Kathryn E Johnson

List of Publications by Year
in descending order

56 papers	2,413 citations	471509 17 h-index	526287 27 g-index
59 all docs	59 docs citations	59 times ranked	1280 citing authors

#	Article	IF	Citations
1	Evaluating techniques for redirecting turbine wakes using SOWFA. Renewable Energy, 2014, 70, 211-218.	8.9	308
2	A tutorial on the dynamics and control of wind turbines and wind farms. , 2009, , .		244
3	Simulation comparison of wake mitigation control strategies for a two-turbine case. Wind Energy, 2015, 18, 2135-2143.	4.2	206
4	A tutorial of wind turbine control for supporting grid frequency through active power control. , 2012, , .		164
5	Estimation of Rotor Effective Wind Speed: A Comparison. IEEE Transactions on Control Systems Technology, 2013, 21, 1155-1167.	5.2	153
6	Methods for Increasing Region 2 Power Capture on a Variable-Speed Wind Turbine. Journal of Solar Energy Engineering, Transactions of the ASME, 2004, 126, 1092-1100.	1.8	136
7	Wind farm control: Addressing the aerodynamic interaction among wind turbines. , 2009, , .		109
8	Wind turbine fault detection and fault tolerant control - An enhanced benchmark challenge. , 2013, , .		95
9	FX-RLS-Based Feedforward Control for LIDAR-Enabled Wind Turbine Load Mitigation. IEEE Transactions on Control Systems Technology, 2012, 20, 1212-1222.	5.2	85
10	Assessment of Extremum Seeking Control for Wind Farm Energy Production. Wind Engineering, 2012, 36, 701-715.	1.9	59
11	Development, implementation, and testing of fault detection strategies on the National Wind Technology Center's controls advanced research turbines. Mechatronics, 2011, 21, 728-736.	3.3	54
12	Comparison of Strategies for Enhancing Energy Capture and Reducing Loads Using LIDAR and Feedforward Control. IEEE Transactions on Control Systems Technology, 2013, 21, 1129-1142.	5.2	50
13	Evaluating wake models for wind farm control. , 2014, , .		43
14	Baseline Results and Future Plans for the NREL Controls Advanced Research Turbine. , 2004, , .		42
15	Comparison and testing of power reserve control strategies for grid-connected wind turbines. Wind Energy, 2014, 17, 343-358.	4.2	40
16	Adaptive Pitch Control of Variable-Speed Wind Turbines. Journal of Solar Energy Engineering, Transactions of the ASME, 2008, 130, .	1.8	34
17	A distributed optimization framework for wind farms. Journal of Wind Engineering and Industrial Aerodynamics, 2013, 123, 88-98.	3.9	34
18	Lidar-enhanced wind turbine control: Past, present, and future. , 2016, , .		34

#	ARTICLE	IF	CITATIONS
19	Methods for Increasing Region 2 Power Capture on a Variable Speed HAWT. , 2004, , .		33
20	Wind direction estimation using SCADA data with consensus-based optimization. Wind Energy Science, 2019, 4, 355-368.	3.3	33
21	Efficient Optimization of Large Wind Farms for Real-Time Control. , 2018, , .		31
22	Active Power Control for Wind Farms Using Distributed Model Predictive Control and Nearest Neighbor Communication. , 2018, , .		30
23	Methods for Controlling a Wind Turbine System With a Continuously Variable Transmission in Region 2. Journal of Solar Energy Engineering, Transactions of the ASME, 2009, 131, .	1.8	27
24	Detailed field test of yaw-based wake steering. Journal of Physics: Conference Series, 2016, 753, 052003.	0.4	25
25	Proof-of-concept of a reinforcement learning framework for wind farm energy capture maximization in time-varying wind. Journal of Renewable and Sustainable Energy, 2021, 13, .	2.0	24
26	System-level design studies for large rotors. Wind Energy Science, 2019, 4, 595-618.	3.3	24
27	Flow Control Leveraging Downwind Rotors for Improved Wind Power Plant Operation. , 2019, , .		18
28	A Distributed Reinforcement Learning Yaw Control Approach for Wind Farm Energy Capture Maximization. , 2020, , .		17
29	Aero-structural design and optimization of 50â€‰MW wind turbine with over 250-m blades. Wind Engineering, 2022, 46, 273-295.	1.9	17
30	Design of a tower and drive train damping controller for the threeâ€bladed controls advanced research turbine operating in designâ€driving load cases. Wind Energy, 2011, 14, 571-601.	4.2	15
31	Engineering student perceptions of social justice in a feedback control systems course. Journal of Engineering Education, 2021, 110, 718-749.	3.0	15
32	Sparse-Sensor Placement for Wind Farm Control. Journal of Physics: Conference Series, 2018, 1037, 032019.	0.4	14
33	Design and Testing of a Scaled Demonstrator Turbine at the National Wind Technology Center. , 2019, , .		12
34	Preventing wind turbine overspeed in highly turbulent wind events using disturbance accommodating control and light detection and ranging. Wind Energy, 2015, 18, 351-368.	4.2	11
35	Models used for the simulation and control of a segmented ultralight morphing rotor. IFAC-PapersOnLine, 2017, 50, 4478-4483.	0.9	11
36	Lidar-assisted wind turbine feedforward torque controller design below rated. , 2014, , .		9

#	Article	IF	Citations
37	Independent blade pitch controller design for a three-bladed turbine using disturbance accommodating control. , 2016, , .		9
38	Extreme-scale load-aligning rotor: To hinge or not to hinge?. Applied Energy, 2020, 257, 113985.	10.1	9
39	Gravoâ€aeroelastic scaling of a 13â€MW downwind rotor for 20% scale blades. Wind Energy, 2021, 24, 229-245.	4.2	9
40	Adaptive Pitch Control of Variable-Speed Wind Turbines. , 2007, , .		8
41	Deep Reinforcement Learning for Automatic Generation Control of Wind Farms. , 2021, , .		8
42	Servo-aero-gravo-elastic (SAGE) scaling and its application to a 13-MW downwind turbine. Journal of Renewable and Sustainable Energy, 2020, 12, 063301.	2.0	8
43	Adaptive Torque Control of Variable Speed Wind Turbines for Increased Region 2 Energy Capture. , 2005, , .		6
44	Robust fault tolerant pitch control of wind turbines. , 2013, , .		6
45	LPV-based torque control for an extreme-scale morphing wind turbine rotor. , 2017, , .		6
46	Model Development of a Wind Turbine System with a Continuously Variable Transmission for Design of Region 2 Speed Control. , 2008, , .		5
47	LIDAR-based Extreme Event Control to Prevent Wind Turbine Overspeed. , 2013, , .		5
48	Short-Term Forecasting Across a Network for the Autonomous Wind Farm. , 2019, , .		5
49	LIDAR-based FX-RLS feedforward control for wind turbine load mitigation. , 2011, , .		4
50	Combined Lidar-Based Feedforward and Feedback Controllers for Wind Turbines with Tower and Blade Damping. , 2011, , .		3
51	Pulsed LIDAR-assisted controllers for turbine power capture enhancement and fatigue load mitigation below rated. , 2012, , .		3
52	LIDAR-assisted preview controllers design for a MW-scale commercial wind turbine model. , 2013, , .		3
53	Field tests of a highly flexible downwind ultralight rotor to mimic a 13-MW turbine rotor. Journal of Physics: Conference Series, 2022, 2265, 032031.	0.4	2
54	Efficient stochastic wake modeling for wind farm control. , 2017, , .		1

#	ARTICLE	IF	CITATIONS
55	Single-sensor-based Fault Detection in Wind Turbines. , 2012, , .		0
56	Model based soft shutdown controller for SUMR wind turbine. , 2019, , .		0