

# Jon Are Suul

## List of Publications by Year in descending order

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116  
papers

4,533  
citations

218677

26  
h-index

315739

38  
g-index

118  
all docs

118  
docs citations

118  
times ranked

3117  
citing authors

#	ARTICLE	IF	CITATIONS
1	A Virtual Synchronous Machine implementation for distributed control of power converters in SmartGrids. <i>Electric Power Systems Research</i> , 2015, 122, 180-197.	3.6	474
2	Equivalence of Virtual Synchronous Machines and Frequency-Droops for Converter-Based MicroGrids. <i>IEEE Transactions on Smart Grid</i> , 2014, 5, 394-395.	9.0	473
3	Low Voltage Ride Through of Wind Farms With Cage Generators: STATCOM Versus SVC. <i>IEEE Transactions on Power Electronics</i> , 2008, 23, 1104-1117.	7.9	362
4	Virtual synchronous machines &#x2014; Classification of implementations and analysis of equivalence to droop controllers for microgrids. , 2013, , .		287
5	Evaluation of Virtual Synchronous Machines With Dynamic or Quasi-Stationary Machine Models. <i>IEEE Transactions on Industrial Electronics</i> , 2017, 64, 5952-5962.	7.9	159
6	Virtual Synchronous Machine-Based Control of a Single-Phase Bi-Directional Battery Charger for Providing Vehicle-to-Grid Services. <i>IEEE Transactions on Industry Applications</i> , 2016, 52, 3234-3244.	4.9	151
7	Identification and Small-Signal Analysis of Interaction Modes in VSC MTDC Systems. <i>IEEE Transactions on Power Delivery</i> , 2016, 31, 888-897.	4.3	149
8	Automatic Tuning of Cascaded Controllers for Power Converters Using Eigenvalue Parametric Sensitivities. <i>IEEE Transactions on Industry Applications</i> , 2015, 51, 1743-1753.	4.9	147
9	Impedanceâ€compensated grid synchronisation for extending the stability range of weak grids with voltage source converters. <i>IET Generation, Transmission and Distribution</i> , 2016, 10, 1315-1326.	2.5	119
10	Wireless Charging for Ships: High-Power Inductive Charging for Battery Electric and Plug-In Hybrid Vessels. <i>IEEE Electrification Magazine</i> , 2017, 5, 22-32.	1.8	102
11	Virtual-Flux-Based Voltage-Sensor-Less Power Control for Unbalanced Grid Conditions. <i>IEEE Transactions on Power Electronics</i> , 2012, 27, 4071-4087.	7.9	101
12	Voltage-Sensor-Less Synchronization to Unbalanced Grids by Frequency-Adaptive Virtual Flux Estimation. <i>IEEE Transactions on Industrial Electronics</i> , 2012, 59, 2910-2923.	7.9	99
13	Frequencyâ€dependent cable modelling for smallâ€signal stability analysis of VSCâ€HVDC systems. <i>IET Generation, Transmission and Distribution</i> , 2016, 10, 1370-1381.	2.5	95
14	Small-signal modeling and parametric sensitivity of a virtual synchronous machine in islanded operation. <i>International Journal of Electrical Power and Energy Systems</i> , 2015, 72, 3-15.	5.5	92
15	Improving Small-Signal Stability of an MMC With CCSC by Control of the Internally Stored Energy. <i>IEEE Transactions on Power Delivery</i> , 2018, 33, 429-439.	4.3	81
16	Extending the Life of Gear Box in Wind Generators by Smoothing Transient Torque With STATCOM. <i>IEEE Transactions on Industrial Electronics</i> , 2010, 57, 476-484.	7.9	79
17	Control system tuning and stability analysis of Virtual Synchronous Machines. , 2013, , .		79
18	Synchronous Reference Frame Hysteresis Current Control for Grid Converter Applications. <i>IEEE Transactions on Industry Applications</i> , 2011, 47, 2183-2194.	4.9	75

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19	High-Power Machines and Starter-Generator Topologies for More Electric Aircraft: A Technology Outlook. IEEE Access, 2020, 8, 130104-130123.	4.2	74
20	Minimizing Converter Requirements of Inductive Power Transfer Systems With Constant Voltage Load and Variable Coupling Conditions. IEEE Transactions on Industrial Electronics, 2016, 63, 6835-6844.	7.9	70
21	Generalized Voltage-Based State-Space Modeling of Modular Multilevel Converters With Constant Equilibrium in Steady State. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2018, 6, 707-725.	5.4	67
22	STATCOM-Based Indirect Torque Control of Induction Machines During Voltage Recovery After Grid Faults. IEEE Transactions on Power Electronics, 2010, 25, 1240-1250.	7.9	62
23	Harmonic-Domain SISO Equivalent Impedance Modeling and Stability Analysis of a Single-Phase Grid-Connected VSC. IEEE Transactions on Power Electronics, 2020, 35, 9770-9783.	7.9	56
24	Small-signal modelling and parametric sensitivity of a Virtual Synchronous Machine. , 2014, , .		50
25	Energy-Based State-Space Representation of Modular Multilevel Converters with a Constant Equilibrium Point in Steady-State Operation. IEEE Transactions on Power Electronics, 2018, 33, 4832-4851.	7.9	50
26	Simplified models of a single-phase power electronic inverter for railway power system stability analysisâ€”Development and evaluation. Electric Power Systems Research, 2010, 80, 204-214.	3.6	47
27	Shore Charging for Plug-In Battery-Powered Ships: Power System Architecture, infrastructure, and Control. IEEE Electrification Magazine, 2020, 8, 47-61.	1.8	42
28	Modeling and Analysis of SOGI-PLL/FLL-Based Synchronization Units: Stability Impacts of Different Frequency-Feedback Paths. IEEE Transactions on Energy Conversion, 2021, 36, 2047-2058.	5.2	42
29	Small-signal state-space modeling of modular multilevel converters for system stability analysis. , 2015, , .		39
30	Tuning of control loops for grid connected voltage source converters. , 2008, , .		35
31	Control of DC-capacitor peak voltage in reduced capacitance single-phase STATCOM. , 2016, , .		34
32	Implementation and analysis of a control scheme for damping of oscillations in VSC-based HVDC grids. , 2014, , .		30
33	System-Wide Harmonic Mitigation in a Diesel-Electric Ship by Model Predictive Control. IEEE Transactions on Industrial Electronics, 2016, 63, 4008-4019.	7.9	30
34	Improved grid interface of induction generators for renewable energy by use of STATCOM. , 2007, , .		27
35	A synchronization controller for grid reconnection of islanded virtual synchronous machines. , 2015, , .		27
36	State-space modelling of modular multilevel converters for constant variables in steady-state. , 2016, , .		27

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37	Constant power loads in AC distribution systems: An investigation of stability. , 2008, , .		26
38	A simple method for analytical evaluation of LVRT in wind energy for induction generators with STATCOM or SVC. , 2007, , .		25
39	Estimation of sub-module capacitor voltages in modular multilevel converters. , 2013, , .		22
40	Wind power integration in isolated grids enabled by variable speed pumped storage hydropower plant. , 2008, , .		21
41	Optimal Shaping of the MMC Circulating Currents for Preventing AC-Side Power Oscillations From Propagating Into HVdc Grids. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2019, 7, 1015-1030.	5.4	21
42	Configuration and Model Order Selection of Frequency-Dependent ĩ Models for Representing DC Cables in Small-Signal Eigenvalue Analysis of HVDC Transmission Systems. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2021, 9, 2410-2426.	5.4	20
43	Load Balancing of a Modular Multilevel Grid-Interface Converter for Transformer-Less Large-Scale Wireless Electric Vehicle Charging Infrastructure. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2021, 9, 4587-4605.	5.4	20
44	Comparison of small-signal dynamics in MMC and two-level VSC HVDC transmission schemes. , 2016, , .		19
45	Electrical Machines and Power Electronics For Starter-Generators in More Electric Aircrafts: A Technology Review. , 2019, , .		18
46	Wind farms with increased transient stability margin provided by a STATCOM. , 2006, , .		15
47	Evaluation of Energy Transfer Efficiency for Shore-to-Ship Fast Charging Systems. , 2020, , .		15
48	Frequency-adaptive Virtual Flux estimation for grid synchronization under unbalanced conditions. , 2010, , .		14
49	Impact on small-signal dynamics of using circulating currents instead of AC-currents to control the DC voltage in MMC HVDC terminals. , 2016, , .		13
50	Coupling of AC Grids via VSC-HVDC Interconnections for Oscillation Damping Based on Differential and Common Power Control. IEEE Transactions on Power Electronics, 2020, 35, 6548-6558.	7.9	13
51	Torque transient alleviation in fixed speed wind generators by Indirect Torque Control with STATCOM. , 2008, , .		12
52	Virtual synchronous machine-based control of a single-phase bi-directional battery charger for providing vehicle-to-grid services. , 2015, , .		12
53	Minimization of converter ratings for MW-scale inductive charger operated under widely variable coupling conditions. , 2015, , .		12
54	A Comparative Study of Methods for Estimating Virtual Flux at the Point of Common Coupling in Grid-Connected Voltage Source Converters With LCL Filter. IEEE Transactions on Industry Applications, 2017, 53, 5795-5809.	4.9	12

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55	State-space modelling with steady-state time invariant representation of energy based controllers for modular multilevel converters. , 2017, , .		12
56	Exploring the range of impedance conditioning by virtual inductance for grid connected voltage source converters. , 2012, , .		11
57	Stability of DC voltage droop controllers in VSC HVDC systems. , 2015, , .		11
58	Virtual Synchronous Machine Control of VSC HVDC for Power System Oscillation Damping. , 2018, , .		11
59	Dynamic Wireless Charging of Autonomous Vehicles: Small-scale demonstration of inductive power transfer as an enabling technology for self-sufficient energy supply. IEEE Electrification Magazine, 2020, 8, 37-48.	1.8	11
60	A Current Controlled Virtual Synchronous Machine Adapted for Operation under Unbalanced Conditions. , 2020, , .		10
61	Impact of Virtual Flux reference frame orientation on voltage source inverters in weak grids. , 2010, , .		9
62	Small-Signal State-Space Analysis of Inductive Battery Charging System in Off-Resonant Operation. , 2019, , .		9
63	Flexible reference frame orientation of Virtual Flux-based Dual Frame Current controllers for operation in weak grids. , 2011, , .		8
64	Transient Control of Dynamic Inductive EV Charging and Impact on Energy Efficiency when Passing a Roadside Coil Section. , 2018, , .		8
65	An Integrated Method for Generating VSCsâ€™™ Periodical Steady-State Conditions and HSS-Based Impedance Model. IEEE Transactions on Power Delivery, 2020, 35, 2544-2547.	4.3	8
66	Negative Sequence Control for Virtual Synchronous Machines Under Unbalanced Conditions. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2022, 10, 5670-5685.	5.4	8
67	A study of biomass in a hybrid stand-alone Micro-Grid for the rural village of Wawashang, Nicaragua. , 2014, , .		7
68	DC/dc converters for interconnecting independent HVDC systems into multiterminal DC grids. , 2015, , .		7
69	Analysis of accuracy versus model order for frequency-dependent Pi-model of HVDC cables. , 2016, , .		7
70	Comparative Eigenvalue Analysis of Synchronous Machine Emulations and Synchronous Machines. , 2019, , .		7
71	A Multilayer Framework for Reliability Assessment of Shore-to-Ship Fast Charging System Design. IEEE Transactions on Transportation Electrification, 2022, 8, 3028-3040.	7.8	7
72	A Modular Multilevel Interface for Transformerless Grid Integration of Large-Scale Infrastructure for Wireless Electric Vehicle Charging. , 2019, , .		7

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73	Voltage saturation anti-windup for harmonic controllers in multiple reference frames. , 2015, , .		6
74	Small-Signal analysis of an isolated power system controlled by a virtual synchronous machine. , 2016, , .		6
75	Evaluation of Virtual Inertia Control Strategies for MMC-based HVDC Terminals by P-HiL Experiments. , 2019, , .		6
76	Analysis of Modular Multilevel Converters under unbalanced grid conditions with different load current control strategies and Lagrange-based differential current control. , 2013, , .		5
77	Generalized implementations of piecewise linear control characteristics for multiterminal HVDC. , 2014, , .		5
78	Embedded limitations and protections for droop-based control schemes with cascaded loops in the synchronous reference frame. , 2014, , .		5
79	Analysis of DC/DC converters in multiterminal HVDC systems for large offshore wind farms. , 2015, , .		5
80	Parametric Stability Assessment of Single-Phase Grid-Tied VSCs Using Peak and Average DC Voltage Control. IEEE Transactions on Industrial Electronics, 2022, 69, 2904-2915.	7.9	5
81	Improving the Power Reference Tracking of Virtual Synchronous Machines by Feed-Forward Control. , 2021, , .		5
82	Improving the dynamics of lagrange-based MMC controllers by means of adaptive filters for single-phase voltage, power and energy estimation. , 2013, , .		4
83	Operation of a Modular Multilevel Converter Controlled as a Virtual Synchronous Machine. , 2018, , .		4
84	Comparative Analysis of Small-Signal Dynamics in Virtual Synchronous Machines and Frequency-Derivative-Based Inertia Emulation. , 2018, , .		4
85	Analysis of MMC Dynamics in DQZ Coordinates for Vertical and Horizontal Energy Balancing Control. , 2018, , .		4
86	Impact on Power System Frequency Dynamics from an HVDC Transmission System With Converter Stations Controlled as Virtual Synchronous Machines. , 2019, , .		4
87	Reliability Analysis of Shore-to-Ship Fast Charging Systems. , 2021, , .		4
88	Optimal load management strategy for large electric vehicle charging stations with undersized charger clusters. IET Electrical Systems in Transportation, 2022, 12, 49-64.	2.4	4
89	Optimized Allocation of Loads in MMC-based Electric Vehicle Charging Infrastructure. , 2020, , .		4
90	V2G Potential Estimation and Optimal Discharge Scheduling for MMC-based Charging Stations. , 2020, , .		4

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91	Analysis and Mitigation of Oscillations in Inductive Power Transfer Systems with Constant Voltage Load and Pulse Density Modulation. , 2021, , .		4
92	Properties of reactive current injection by AC power electronic systems for loss minimization. , 2012, , .		3
93	System design and load profile shaping for a Reverse Osmosis desalination plant powered by a stand-alone PV system in Pozo Colorado, Paraguay. , 2014, , .		3
94	A simulation study of proportional resonant controller based on the implementation of frequency-adaptive virtual flux estimation with the LCL filter. , 2015, , .		3
95	Blocking capability for switching function and average models of modular multilevel converters. , 2016, , .		3
96	Time-Invariant State-Space model of an AC Cable by $\pi$ -representation of Frequency-Dependent $\pi$ -sections. , 2019, , .		3
97	Placement of virtual inertia from HVDC terminals based on a frequency deviation index. , 2021, , .		3
98	A Virtual Synchronous Machine-based Control for Eliminating DC-side Power Oscillations of Three-Phase VSCs under Unbalanced Grid Voltages. , 2021, , .		3
99	Optimal Management for Megawatt Level Electric Vehicle Charging Stations With a Grid Interface Based on Modular Multilevel Converter. IEEE Access, 2022, 10, 258-270.	4.2	3
100	Analysis of power cycling for semiconductor devices in modular multilevel converters. , 2016, , .		2
101	Interoperability of Modular Multilevel Converters and 2-level Voltage Source Converters in a Laboratory-Scale Multi-Terminal DC Grid. , 2018, , .		2
102	Virtual Friction Control for Power System Oscillation Damping with VSC-HVDC Links. , 2019, , .		2
103	P-HiL Evaluation of Virtual Inertia Support to the Nordic Power System by an HVDC Terminal. , 2020, , .		2
104	Eigenvalue-based analysis of small-signal dynamics and stability in DC grids. , 2021, , 69-128.		2
105	Virtual Friction for Oscillation Damping and Inertia Sharing from Multi-Terminal VSC-HVDC Grids. , 2020, , .		2
106	Impact on Efficiency of Inductive Battery Charging System by Sub-Resonant Frequency Control during Large Variations in Coupling Conditions. , 2020, , .		2
107	Competitiveness of grid connected photovoltaic power supply for a desalination plant under a prospective power market in Paraguay. , 2014, , .		1
108	A comparative study of methods for estimating virtual flux at the point of common coupling in grid connected voltage source converters with LCL filter. , 2016, , .		1

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109	Stability Analysis of a Virtual Synchronous Machine-based HVDC Link by Gear™s Method. , 2020, , .		1
110	Resynchronization of Islanded Virtual Synchronous Machines by Cascaded Phase and Frequency Controllers Acting on the Internal Power Reference. , 2020, , .		1
111	Operation-based Reliability Assessment of Shore-to-Ship Charging Systems. , 2022, , .		1
112	Non-Linear Model Predictive Control for Modular Multilevel Converters. , 2022, , .		1
113	Synchronous reference frame hysteresis current control for grid converter applications. , 2010, , .		0
114	High Efficiency operation of Inductive Battery Charging System by the Coordinated Voltage-Frequency Control during Large Variations in Coupling Conditions. , 2021, , .		0
115	Analysis of Scaling Characteristics for Inductive Power Transfer Coils. , 2022, , .		0
116	A Primary-Side Gain-Scheduled Controller Based on Dynamic Coupling Estimation for Inductive Battery Charging Systems with Sub-resonant Frequency Control. , 2022, , .		0