

Innocent Davidson

List of Publications by Year in descending order

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146
papers

1,364
citations

623699

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501174

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g-index

146
all docs

146
docs citations

146
times ranked

800
citing authors

#	ARTICLE	IF	CITATIONS
1	Comparative Analysis of Solar PV Production in Durban to Other Cities in South Africa. Lecture Notes in Electrical Engineering, 2022, , 417-430.	0.4	0
2	Quantum Cryptography-as-a-Service for Secure UAV Communication: Applications, Challenges, and Case Study. IEEE Access, 2022, 10, 1475-1492.	4.2	23
3	Modeling of Double Stage Photovoltaic Inverter System with Fast Delayed Signal Cancellation for Fault Ride-Through Control Application in Microgrids. Energies, 2022, 15, 701.	3.1	1
4	Coalition Games for Performance Evaluation in 5G and Beyond Networks: A Survey. IEEE Access, 2022, 10, 15393-15420.	4.2	5
5	<i>DL-GuesS</i>: Deep Learning and Sentiment Analysis-Based Cryptocurrency Price Prediction. IEEE Access, 2022, 10, 35398-35409.	4.2	26
6	Seasonal Variation of Soil Resistivity and Corrective Factor for Optimal Substation Earth Grid Design in Eastern Cape. , 2022, , .		2
7	Power Planning for a Smart Integrated African Super-Grid. , 2022, , .		6
8	Fusion in Cryptocurrency Price Prediction: A Decade Survey on Recent Advancements, Architecture, and Potential Future Directions. IEEE Access, 2022, 10, 34511-34538.	4.2	13
9	Modelling of Solar PV under Varying Condition with an Improved Incremental Conductance and Integral Regulator. Energies, 2022, 15, 2405.	3.1	7
10	Ransomware Detection, Avoidance, and Mitigation Scheme: A Review and Future Directions. Sustainability, 2022, 14, 8.	3.2	38
11	Analysis of voltage rise phenomena in electrical power network with high concentration of renewable distributed generations. Scientific Reports, 2022, 12, 7815.	3.3	8
12	Enhancing the Performance of Eskomâ€™s Cahora Bassa HVDC Scheme and Harmonic Distortion Minimization of LCC-HVDC Scheme Using the VSC-HVDC Link. Energies, 2022, 15, 4008.	3.1	3
13	Advanced Distributed Cooperative Secondary Control of Islanded DC Microgrids. Energies, 2022, 15, 3988.	3.1	15
14	Decentralized Virtual Impedance- Conventional Droop Control for Power Sharing for Inverter-Based Distributed Energy Resources of a Microgrid. Energies, 2022, 15, 4439.	3.1	14
15	A Taxonomy on Smart Healthcare Technologies: Security Framework, Case Study, and Future Directions. Journal of Sensors, 2022, 2022, 1-30.	1.1	9
16	Why Solar PV is Such a Lucrative Option for South African Municipal Customers. , 2021, , .		1
17	Financial Feasibility of Solar PV within eThekweni Municipality- Residential Customers. , 2021, , .		0
18	Blockchain and AI-Empowered Social Distancing Scheme to Combat COVID-19 Situations. IEEE Access, 2021, 9, 129830-129840.	4.2	10

#	ARTICLE	IF	CITATIONS
19	Modeling and Simulation of Radial-Grid Topology Based on Multi-Terminal VSC-HVDC System. , 2021, , .		2
20	The Analysis of Global Navigation Satellite Systems (GNSS) and the Numerical Estimation of Multipath Propagation. , 2021, , 411-425.		0
21	Conceptual Design and Analysis of Modern Space Solar Power Satellite and Rectenna Systems. , 2021, , 427-436.		0
22	The Influence of the Signal Distortions on the Satellite Based Navigation Systems. , 2021, , .		0
23	The Recent Trend of Increasing Fault Current Levels and Mitigation Measures. , 2021, , .		0
24	Financial Feasibility of Solar PV within eThekweni Municipality - Business Customers. , 2021, , .		0
25	Decentralized Fast Delayed Signal Cancellation Secondary Control for Low Voltage Ride-Through Application in Grid Supporting Grid Feeding Microgrid. <i>Frontiers in Energy Research</i> , 2021, 9, .	2.3	4
26	MVDC Railway Traction Power Systems; State-of-the Art, Opportunities, and Challenges. <i>Energies</i> , 2021, 14, 4156.	3.1	22
27	Design Considerations and Performance Prediction of an External Rotor 6/10 Switched Reluctance Motor for Electric Vehicle Applications. , 2021, , .		0
28	DC Pole-to-Ground Fault Analysis in a 4-Point VSC Multi-Terminal HVDC Transmission System. , 2021, , .		0
29	Thermal Analysis of an Optimized Switched Reluctance Motor for Enhanced Performance. , 2021, , .		2
30	Feasibility of Offshore Wind Power for Namibia. , 2021, , .		0
31	Modeling and Simulation of MVDC Traction Power System for High-Speed Rail Transportation. , 2021, , .		3
32	Performance Analysis of a 10hp Three phase Induction Motor Using Classical and Finite-Elements for Varying Load Conditions. , 2021, , .		2
33	Tracking the Progress of Universal Access to Electricity in Africa: Status quo, Challenges and Opportunities. , 2021, , .		1
34	Simplified LCL Filter State Space Modeling and Small Signal Stability Analysis of Inverter Based Microgrid. , 2021, , .		6
35	Investigation of Fault Ride Through Capabilities of DFIG and PMSG Wind System. , 2021, , .		1
36	Technical and financial analysis of large-scale solar-PV in eThekweni Municipality: Residential, business and bulk customers. <i>Energy Reports</i> , 2021, 7, 4961-4976.	5.1	8

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37	Loadability Assessment of a Photovoltaic Penetrated Grid to Offset Intermittency and Reduce Total Losses using Battery Energy Storage System. , 2021, , .		1
38	Fault Ride-Through Analysis of Current- and Voltage-Source Models of Grid Supporting Inverter-Based Microgrid. Canadian Journal of Electrical and Computer Engineering, 2021, 44, 189-198.	2.0	13
39	Deep Learning-Based Cryptocurrency Price Prediction Scheme With Inter-Dependent Relations. IEEE Access, 2021, 9, 138633-138646.	4.2	60
40	Intercloud Resource Discovery Using Blockchain. IEEE Access, 2021, 9, 161224-161247.	4.2	4
41	Developing Countriesâ€™ Concerns Regarding Blockchain Adoption in Maritime. Journal of Marine Science and Engineering, 2021, 9, 1326.	2.6	7
42	Voltage Rise Regulation with a Grid Connected Solar Photovoltaic System. Energies, 2021, 14, 7510.	3.1	5
43	Coalition of 6G and Blockchain in AR/VR Space: Challenges and Future Directions. IEEE Access, 2021, 9, 168455-168484.	4.2	42
44	South Africa Electricity Supply System: The Past, Present and The Future. , 2020, , .		2
45	A Review of Long-Distance UHVDC Technology - A future Energy Disrupter. , 2020, , .		3
46	Digitalization in Developing Maritime Business Environments towards Ensuring Sustainability. Sustainability, 2020, 12, 9235.	3.2	21
47	Integration and Enhancement of Load Frequency Control Design for Diverse Sources Power System via DFIG Based Wind Power Generation and Interconnected via Parallel HVDC/EHVAC Tie-Lines. International Journal of Engineering Research in Africa, 2020, 46, 106-124.	0.7	7
48	Modeling and Analysis of Standalone Inverter-Based Microgrid with Grid-Supporting Voltage-Source Control under Changing Load. , 2020, , .		1
49	Application of AI for Frequency Normalization of Solar PV-Thermal Electrical Power System. , 2020, , .		1
50	Investigation and Mitigation of Temporary Overvoltage Caused by De-Energization on an Offshore Wind Farm. Energies, 2020, 13, 4439.	3.1	6
51	Load Frequency Control of Hydro Electric System using Application of Fuzzy with Particle Swarm Optimization Algorithm. , 2020, , .		4
52	Lightning Performance and Economic Analysis of an Overhead 88 kV Power Delivery Network with Enhanced Protective Systems. Energies, 2020, 13, 6519.	3.1	2
53	Comparison of DC voltage Control Strategies for Multi-terminal HVDC Network during AC Faults. , 2020, , .		2
54	Investigation of Diverse Sampling Time for LFC of Hydro Power System using Discrete LQR with UPFC and RFB. , 2020, , .		4

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55	Modeling and Assessment of the Fault Ride-Through Capabilities of Grid Supporting Inverter-Based Microgrids. , 2020, , .		2
56	Short-term Wind Variability Analysis of Afe Babalola University. , 2020, , .		3
57	Frequency Regulation Studies of Interconnected PV Thermal Power System. , 2020, , .		2
58	Challenges of Planning Future High Voltage Power Systems Networks. , 2020, , .		0
59	Successes in University - Industry Partnerships - Perspectives from Durban University of Technology. , 2020, , .		0
60	Overview of Fault Ride-Through Requirements for Photovoltaic Grid Integration, Design and Grid Code Compliance. , 2020, , .		12
61	Artisan Development and Training - An analysis of the Apprentice, Learnership and ARPL Trade Test Results of Candidates Tested at TEK-MATION Training Institute. , 2019, , .		2
62	Utilization of Line Surge Arrestors to Improve Overhead HV AC Line Performance under Lightning Conditions. , 2019, , .		3
63	Comparative Analysis of the Fault Ride-Through Capabilities of the VSG Methods of Microgrid Inverter Control under Faults. , 2019, , .		7
64	The HEPSSA Project â€œ A Catalyst for Capacity Building at Durban University of Technology. , 2019, , .		1
65	Voltage Profile and Power Losses Analysis on a Modified IEEE 9-Bus System with PV Penetration at the Distribution Ends. , 2019, , .		6
66	Assessment and Analysis of Typical Eskom Secondary Distribution Network under Normal Steady State. , 2019, , .		1
67	Development of an IGBT-Diode based Fault Current Limiter for Fault Ride-Through Enhancement in Microgrid Application. , 2019, , .		6
68	Performance Evaluation of Solar Roof-Top PV on Eskom's LV Electric Power Distribution Networks. , 2019, , .		6
69	Exploring the Demand-Supply Gap of Electricity in Nigeria: Locational Evaluation for Capacity Expansions. , 2019, , .		4
70	Fault Ride-Through Enhancement of Grid Supporting Inverter-Based Microgrid Using Delayed Signal Cancellation Algorithm Secondary Control. Energies, 2019, 12, 3994.	3.1	20
71	Investigation of Voltage Unbalance Profile in Low Voltage Electrical Distribution Network with Normal Mode Operation Using MATLAB. International Journal of Engineering Research in Africa, 2018, 35, 60-76.	0.7	4
72	Performance evaluation of traction and utility network interface: Fault location and protection coordination. Electric Power Systems Research, 2018, 156, 44-53.	3.6	6

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73	Analysis of Optimal PV Penetrations Levels with Time-Variant Loads in Power Distribution Networks. , 2018, , .		2
74	Power System Static Security Enhancement Through Interline Power Flow Controller. , 2018, , .		6
75	A Three-Phase, Five-Level Multilevel Inverter with Output Voltage Boost. , 2018, , .		3
76	A Review of Grid Tied PV Generation on LV Distribution Networks. , 2018, , .		3
77	Analysis of Soil Resistivity and its Impact on Grounding Systems Design. , 2018, , .		11
78	Investigation of Combined SVC and TCSC versus IPFC in Enhancing Power System Static Security. International Journal of Engineering Research in Africa, 2018, 40, 119-135.	0.7	8
79	Power Market and Impact of Tariff in Malawi. , 2018, , .		1
80	A Configuration for Output Voltage Boost of a Three-Phase, 3-Level Multilevel Level Inverter. , 2018, , .		0
81	Advances in Telecontrol and Remote Terminal Units (RTU) for Power Substations. , 2018, , .		4
82	Cost Optimization and Design of a Hybrid Distributed Generation System for a DC Microgrid. , 2018, , .		4
83	A Smart Grid Framework for Optimally Integrating Supply-Side, Demand-Side and Transmission Line Management Systems. Energies, 2018, 11, 1038.	3.1	8
84	Effectiveness of Dynamic Voltage Restorer for Unbalance Voltage Mitigation and Voltage Profile Improvement in Secondary Distribution System. Canadian Journal of Electrical and Computer Engineering, 2018, 41, 105-115.	2.0	46
85	Control of a direct-driven permanent magnet synchronous generator-based wind turbine to achieve maximum wind-power extraction. , 2017, , .		4
86	Study of renewable energy resources found within local municipalities: An eThekweni municipality case study. , 2017, , .		0
87	An improvement of voltage unbalance in a low voltage 11/0.4 kV electric power distribution network under 3-phase unbalance load condition using dynamic voltage restorer. , 2017, , .		9
88	A review of the performance of VSC-HVDC and MTDC systems. , 2017, , .		24
89	Lifecycle cost optimization of electric utility transmission and distribution assets. , 2017, , .		1
90	Grid energy storage devices. , 2017, , .		5

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91	A review of the impacts and mitigation strategies of high PV penetration in low voltage networks. , 2017, , .		23
92	Technical performance and cost analysis of a 600kV HVDC link on South Africa's EHV network. , 2017, , .		5
93	Drivers, barriers and a method for evaluating the feasibility of residential rooftop solar PV in Durban (Part 1). , 2017, , .		4
94	Drivers, barriers and a method for evaluating the feasibility of residential rooftop solar PV in Durban (part 2). , 2017, , .		2
95	Effectiveness of dynamic voltage restorer in enhancing voltage profile in low voltage electric power distribution networks under normal mode operation. , 2017, , .		1
96	Voltage profile enhancement in low voltage 11/0.4 kV electric power distribution network using dynamic voltage restorer under three phase balance load. , 2017, , .		7
97	Assessment of a two dimensional (2D) FEM model of a 22 kV silicon rubber DC insulator. , 2017, , .		0
98	Investigation of voltage unbalance in low voltage electric power distribution network under steady state mode. , 2017, , .		7
99	Dynamic analysis of Southern Africa power pool (SAPP) network. , 2017, , .		2
100	Transforming the West African regional electricity market " Lessons and experiences. , 2017, , .		3
101	An assessment of voltage rise phenomenon on existing eThekweni Electricity low-voltage distribution network. , 2017, , .		3
102	Insulator condition using local binary patterns combined with support vector machines. , 2017, , .		1
103	Introduction to the South African Renewable Energy Grid Code version 2.9 requirements (Part II " Tj ETQq1 1 0.784314 rgBT /Over		5
104	Introduction to the South African Renewable Energy Grid Code version 2.9 requirements (Part III " Tj ETQq0 0 0 rgBT /Over		2
105	FPGA implementation of open-loop controller for five-level three phase modular multilevel converter. , 2017, , .		2
106	Introduction to the South African Renewable Energy Grid Code version 2.9 requirements (Part I " Tj ETQq0 0 0 rgBT /Over		3
107	Rotor Speed Control of a Direct-Driven Permanent Magnet Synchronous Generator-Based Wind Turbine Using Phase-Lag Compensators to Optimize Wind Power Extraction. Journal of Control Science and Engineering, 2017, 2017, 1-17.	1.0	8
108	Underground Pumped Hydroelectric Energy Storage in South Africa using Aquifers and Existing Infrastructure. , 2017, , 119-122.		6

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109	Analysis of Current Pulses in HeLa-Cell Permeabilization Due to High Voltage DC Corona Discharge. IEEE Transactions on Nanobioscience, 2016, 15, 1-1.	3.3	0
110	Guiding principles for grid code compliance of large utility scale renewable power plant intergration onto south africa's transmission/distribution networks. , 2016, , .		6
111	Static voltage stability analysis of eskom eastern grid. , 2016, , .		0
112	Harmonie distortion of LCC-HVDC and VSC-HVDC link in eskom's cahora bassa HVDC scheme. , 2016, , .		2
113	Control of multi-level voltage source converters integrating a wind turbine system into the grid. , 2016, , .		4
114	Analyses of the vibration level of an OPGW at the catenary value of 2100m with multi-response stockbridge dampers. , 2016, , .		2
115	Intelligent proportional integral control of a polar axis solar tracker. , 2016, , .		4
116	Voltage stability improvement of a multi-machine system using HVDC. , 2016, , .		7
117	Model of a hybrid distributed generation system for a DC nano-grid. , 2016, , .		14
118	A review of LCC-HVDC and VSC-HVDC technologies and applications. , 2016, , .		101
119	Modeling and control of voltage source converters for grid integration of a wind turbine system. , 2016, , .		14
120	Dynamic voltage stability studies using a modified IEEE 30-bus system. , 2016, , .		4
121	Fault investigation methods on power transmission line: A comparative study. , 2016, , .		8
122	An active contour approach to water droplets segmentation from insulators. , 2016, , .		4
123	Design considerations of the Katsina Wind Farm in Nigeria. , 2016, , .		2
124	Optimisation and financial viability of landfill gas to electricity projects in south africa. , 2016, , .		1
125	Impact analysis of Landfill gas to electricity Distributed Generation on existing distribution networks to mitigate SA energy shortages. , 2016, , .		4
126	A Review of LCC-HVDC and VSC-HVDC Technologies and Applications. Transactions on Environment and Electrical Engineering, 2016, 1, 68.	0.5	15

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127	An active contour approach to insulator segmentation. , 2015, , .		13
128	Full-bridge modular multilevel converter (FB-MMC) with extended control range. , 2015, , .		4
129	Statistical analysis and characterization of low voltage power line noise for telecommunication applications. , 2015, , .		3
130	Enhancing SCIG-based wind turbine generator performance through reactive power control. , 2015, , .		6
131	Robust and Generic Control of Full-Bridge Modular Multilevel Converter High-Voltage DC Transmission Systems. IEEE Transactions on Power Delivery, 2015, 30, 2468-2476.	4.3	133
132	Intelligent analysis of wind turbine power curve models. , 2014, , .		14
133	Security analysis of electric power supply in SADC region. , 2013, , .		4
134	Power Planning for renewable energy grid integration - Case Study of South Africa. , 2013, , .		10
135	England and Wales electricity industry "experiences in deregulation. Journal of Engineering, Design and Technology, 2005, 3, 24-29.	1.7	1
136	Energizing Africa's emerging economy. IEEE Power and Energy Magazine, 2005, 3, 24-31.	1.6	18
137	Technical loss computation and economic dispatch model for T&D systems in a deregulated ESI. Power Engineering Journal, 2002, 16, 55-60.	0.1	25
138	Evaluation and effective management of non-technical losses in power networks. Transactions of the South African Institute of Electrical Engineers, 2002, 94, 39-42.	0.0	1
139	PWM-VSI inverter-assisted stand-alone dual stator winding induction generator. IEEE Transactions on Industry Applications, 2000, 36, 1604-1611.	4.9	170
140	Performance analysis of a shaded-pole linear induction motor using symmetrical components, field analysis, and finite element method. IEEE Transactions on Energy Conversion, 2000, 15, 24-29.	5.2	9
141	Dynamics of a Solar-Powered Fractional Horse Power Motor. , 0, , .		1
142	Application of Dynamic Voltage Restorer for Power Quality Improvement in Low Voltage Electrical Power Distribution Network: An Overview. International Journal of Engineering Research in Africa, 0, 28, 142-156.	0.7	16
143	Voltage Unbalance Mitigation and Voltage Profile Enhancement in Secondary Distribution System Using Dynamic Voltage Restorer. International Journal of Engineering Research in Africa, 0, 34, 81-101.	0.7	8
144	Investigation of the Low Voltage Ride-Through of Inverter Using Virtual Inertia Methods in Microgrid. International Journal of Engineering Research in Africa, 0, 44, 200-212.	0.7	9

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145	Battery Energy Storage Systems and Rooftop Solar-Photovoltaics in Electric Power Distribution Networks. , 0, , .		0
146	Optimization of University Campus Microgrid for Cost Reduction: A Case Study. Advanced Engineering Forum, 0, 45, 77-96.	0.3	2