Venkataramana Ajjarapu

List of Publications by Year
in descending order

76 papers	2,085 citations	304743 22 h-index	361022 35 g-index
78 all docs	78 docs citations	78 times ranked	1781 citing authors

#	ARTICLE	IF	CITATIONS
1	SMTD Co-Simulation Framework With HELICS for Future-Grid Analysis and Synthetic Measurement-Data Generation. IEEE Transactions on Industry Applications, 2022, 58, 131-141.	4.9	18
2	Data-Driven Identification of Nonlinear Power System Dynamics Using Output-Only Measurements. IEEE Transactions on Power Systems, 2022, 37, 3458-3468.	6.5	10
3	Critical Comparative Analysis of Measurement Based Centralized Online Voltage Stability Indices. IEEE Transactions on Power Systems, 2022, 37, 4618-4629.	6.5	3
4	Propagating Uncertainty in Power System Initial Conditions Using Data-Driven Linear Operators. IEEE Transactions on Power Systems, 2022, 37, 4125-4128.	6.5	4
5	Efficient Data-Driven Uncertainty Propagation in Power System Dynamics Using Low-Rank Randomized Koopman Operator Approximation. , 2022, , .		0
6	Primary Frequency Support Through North American Continental HVDC Interconnections With VSC-MTDC Systems. IEEE Transactions on Power Systems, 2021, 36, 806-817.	6.5	26
7	Basics of Voltage Stability Assessment. Power Electronics and Power Systems, 2021, , 25-77.	0.6	0
8	Real-Time Modal Analysis of Electric Power Gridsâ€" The Need for Dynamic State Estimation. , 2020, , .		1
9	Data-Driven Approach for Uncertainty Propagation and Reachability Analysis in Dynamical Systems. , 2020, , .		7
10	Real-Time Local Volt/Var Control Under External Disturbances With High PV Penetration. IEEE Transactions on Smart Grid, 2019, 10, 3849-3859.	9.0	93
11	On Information Transfer-Based Characterization of Power System Stability. IEEE Transactions on Power Systems, 2019, 34, 3804-3812.	6.5	9
12	Review of Challenges and Research Opportunities for Voltage Control in Smart Grids. IEEE Transactions on Power Systems, 2019, 34, 2790-2801.	6.5	270
13	Sequential Set-Point Control for Heterogeneous Thermostatically Controlled Loads Through an Extended Markov Chain Abstraction. IEEE Transactions on Smart Grid, 2019, 10, 116-127.	9.0	32
14	Adaptive Online Monitoring of Voltage Stability Margin via Local Regression. IEEE Transactions on Power Systems, 2018, 33, 701-713.	6.5	42
15	Sensitivity Based Thevenin Index With Systematic Inclusion of Reactive Power Limits. IEEE Transactions on Power Systems, 2018, 33, 932-942.	6.5	28
16	Sensitivity based Thevenin Index with Systematic Inclusion of Reactive Power Limits. , 2018, , .		1
17	A Framework to Utilize DERsâ€™ VAR Resources to Support the Grid in an Integrated T-D System. , 2018, , .		10
18	Impact of Distribution Generation Penetration on Power System Dynamics considering Voltage Ride-Through Requirements. , 2018, , .		5

#	Article	IF	Citations
19	Adaptive critical eigenvalues tracing via projected continuation of invariant subspace. IET Generation, Transmission and Distribution, 2017, 11, 2115-2123.	2.5	0
20	Participation factor based CVR for enhanced voltage stability using integrated transmission and distributed system. , 2017, , .		3
21	Comparison of CVR impact on transmission system load margin with aggregated and de-aggregated distribution system. , 2017, , .		3
22	Long-term voltage stability assessment of an integrated transmission distribution system. , 2017, , .		15
23	Real-time monitoring of long-term voltage stability via convolutional neural network. , 2017, , .		20
24	Sensitivity analysis on modeling heterogeneous thermostatically controlled loads using Markov chain abstraction. , 2017, , .		1
25	Identifying causal interaction in power system: Information-based approach. , 2017, , .		8
26	Extracting expedient short term services from Homogeneous Group of Thermostatically Controlled Loads. , 2016, , .		1
27	Online Detection of Stealthy False Data Injection Attacks in Power System State Estimation. IEEE Transactions on Smart Grid, 2016, , 1-1.	9.0	158
28	Attack-resilient measurement design methodology for State Estimation to increase robustness against cyber attacks. , 2016, , .		5
29	A computer package for multi-contingency constrained reactive power planning. , 2015, , .		5
30	Real-time monitoring of long-term voltage stability via local linear regression. , 2015, , .		0
31	PMU based real-time monitoring for delayed voltage response. , 2015, , .		1
32	Calculating the long term voltage stability margin using a linear index. , 2015, , .		12
33	Contingency Analysis and Identification of Dynamic Voltage Control Areas. IEEE Transactions on Power Systems, 2015, 30, 2974-2983.	6.5	25
34	Entropy-Based Metric for Characterization of Delayed Voltage Recovery. IEEE Transactions on Power Systems, 2015, 30, 2460-2468.	6.5	19
35	A hybrid dynamic optimization approach for stability constrained optimal power flow. , 2015, , .		0
36	PMU-Based Model-Free Approach for Real-Time Rotor Angle Monitoring. IEEE Transactions on Power Systems, 2015, 30, 2818-2819.	6.5	59

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37	Economic dispatch with deliverable ramping capability constraint for high wind penetration. , 2014, , .		8
38	PMU based real-time short term voltage stability monitoring — Analysis and implementation on a real-time test bed. , 2014, , .		5
39	Identification and location of long‐term voltage instability based on branch equivalent. IET Generation, Transmission and Distribution, 2014, 8, 46-54.	2.5	8
40	Application of automatic differentiation in power system trajectory sensitivity analysis. , 2014, , .		1
41	Long term voltage stability thevenin index using voltage locus method. , 2014, , .		4
42	A Hybrid Dynamic Optimization Approach for Stability Constrained Optimal Power Flow. IEEE Transactions on Power Systems, 2014, 29, 2138-2149.	6.5	34
43	Real-Time Monitoring of Short-Term Voltage Stability Using PMU Data. IEEE Transactions on Power Systems, 2013, 28, 3702-3711.	6.5	135
44	Dynamic Optimization Based Reactive Power Planning to Mitigate Slow Voltage Recovery and Short Term Voltage Instability. IEEE Transactions on Power Systems, 2013, 28, 3865-3873.	6.5	113
45	Approach to trace and locate long‐term voltage instability risk in power system planning. IET Generation, Transmission and Distribution, 2013, 7, 483-490.	2.5	3
46	Wireless Network Design for Transmission Line Monitoring in Smart Grid. IEEE Transactions on Smart Grid, 2013, 4, 1076-1086.	9.0	89
47	Performance analysis for two-level parallel transient stability constrained optimal power flow. , 2013, , .		2
48	An approach for real time voltage stability margin control via reactive power reserve sensitivities. IEEE Transactions on Power Systems, 2013, 28, 615-625.	6.5	70
49	PMU-based model-free approach for short term voltage stability monitoring. , 2012, , .		14
50	A practical two-stage online voltage stability margin estimation method for utility-scale systems. , 2011, , .		4
51	Optimal Allocation of Dynamic VAR Support Using Mixed Integer Dynamic Optimization. IEEE Transactions on Power Systems, 2011, 26, 305-314.	6.5	84
52	Sensitivity-Based Efficient Identification of Oscillatory Stability Margin and Damping Margin Using Continuation of Invariant Subspaces. IEEE Transactions on Power Systems, 2011, 26, 1484-1492.	6.5	19
53	Development of Multilinear Regression Models for Online Voltage Stability Margin Estimation. IEEE Transactions on Power Systems, 2011, 26, 374-383.	6.5	55
54	A Novel Online Load Shedding Strategy for Mitigating Fault-Induced Delayed Voltage Recovery. IEEE Transactions on Power Systems, 2011, 26, 294-304.	6.5	80

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55	A New Method of Eigenvalue Sensitivity Calculation Using Continuation of Invariant Subspaces. IEEE Transactions on Power Systems, 2011, 26, 479-480.	6.5	5
56	RPM-Based Approach to Extract Power System Steady State and Small Signal Stability Information From the Time-Domain Simulation. IEEE Transactions on Power Systems, 2011, 26, 261-269.	6.5	4
57	MW Resource Assessment Model for a Hybrid Energy Conversion System With Wind and Solar Resources. IEEE Transactions on Sustainable Energy, 2011, 2, 383-391.	8.8	70
58	A Speed-Adaptive Reduced-Order Observer for Sensorless Vector Control of Doubly Fed Induction Generator-Based Variable-Speed Wind Turbines. IEEE Transactions on Energy Conversion, 2010, 25, 891-900.	5.2	78
59	Application of multi-linear regression models and machine learning techniques for online voltage stability margin estimation. , 2010, , .		6
60	Extended Reactive Capability of DFIG Wind Parks for Enhanced System Performance. IEEE Transactions on Power Systems, 2009, 24, 1346-1355.	6.5	89
61	Planning Reconfigurable Reactive Control for Voltage Stability Limited Power Systems. IEEE Transactions on Power Systems, 2009, 24, 1029-1038.	6.5	21
62	Invariant subspace based eigenvalue tracing for power system small-signal stability analysis. , 2009, , .		6
63	Hierarchical control for hybrid wind systems. , 2009, , .		0
64	Sensorless Control of the Doubly-Fed Induction Generator for Wind Energy Generations Using a Speed-Adaptive Full-Order Flux Observer. , 2009, , .		4
65	A Novel Parameter Identification Approach via Hybrid Learning for Aggregate Load Modeling. IEEE Transactions on Power Systems, 2009, 24, 1145-1154.	6.5	80
66	Transmission system vulnerability assessment based on practical identification of critical relays and contingencies. , 2008, , .		3
67	Trajectory optimization for voltage control via receding horizon control and mixed-integer programming. , 2008, , .		0
68	Effect of grid voltage unbalance on operation of a bi-directional converter. , 2008, , .		3
69	Optimal allocation of dynamic VAR for enhancing stability and power quality. , 2008, , .		5
70	Critical Eigenvalues Tracing for Power System Analysis via Continuation of Invariant Subspaces and Projected Arnoldi Method. IEEE Power Engineering Society General Meeting, 2007, , .	0.0	0
71	Modified algorithm to trace critical eigenvalues of power system with sensitivities via continuation of invariant subspaces. , 2007, , .		3
72	Critical Eigenvalues Tracing for Power System Analysis via Continuation of Invariant Subspaces and Projected Arnoldi Method. IEEE Transactions on Power Systems, 2007, 22, 324-332.	6.5	46

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73	Relay margin trajectory based identification of transmission vulnerability for power system security assessment. , 2007, , .		4
74	A Novel Algorithm Incorporating System Status to Prevent Undesirable Protection Operation during Voltage Instability. , 2007, , .		10
75	Test Loadability of Power Systems using A Networked Power Electronic Devices Control and Measurement System. , 2006, , .		0
76	EFFECT OF LOAD MODELING ON STEADY STATE VOLTAGE STABILITY. Electric Power Components and Systems, 1995, 23, 501-514.	0.1	20