

# Lei Shang

## List of Publications by Year in descending order

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63  
papers

2,669  
citations

279701

23  
h-index

289141

40  
g-index

64  
all docs

64  
docs citations

64  
times ranked

1829  
citing authors

#	ARTICLE	IF	CITATIONS
1	Modeling of VSC Connected to Weak Grid for Stability Analysis of DC-Link Voltage Control. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2015, 3, 1193-1204.	3.7	266
2	Direct Active and Reactive Power Regulation of Grid-Connected DC/AC Converters Using Sliding Mode Control Approach. IEEE Transactions on Power Electronics, 2011, 26, 210-222.	5.4	255
3	Modeling of Grid-Connected VSCs for Power System Small-Signal Stability Analysis in DC-Link Voltage Control Timescale. IEEE Transactions on Power Systems, 2017, 32, 3981-3991.	4.6	231
4	Modeling of Grid-Connected DFIG-Based Wind Turbines for DC-Link Voltage Stability Analysis. IEEE Transactions on Sustainable Energy, 2015, 6, 1325-1336.	5.9	193
5	Virtual Synchronous Control for Grid-Connected DFIG-Based Wind Turbines. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2015, 3, 932-944.	3.7	176
6	Voltage Dynamics of Current Control Time-Scale in a VSC-Connected Weak Grid. IEEE Transactions on Power Systems, 2016, 31, 2925-2937.	4.6	163
7	Sliding-Mode-Based Direct Power Control of Grid-Connected Wind-Turbine-Driven Doubly Fed Induction Generators Under Unbalanced Grid Voltage Conditions. IEEE Transactions on Energy Conversion, 2012, 27, 362-373.	3.7	156
8	DC-Bus Voltage Control Stability Affected by AC-Bus Voltage Control in VSCs Connected to Weak AC Grids. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2016, 4, 445-458.	3.7	149
9	Inertia Provision and Estimation of PLL-Based DFIG Wind Turbines. IEEE Transactions on Power Systems, 2017, 32, 510-521.	4.6	134
10	An Improved Design of Current Controller for <i>LCL</i> -Type Grid-Connected Converter to Reduce Negative Effect of PLL in Weak Grid. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2018, 6, 648-663.	3.7	126
11	Impact of Inertia Control of DFIG-Based WT on Electromechanical Oscillation Damping of SG. IEEE Transactions on Power Systems, 2018, 33, 3450-3459.	4.6	67
12	Modeling of DFIG-Based WTs for Small-Signal Stability Analysis in DVC Timescale in Power Electronized Power Systems. IEEE Transactions on Energy Conversion, 2017, 32, 1151-1165.	3.7	66
13	Stability of DC-link voltage as affected by phase locked loop in VSC when attached to weak grid. , 2014, , .		61
14	Inertia and Primary Frequency Provisions of PLL-Synchronized VSC HVDC When Attached to Islanded AC System. IEEE Transactions on Power Systems, 2018, 33, 4179-4188.	4.6	54
15	Modeling and Stability Analysis of DC-Link Voltage Control in Multi-VSCs With Integrated to Weak Grid. IEEE Transactions on Energy Conversion, 2017, 32, 1127-1138.	3.7	51
16	Fast Grid Frequency and Voltage Control of Battery Energy Storage System Based on the Amplitude-Phase-Locked-Loop. IEEE Transactions on Smart Grid, 2022, 13, 941-953.	6.2	46
17	Modeling of DFIG Wind Turbine Based on Internal Voltage Motion Equation in Power Systems Phase-Amplitude Dynamics Analysis. IEEE Transactions on Power Systems, 2018, 33, 1484-1495.	4.6	45
18	Mechanism Analysis of DFIG-Based Wind Turbine's Fault Current During LVRT With Equivalent Inductances. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2020, 8, 1515-1527.	3.7	38

#	ARTICLE	IF	CITATIONS
19	SISO Equivalent of MIMO VSC-Dominated Power Systems for Voltage Amplitude and Phase Dynamic Analyses in Current Control Timescale. IEEE Transactions on Energy Conversion, 2019, 34, 1454-1465.	3.7	37
20	Fault Ride Through Strategy of Virtual-Synchronous-Controlled DFIG-Based Wind Turbines Under Symmetrical Grid Faults. IEEE Transactions on Energy Conversion, 2020, 35, 1360-1371.	3.7	36
21	Overview of problems in large-scale wind integrations. Journal of Modern Power Systems and Clean Energy, 2013, 1, 22-25.	3.3	34
22	Inertia Characteristic of DFIG-Based WT Under Transient Control and its Impact on the First-Swing Stability of SGs. IEEE Transactions on Energy Conversion, 2017, 32, 1502-1511.	3.7	29
23	Multi-time scale dynamics in power electronics-dominated power systems. Frontiers of Mechanical Engineering, 2017, 12, 303-311.	2.5	26
24	Understanding Inertial Response of Variable-Speed Wind Turbines by Defined Internal Potential Vector. Energies, 2017, 10, 22.	1.6	25
25	Common-mode voltage injection-based nearest level modulation with loss reduction for modular multilevel converters. IET Renewable Power Generation, 2016, 10, 798-806.	1.7	20
26	Dynamics and Collapse in a Power System Model with Voltage Variation: The Damping Effect. PLoS ONE, 2016, 11, e0165943.	1.1	19
27	Modelling and Analysis of Electromagnetic Time Scale Voltage Variation Affected by Power Electronic Interfaced Voltage Regulatory Devices. IEEE Transactions on Power Systems, 2022, 37, 1102-1112.	4.6	18
28	Impact of large-scale photovoltaic generation integration structure on static voltage stability in China's Qinghai province network. Journal of Engineering, 2017, 2017, 671-675.	0.6	14
29	Improved virtual synchronous control for grid-connected VSCs under grid voltage unbalanced conditions. Journal of Modern Power Systems and Clean Energy, 2019, 7, 174-185.	3.3	13
30	Mechanism Analysis of Subsynchronous Torsional Interaction With PMSG-Based WTs and LCC-HVDC. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2021, 9, 1708-1724.	3.7	13
31	Predictive direct power control of grid-connected voltage-sourced converters under unbalanced grid voltage conditions. , 2009, , .		11
32	Effect of reactive power control on stability of DC-link voltage control in VSC connected to weak grid. , 2014, , .		11
33	Impact of the voltage feed-forward and current decoupling on VSC current control stability in weak grid based on complex variables. , 2015, , .		10
34	Nonlinear analysis of a simple amplitude-phase motion equation for power-electronics-based power system. Nonlinear Dynamics, 2019, 95, 1965-1976.	2.7	10
35	Interaction analysis of multi VSCs integrated into weak grid in current control time-scale. , 2016, , .		9
36	Phase-amplitude model for doubly fed induction generators. Journal of Modern Power Systems and Clean Energy, 2019, 7, 369-379.	3.3	7

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37	Positive and negative sequence control of DFIG based wind turbines and its impact on grid voltage profile concerning converter control capability. Journal of Engineering, 2017, 2017, 1584-1589.	0.6	6
38	Interaction analysis between induction motor loads and STATCOM in weak grid using induction machine model. Journal of Modern Power Systems and Clean Energy, 2018, 6, 158-167.	3.3	6
39	Sliding mode current control of grid-connected voltage source converter. , 2010, , .		5
40	Amplitude-phase-locked loop: Estimator of three-phase grid voltage vector. , 2015, , .		5
41	Modeling and Analyzing the Effect of Frequency Variation on Weak Grid-Connected VSC System Stability in DC Voltage Control Timescale. Energies, 2019, 12, 4458.	1.6	5
42	Analytic Quantification of Interactions in MTDC Systems Based on Self-/En-Stabilizing Coefficients in DC Voltage Control Timescale. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2021, 9, 2980-2991.	3.7	5
43	Wind farm aggregation method based on motion equation concept: a case study. Journal of Engineering, 2017, 2017, 708-713.	0.6	4
44	Functionality identification for the testing systems with large-scale highly-concentrated wind power integration by long-distance transmission lines. , 2014, , .		3
45	Active and Reactive Power Joint Balancing for Analyzing Short-Term Voltage Instability Caused by Induction Motor. Energies, 2019, 12, 3617.	1.6	2
46	Analysis on SSR frequency components by studying two-dimensional modulation of synchronous generator's flux linkage. Journal of Engineering, 2019, 2019, 1313-1318.	0.6	2
47	Damping Injection Control Strategy of Low Frequency Oscillation in Photovoltaic Power Plant. , 2021, , .		2
48	Dynamic characteristic and interaction analysis of synchronous generator based on amplitude-phase motion equation. Journal of Engineering, 2017, 2017, 714-718.	0.6	1
49	Characteristic of the Equivalent Inertia of PLL-Based DFIG Wind Turbine and Its Impact on System Frequency Dynamic. , 2019, , .		1
50	Fault Current Analysis of Type-3 Wind Turbine Considering Dynamic Influence of Phase Locked Loop. , 2019, , .		1
51	Frequency Coupling of Asymmetrical VSC-dominated Power Systems in Small-signal Dynamic Analysis. , 2020, , .		1
52	Voltage Source Converter-Based Voltage Stiffness Compensator to Improve Grid Voltage Dynamics. Frontiers in Energy Research, 2022, 10, .	1.2	1
53	Dynamic compensating strategy and en-stabilizing compensator to enhance the stability of wind farms integrated into weak grid. , 2014, , .		0
54	Multiband filter: estimator of different frequency components of grid voltage. Journal of Engineering, 2017, 2017, 696-701.	0.6	0

#	ARTICLE	IF	CITATIONS
55	Simplified Frequency-Domain Model of Modular Multilevel Converter. , 2019, , .		0
56	Study on Sub-synchronous Oscillation of Grid-connected VSC via Series Compensation Lines. , 2019, , .		0
57	Phenomenon of Active Power Consumption by the Inductors in Voltage Source Converters Dominated Power Systems. , 2019, , .		0
58	Time-Varying Amplitude-Frequency Characteristics Analysis of VSC Internal Voltage Under Grid Fault. , 2019, , .		0
59	Stability and Adaptability Analysis for PLL-Synchronized VSC-HVDC with Frequency Regulation Scheme Under Islanded Grid. , 2019, , .		0
60	Stability analysis of VSC based on SISO equivalent in current control time scale. , 2020, , .		0
61	Research on Transient Interaction Mechanism of Two PMSG Considering Different Nodes and Network Characteristics. , 2020, , .		0
62	Research on Photovoltaic VSC Control Technology Based on Generation. , 2021, , .		0
63	A bi-level optimal configuration model of isolated microgrid considering energy storage lifetime. , 2021, , .		0