History and the Status of Electric Ship Propulsion, Integ Trends in the U.S. Navy

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Citation Report

#	Article	IF	CITATIONS
1	Adaptive Battery Management and Parameter Estimation Through Physics-Based Modeling and Experimental Verification. IEEE Transactions on Transportation Electrification, 2016, 2, 454-464.	7.8	47
2	All-Electric Ship Design: From Electrical Propulsion to Integrated Electrical and Electronic Power Systems. IEEE Transactions on Transportation Electrification, 2016, 2, 507-521.	7.8	184
3	Future Shipboard MVdc System Protection Requirements and Solid-State Protective Device Topological Tradeoffs. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2017, 5, 244-259.	5.4	71
4	Frequency-division power sharing and hierarchical control design for DC shipboard microgrids with hybrid energy storage systems. , 2017, , .		16
5	Thinking and Study of Electromagnetic Launch Technology. IEEE Transactions on Plasma Science, 2017, 45, 1071-1077.	1.3	83
6	Early-stage design of integrated power and energy systems for naval vessels electrification: Advanced modeling using CSI. , 2017, , .		10
7	Multi-rate LQR control of a multi-machine MVDC shipboard electric distribution system with constant power loads. , 2017, , .		1
8	Power converter metamodeling approach for the smart ship design environment. , 2017, , .		9
9	Algorithm-based evaluation of ramp rate and pulsed power loading for AC electric systems. , 2017, , .		2
10	Early-stage design of shipboard integrated power systems: CSI-based multiple solutions comparison. , 2017, , .		10
11	Short-Circuit Fault Management in DC Electric Ship Propulsion System: Protection Requirements, Review of Existing Technologies and Future Research Trends. IEEE Transactions on Transportation Electrification, 2018, 4, 272-291.	7.8	97
12	Optimal-Third-Harmonic-Injection-Based Control for a Five-Phase Dual Stator-Winding Induction Generator DC Generating System. IEEE Transactions on Industrial Electronics, 2018, 65, 9124-9134.	7.9	8
13	A Superconducting Vernier Motor for Electric Ship Propulsion. IEEE Transactions on Applied Superconductivity, 2018, 28, 1-6.	1.7	19
14	Control development and performance evaluation for battery/flywheel hybrid energy storage solutions to mitigate load fluctuations in all-electric ship propulsion systems. Applied Energy, 2018, 212, 919-930.	10.1	97
15	A review of power electronics equipment for all-electric ship MVDC power systems. International Journal of Electrical Power and Energy Systems, 2018, 96, 306-323.	5.5	50
16	DC Fault Protection Strategy for Medium Voltage Integrated Power System: Development and Assessment. Arabian Journal for Science and Engineering, 2018, 43, 2859-2872.	3.0	6
17	DC Power System for Fishing Boat. , 2018, , .		10
18	Power Conversion and Distribution Equipment Metamodels for Dependable Design of Shipboard Integrated Power and Energy Systems. , 2018, , .		5

#	Article	IF	CITATIONS
19	Naval Smart Grid Research Program: Phase 2. , 2018, , .		5
20	Capacitor Voltage Ripple Reduction of A 4-Level Hybrid Clamped Converter Using Switching State Redundancy for Medium-Voltage Drive. , 2018, , .		0
21	A Study on Design and Optimization of High Power Density PMSM for Pod Propulsion System. , 2018, , .		4
22	Fault Dynamics in a Multi-Generator MVDC Marine Power System Architecture. , 2018, , .		1
23	Energy Storage Systems for Shipboard Microgrids—A Review. Energies, 2018, 11, 3492.	3.1	92
24	Design and Analysis of New Harbour Grid Models to Facilitate Multiple Scenarios of Battery Charging and Onshore Supply for Modern Vessels. Energies, 2019, 12, 2354.	3.1	23
25	Early-Stage design methodology for a multirole electric propelled surface combatant ship. , 2019, , .		8
26	Control of Hybrid Diesel/PV/Battery/Ultra-Capacitor Systems for Future Shipboard Microgrids. Energies, 2019, 12, 3460.	3.1	22
27	Utilization of Power Hardware-in-the-Loop to Study Power Conversion Topologies and Control in Distributed Generation Power Systems. , 2019, , .		0
28	Analytical Performance Prediction of an Electromagnetic Launcher and Its Validation by Numerical Analyses and Experiments. Applied Sciences (Switzerland), 2019, 9, 4063.	2.5	2
29	Demonstration of Solid State Circuit Breakers within Low Voltage DC Distribution System for Shipboard Applications. , 2019, , .		6
30	Coordinated Control of a Hybrid-Electric-Ferry Shipboard Microgrid. IEEE Transactions on Transportation Electrification, 2019, 5, 828-839.	7.8	33
31	Applying a Virtual Prototyping Process to Generate Pareto Optimal Solutions for a Modular Multi-Level MVAC to MVDC Converter. , 2019, , .		8
32	Adaptive model predictive control for hybrid energy storage energy management in all-electric ship microgrids. Energy Conversion and Management, 2019, 198, 111929.	9.2	52
33	A Generic Multi-Criteria Design Approach Toward High Power Density and Fault-Tolerant Low-Speed PMSM for Pod Applications. IEEE Transactions on Transportation Electrification, 2019, 5, 356-370.	7.8	21
34	Ammunition Reliability Against the Harsh Environments During the Launch of an Electromagnetic Gun: A Review. IEEE Access, 2019, 7, 45322-45339.	4.2	26
35	Model and Control of Naval Ship Power System by The Concept of All-Electric Ships Based on Renewable Energy. , 2019, , .		7
36	Power Hardware-in-the-Loop Simulation Testing of a 200 MJ Battery-Based Energy Magazine for Shipboard Applications. , 2019, , .		8

#	Article	IF	CITATIONS
37	Feasibility Study on SSTO Rocket with an Initial Velocity Given by EML. Journal of Spacecraft and Rockets, 2019, 56, 241-247.	1.9	1
38	Multidisciplinary analysis of a 750ÂkW PMSM for marine propulsion including shock loading response. IET Electric Power Applications, 2020, 14, 1974-1983.	1.8	1
39	Energy efficiency of integrated electric propulsion for ships – A review. Renewable and Sustainable Energy Reviews, 2020, 134, 110145.	16.4	128
40	A review of multi-energy hybrid power system for ships. Renewable and Sustainable Energy Reviews, 2020, 132, 110081.	16.4	92
41	Soft Start-Up Control Strategy for Dual Active Bridge Converter with a Supercapacitor. Energies, 2020, 13, 4083.	3.1	2
42	Comprehensive Real-Time Hardware-In-the-Loop Transient Emulation of MVDC Power Distribution System on Nuclear Submarine. IEEE Open Journal of the Industrial Electronics Society, 2020, 1, 326-339.	6.8	5
43	Design and analysis of dual wound machine for electric ships. , 2020, , .		1
44	Application of Flux-Coupling-Type Superconducting Fault Current Limiter on Shipboard MVDC Integrated Power System. IEEE Transactions on Applied Superconductivity, 2020, 30, 1-8.	1.7	18
45	Random Asymmetric Carrier PWM Method for PMSM Vibration Reduction. IEEE Access, 2020, 8, 109411-109420.	4.2	22
46	Naval Engineering and Ship Control Special Edition Editorial. Journal of Marine Engineering and Technology, 2020, 19, 1-4.	4.1	1
47	Control of High-Performance Drive Feeding by Four-Level Hybrid Clamped Converter for Transportation Electrification. IEEE Transactions on Transportation Electrification, 2020, 6, 568-577.	7.8	11
48	Investigating the Performance Capability of a Lithium-ion Battery System When Powering Future Pulsed Loads. Energies, 2020, 13, 1357.	3.1	4
49	Control Strategy for Battery/Flywheel Hybrid Energy Storage in Electric Shipboard Microgrids. IEEE Transactions on Industrial Informatics, 2021, 17, 1089-1099.	11.3	34
50	Design and Analysis of a Five-Phase Permanent-Magnet Synchronous Motor for Fault-Tolerant Drive. Energies, 2021, 14, 514.	3.1	12
51	Design and Test Analysis of Small-Scale Direct Current Superconducting Current-Limiting Switch Prototype. IEEE Transactions on Magnetics, 2022, 58, 1-5.	2.1	0
52	Optimal Sizing of Battery Energy Storage System in a Shipboard Power System with considering Energy Management Optimization. Discrete Dynamics in Nature and Society, 2021, 2021, 1-12.	0.9	13
53	Mechanical properties analysis of the naval ship similar model with an integrated sandwich composite superstructure. Ocean Engineering, 2021, 232, 109101.	4.3	12
54	Power Dense HTS Networks – Designs For Contingencies and Resiliency of Electric Transport Systems. IEEE Transactions on Applied Superconductivity, 2021, 31, 1-5.	1.7	3

#	Article	IF	CITATIONS
55	Priority-Based Management of Energy Resources During Power-Constrained Operation of Shipboard Power System. , 2021, , .		4
56	Shipboard Zonal Load Center Modeling and Characterization on Real-Time Simulation Platform. , 2021, , .		2
57	The Mechanism for Suppressing High-Frequency Vibration of Multiphase Surface Permanent Magnet Motors via PWM Carrier Phase Shifting. IEEE Transactions on Power Electronics, 2021, 36, 10504-10513.	7.9	12
58	Study of DC Superconducting Current-Limiting Switch in MVDC Shipboard Power System. IEEE Transactions on Applied Superconductivity, 2021, 31, 1-5.	1.7	2
59	A Multichannel High-Frequency Current Link Based Isolated Auxiliary Power Supply for Medium-Voltage Applications. IEEE Transactions on Power Electronics, 2022, 37, 674-686.	7.9	26
60	An adaptive hybrid dynamic state estimation method of the medium-voltage DC integrated power system with pulse load. International Journal of Electrical Power and Energy Systems, 2022, 134, 107441.	5.5	3
61	Recent developments in energy storage systems for marine environment. Materials Advances, 2021, 2, 6800-6815.	5.4	21
62	Resilient Protection of Medium Voltage DC Microgrids Against Cyber Intrusion. IEEE Transactions on Power Delivery, 2022, 37, 960-971.	4.3	4
63	The electric propulsion system as a green solution for management strategy of <scp> CO ₂ </scp> emission in ocean shipping: A comprehensive review. International Transactions on Electrical Energy Systems, 2021, 31, .	1.9	82
64	Control as an Enabler for Electrified Mobility. Annual Review of Control, Robotics, and Autonomous Systems, 2022, 5, .	11.8	1
65	Analysis of magnetic materials and the design of EI-core arm inductor for MV-AFE MMC application using Multi-objective optimization. , 2020, , .		3
66	Equivalent Test Method for Strong Electromagnetic Field Radiation Effect of EED. International Journal of Antennas and Propagation, 2021, 2021, 1-9.	1.2	8
67	A Review of DC Shipboard Microgrids—Part I: Power Architectures, Energy Storage, and Power Converters. IEEE Transactions on Power Electronics, 2022, 37, 5155-5172.	7.9	78
68	A Review of DC Shipboard Microgrids—Part II: Control Architectures, Stability Analysis, and Protection Schemes. IEEE Transactions on Power Electronics, 2022, 37, 4105-4120.	7.9	54
69	An additional bus inductance-based protection scheme for shipboard DC zonal electric distribution systems. International Journal of Electrical Power and Energy Systems, 2022, 138, 107910.	5.5	2
70	Integration of Energy Storage and Pulsed-Power Technologies in Shipboard Power Systems. , 2020, , .		0
71	Current-Limiting Performance of Three Types of SFCL in Shipboard MVDC IPS. , 2020, , .		0
72	Integrated Control and Performance Analysis of High-Speed Medium-Voltage Drive Using Modular Multilevel Converter. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2023, 11, 3692-3704.	5.4	3

#	Article	IF	CITATIONS
73	State of Charge Balance of Distributed Batteries in DC Shipboard Microgrids. , 2021, , .		1
74	Parameter Matching and Structural Optimization Design of H-SFCL in MMC Ship MVDC System. IEEE Transactions on Applied Superconductivity, 2022, 32, 1-6.	1.7	3
75	Analysis of electromagnetic characteristics of the proposed composite four-rail electromagnetic launcher. Science and Engineering of Composite Materials, 2022, 29, 113-125.	1.4	2
76	An Overview of Multi-Energy Microgrid in All-Electric Ships. Frontiers in Energy Research, 2022, 10, .	2.3	3
77	Economic Control for Hybrid-Electric Shipboard Microgrids Considering Battery Degradation and Cycling Life Costs. , 2022, , .		3
78	Analysis of Electromagnetic Characteristics of Copper-Steel Composite Quadrupole Rail. Materials, 2022, 15, 5851.	2.9	1
79	Magnetic Decoupling of Winding Design in Dual Wound Generators. IEEE Transactions on Energy Conversion, 2023, 38, 250-261.	5.2	0
80	Quantitative Comparison on Permanent-Magnet Vernier Machines With Improved Flux Modulation Effect for Automatic Guided Vehicles. IEEE Transactions on Vehicular Technology, 2022, 71, 11367-11378.	6.3	7
81	Introducing Advanced Waterborne Electric Mobility in Venice. SSRN Electronic Journal, 0, , .	0.4	1
82	Sliding Mode Control of Ship DC Microgrid Based on an Improved Reaching Law. Energies, 2023, 16, 1051.	3.1	3
83	Mitigation effect of flywheel energy storage on the performance of marine gas turbine DC microgrid under high-power load mutation. Energy Reports, 2023, 9, 1380-1396.	5.1	8
84	Optimizing Adaptive Disturbance Rejection Control Models Using the Chimp Optimization Algorithm for Ships' Hybrid Renewable Energy Systems. Computational Intelligence and Neuroscience, 2022, 2022, 1-13.	1.7	57
85	The Effects and Mechanisms of Periodic-Carrier-Frequency PWM on Vibrations of Multiphase Permanent Magnet Synchronous Motors. IEEE Transactions on Power Electronics, 2023, 38, 8696-8706.	7.9	6
86	A Risk Assessment Technique for Energy-Efficient Drones to Support Pilots and Ensure Safe Flying. Infrastructures, 2023, 8, 67.	2.8	2
87	Digital Twin in the Maritime Domain: A Review and Emerging Trends. Journal of Marine Science and Engineering, 2023, 11, 1021.	2.6	10
88	Design Challenges of the 22 kV Solid-State Switch for Capacitor Discharge Application Based on 3.3 kV SiC MOSFET Super-Cascode. , 2023, , .		0
89	Hierarchical control of hybrid energy storage system in shipboard gas turbine power system with multiple pulsed power loads. Energy Reports, 2023, 9, 522-532.	5.1	0
90	An Optimal Periodic Carrier Frequency PWM Scheme for Suppressing High-Frequency Vibrations of Permanent Magnet Synchronous Motors. IEEE Transactions on Power Electronics, 2023, 38, 13008-13018.	7.9	2

#	Article	IF	CITATIONS
91	Hybrid ML-EMT Based Digital Twin for Device-Level HIL Real-Time Emulation of Ship-Board Microgrid on FPGA. IEEE Journal of Emerging and Selected Topics in Industrial Electronics, 2023, , 1-13.	3.9	0
92	All-electric ship operations and management: Overview and future research directions. ETransportation, 2023, 17, 100251.	14.8	3
93	Cyber intrusion detection for line current differential relays in DC distribution system. Sustainable Energy, Grids and Networks, 2023, 34, 101065.	3.9	0
94	Evaluation of Tactical Energy Management Controls for Shipboard Power Systems. , 2023, , .		Ο
95	Fast System Level Model for Digital Twin Based Optimization of Naval Power and Energy System. , 2023, , .		0
96	Next generation Amphibious Vessel: an innovative power and propulsion system. , 2023, , .		0
97	Novel Rate-Limited Droop Control for DC Distribution with Impulsive Loads. , 2023, , .		0
98	A review of thermoelectric generators for waste heat recovery in marine applications. Sustainable Energy Technologies and Assessments, 2023, 59, 103394.	2.7	3
99	Optimal-Control-Based Evaluation of Shipboard Power Systems with Energy Magazines. , 2023, , .		1
100	Research on Modelling Method of Ship Hybrid Power System. , 2023, , .		0
101	Fault Location Algorithm for Multi-Terminal Radial Medium Voltage DC Microgrid. IEEE Transactions on Power Delivery, 2023, 38, 4476-4488.	4.3	0
102	Hybrid energy storage power allocation strategy based on parameter-optimized VMD algorithm for marine micro gas turbine power system. Journal of Energy Storage, 2023, 73, 109189.	8.1	0
103	Dynamic Response and Parameter Analysis of Electromagnetic Railguns under Time Varying Moving Loads. Shock and Vibration, 2023, 2023, 1-17.	0.6	0
104	Study on the influence factors of the bearing characteristics of the ship with an integrated glass fiber sandwich composite superstructure. Ocean Engineering, 2024, 299, 116933.	4.3	0
105	Coordinated Control of Engine-Load-Storage for Marine Micro Gas Turbine Power Generation System. Lecture Notes in Electrical Engineering, 2024, , 481-492.	0.4	0
106	A moment of maritime opportunity? The U.S. Navy operational energy challenge. Journal of Marine Engineering and Technology, 0, , 1-13.	4.1	0
107	Design and Optimisation of a 5 MW Permanent Magnet Vernier Motor for Podded Ship Propulsion. World Electric Vehicle Journal, 2024, 15, 119.	3.0	0