toward efficient optimization of wind farm layouts: Utilizing exact gradient information. Applied Energy, 2016, 179, 110-123.	10.1	69
4	The impact of land use constraints in multi-objective energy-noise wind farm layout optimization. Renewable Energy, 2016, 85, 359-370.	8.9	69
5	Bayesian computer-aided experimental design of heterogeneous scaffolds for tissue engineering. CAD Computer Aided Design, 2005, 37, 1127-1139.	2.7	56
6	A mechanistic semi-empirical wake interaction model for wind farm layout optimization. Energy, 2015, 93, 2157-2165.	8.8	46
7	Solving wind farm layout optimization with mixed integer programs and constraint programs. EURO Journal on Computational Optimization, 2014, 2, 195-219.	2.4	45
8	Gradient-based multidisciplinary design of wind farms with continuous-variable formulations. Applied Energy, 2017, 197, 279-291.	10.1	35
9	Constrained multi-objective wind farm layout optimization: Novel constraint handling approach based on constraint programming. Renewable Energy, 2018, 126, 341-353.	8.9	35
10	Improving CFD wind farm simulations incorporating wind direction uncertainty. Renewable Energy, 2019, 133, 1011-1023.	8.9	35
11	Coherent phonon transport in short-period two-dimensional superlattices of graphene and boron nitride. Physical Review B, 2016, 93, .	3.2	33
12	De-epithelialization of porcine tracheal allografts as an approach for tracheal tissue engineering. Scientific Reports, 2019, 9, 12034.	3.3	31
13	Optimal design of wind farms in complex terrains using computational fluid dynamics and adjoint methods. Applied Energy, 2020, 261, 114426.	10.1	31
14	Multi-Objective Wind Farm Layout Optimization Considering Energy Generation and Noise Propagation With NSGA-II. Journal of Mechanical Design, Transactions of the ASME, 2014, 136, .	2.9	30
15	Value-Based Global Optimization. Journal of Mechanical Design, Transactions of the ASME, 2014, 136, .	2.9	30
16	Continuous adjoint formulation for wind farm layout optimization: A 2D implementation. Applied Energy, 2018, 228, 2333-2345.	10.1	28
17	Wind Farm Layout Optimization Considering Energy Generation and Noise Propagation. , 2012, , .		24
18	Combinatorial screening of 3D biomaterial properties that promote myofibrogenesis for mesenchymal stromal cell-based heart valve tissue engineering. Acta Biomaterialia, 2017, 58, 34-43.	8.3	24

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19	A novel wake model for wind farm design on complex terrains. Journal of Wind Engineering and Industrial Aerodynamics, 2018, 174, 94-102.	3.9	19
20	Analysis and Modifications of Turbulence Models for Wind Turbine Wake Simulations in Atmospheric Boundary Layers. Journal of Solar Energy Engineering, Transactions of the ASME, 2018, 140, .	1.8	17
21	Computational fluid dynamics for enhanced tracheal bioreactor design and long-segment graft recellularization. Scientific Reports, 2021, 11, 1187.	3.3	15
22	Challenges in data-based degradation models for lithium-ion batteries. International Journal of Energy Research, 2020, 44, 3954-3975.	4.5	14
23	Multiresponse Metamodeling in Simulation-Based Design Applications. Journal of Mechanical Design, Transactions of the ASME, 2012, 134, .	2.9	13
24	Error Metrics and the Sequential Refinement of Kriging Metamodels. Journal of Mechanical Design, Transactions of the ASME, 2015, 137, .	2.9	13
25	Multi-Stage Bayesian Surrogates for the Design of Time-Dependent Systems. , 2004, , 405.		10
26	On Adaptive Sampling for Single and Multi-Response Bayesian Surrogate Models. , 2006, , 393.		10
27	Assessment of the Holland model for silicon phonon-phonon relaxation times using lattice dynamics calculations. Journal of Applied Physics, 2013, 113, .	2.5	9
28	A Rational Design Approach to Gaussian Process Modeling for Variable Fidelity Models. , 2011, , .		9
29	Solving Wind Farm Layout Optimization with Mixed Integer Programming and Constraint Programming. Lecture Notes in Computer Science, 2013, , 284-299.	1.3	8
30	Optimizing wind farms layouts for maximum energy production using probabilistic inference: Benchmarking reveals superior computational efficiency and scalability. Energy, 2021, 223, 120035.	8.8	7
31	Ascending aortic aneurysm haemodynamics are associated with aortic wall biomechanical properties. European Journal of Cardio-thoracic Surgery, 2022, 61, 367-375.	1.4	7
32	Vessel network extraction and analysis of mouse pulmonary vasculature via X-ray micro-computed tomographic imaging. PLoS Computational Biology, 2021, 17, e1008930.	3.2	6
33	A Novel Wake Interaction Model for Wind Farm Layout Optimization. , 2014, , .		5
34	Modeling Time-Dependent Systems Using Multi-Stage Bayesian Surrogates. , 2003, , 47.		3
35	Analysis and Modifications of Turbulence Models for Wind Turbine Wake Simulations in Atmospheric Boundary Layers. , 2016, , .		3
36	Efficient Wind Turbine Micrositing in Large-Scale Wind Farms. , 2016, , .		3

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37	Aerogel for Microsystems Thermal Insulation: System Design and Process Development. , 2005, , 753.		2
38	Wind Farm Layout Optimization in Complex Terrains Using Computational Fluid Dynamics. , 2015, , .		2
39	Cell Inertia: Predicting Cell Distributions in Lung Vasculature to Optimize Re-endothelialization. Frontiers in Bioengineering and Biotechnology, 2022, 10, 891407.	4.1	2
40	A Study of Covariance Functions for Multi-Response Metamodeling for Simulation-Based Design and Optimization. , 2008, , .		1
41	Improving Multi-Response Metamodels With Upper/Lower Bound Information Using Multi-Stage, Non-Stationary Covariance Functions. , 2010, , .		1
42	Multi-Objective Energy-Noise Wind Farm Layout Optimization Under Land Use Constraints. , 2014, , .		1
43	A Multilevel Optimization Method for the Design and Operation of Stand-Alone Hybrid Renewable Energy Systems for Multiple Remote Communities. , 2014, , .		1
44	Predicting Phonon Thermal Transport in Two-Dimensional Graphene-Boron Nitride Superlattices at the Short-Period Limit. , 2015, , .		1
45	Promoting Suitable Hemodynamic Conditions for Thrombus Formation in Abdominal Aortic Aneurysms With Multilayer Stents. , 2016, , .		1
46	Optimization of porous stents for endovascular repair of abdominal aortic aneurysms. International Journal for Numerical Methods in Biomedical Engineering, 2020, 36, e3336.	2.1	1
47	Battery Health Diagnosis Approach Integrating Physics–based Modelling with Electrochemical Impedance Spectroscopy. Energy Technology, 0, , .	3.8	1
48	A Comparison of Metamodel-Assisted Pre-Screening Criteria for Multi-Objective Genetic Algorithms. , 2009, , .		0
49	Enhanced Thermal Map Prediction and Floor Plan Optimization in Electronic Devices Considering Sub-Continuum Thermal Effects. , 2011, , .		0
50	Predicting Phonon Transport in Two-Dimensional Boron Nitride-Graphene Superlattices. , 2014, , .		0
51	Constrained Multi-Objective Wind Farm Layout Optimization: Introducing a Novel Constraint Handling Approach Based on Constraint Programming. , 2015, , .		0
52	Understanding the Influence of Turbine Geometry and Atmospheric Turbulence on Wind Turbine Wakes. , 2016, , .		0