

Ruben Romero

List of Publications by Year in descending order

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153
papers

7,375
citations

47409

49
h-index

64407

83
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153
all docs

153
docs citations

153
times ranked

3590
citing authors

#	ARTICLE	IF	CITATIONS
1	Medium-term planning of active distribution systems considering voltage-dependent loads, network reconfiguration, and CO2 emissions. International Journal of Electrical Power and Energy Systems, 2022, 135, 107541.	3.3	12
2	Multistage Planning Model for Active Distribution Systems and Electric Vehicle Charging Stations Considering Voltage-Dependent Load Behavior. IEEE Transactions on Smart Grid, 2022, 13, 1383-1397.	6.2	21
3	A Branch and Bound Algorithm for Transmission Network Expansion Planning Using Nonconvex Mixed-Integer Nonlinear Programming Models. IEEE Access, 2022, 10, 39875-39888.	2.6	2
4	Mayfly Optimization Algorithm Applied to the Design of PSS and SSSC-POD Controllers for Damping Low-Frequency Oscillations in Power Systems. International Transactions on Electrical Energy Systems, 2022, 2022, 1-23.	1.2	10
5	Increasing RES Hosting Capacity in Distribution Networks Through Closed-Loop Reconfiguration and Volt/VAr Control. IEEE Transactions on Industry Applications, 2022, 58, 4424-4435.	3.3	20
6	Alternative Mathematical Models for the Optimal Transmission Switching Problem. IEEE Systems Journal, 2021, 15, 1245-1255.	2.9	14
7	Mathematical models and optimization techniques to support local electricity markets. , 2021, , 259-276.		0
8	Optimal Service Restoration in Active Distribution Networks Considering Microgrid Formation and Voltage Control Devices. IEEE Transactions on Industry Applications, 2021, 57, 5758-5771.	3.3	18
9	Optimal Restoration of Distribution Systems Considering Temporary Closed-Loop Operation. IEEE Systems Journal, 2021, 15, 5483-5494.	2.9	12
10	Simultaneous Distributed Generation and Electric Vehicles Hosting Capacity Assessment in Electric Distribution Systems. IEEE Access, 2021, 9, 110927-110939.	2.6	26
11	Boosting the Usage of Green Energy for EV Charging in Smart Buildings Managed by an Aggregator Through a Novel Renewable Usage Index. IEEE Access, 2021, 9, 105357-105368.	2.6	13
12	Planning of Reserve Branches to Increase Reconfiguration Capability in Distribution Systems: A Scenario-Based Convex Programming Approach. IEEE Access, 2021, 9, 104707-104721.	2.6	3
13	Optimal Restoration of Active Distribution Systems With Voltage Control and Closed-Loop Operation. IEEE Transactions on Smart Grid, 2021, 12, 2295-2306.	6.2	24
14	Secondary Reserve Provision through a Smart Aggregation Strategy of Electric Vehicles. , 2021, , .		3
15	Optimal Operation of Active Distribution Systems with Voltage Control and Closed-Loop Topology. , 2021, , .		1
16	Reconfiguration of Radial Distribution Systems: An Efficient Mathematical Model. IEEE Latin America Transactions, 2021, 19, 1172-1181.	1.2	36
17	LQR Design Using LMIs and the Robust D-Stability Criterion for Low-Frequency Oscillation Damping in Power Systems. , 2021, , .		0
18	Power Flow Control and Small-Signal Stability Analysis Considering the SSSC FACTS. , 2021, , .		1

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19	Robust Control via LMIs Applied to Small-Signal Stability in Power Systems. , 2021, , .		0
20	Robust Model Predictive Control via LMIs Applied for Damping Low-Frequency Electromechanical Oscillations in Power Systems. , 2021, , .		0
21	Increasing the RES Hosting Capacity in Distribution Systems Through Reconfiguration with Closed-Loop Operation and Voltage Control. , 2021, , .		1
22	Increasing the PV Hosting Capacity in Unbalanced Three-Phase Distribution Networks Through Reconfiguration with Closed-Loop Operation. , 2021, , .		1
23	Efficient Multi-Start With Path Relinking Search Strategy for Transmission System Expansion Planning. IEEE Access, 2021, 9, 153213-153225.	2.6	2
24	A Stochastic Model for Medium-Term Distribution System Planning Considering CO ₂ Emissions. , 2020, , .		6
25	Optimal Service Restoration in Active Distribution Networks Considering Microgrid Formation and Voltage Control Devices. , 2020, , .		1
26	Enhanced Coordination Strategy for an Aggregator of Distributed Energy Resources Participating in the Day-Ahead Reserve Market. Energies, 2020, 13, 1965.	1.6	11
27	Transmission Network Expansion Planning Considering Line Switching. IEEE Access, 2020, 8, 115148-115158.	2.6	6
28	Assessment of economic benefits for EV owners participating in the primary frequency regulation markets. International Journal of Electrical Power and Energy Systems, 2020, 120, 105985.	3.3	28
29	Flexible Solution Approach for Multistage Transmission Network Expansion Planning with Multiple Generation Scenarios. Journal of Control, Automation and Electrical Systems, 2020, 31, 705-717.	1.2	2
30	An AC Mathematical Model for Solving Complex Restoration Problems in Radial Distribution Systems in a Treatable Runtime. IEEE Access, 2020, 8, 228303-228314.	2.6	2
31	Optimal Restoration of Distribution Networks through Reconfiguration and Microgrid Formation. , 2020, , .		3
32	Line maintenance within transmission expansion planning: a multistage framework. IET Generation, Transmission and Distribution, 2019, 13, 3057-3065.	1.4	38
33	Business models for flexibility of electric vehicles. , 2019, , .		3
34	Distribution System Services Provided by Electric Vehicles: Recent Status, Challenges, and Future Prospects. IEEE Transactions on Intelligent Transportation Systems, 2019, 20, 4277-4296.	4.7	110
35	A strategy for transmission network expansion planning considering multiple generation scenarios. Electric Power Systems Research, 2019, 172, 22-31.	2.1	41
36	Transmission Expansion Planning: Literature Review and Classification. IEEE Systems Journal, 2019, 13, 3129-3140.	2.9	63

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37	Joint reconfiguration of feeders and allocation of capacitor banks in radial distribution systems considering voltage-dependent models. International Journal of Electrical Power and Energy Systems, 2019, 107, 298-310.	3.3	44
38	Mathematical Optimization of Unbalanced Networks with Smart Grid Devices. Power Systems, 2018, , 65-114.	0.3	3
39	A Real Test System For Power System Planning, Operation, and Reliability. Journal of Control, Automation and Electrical Systems, 2018, 29, 192-208.	1.2	38
40	Robust Joint Expansion Planning of Electrical Distribution Systems and EV Charging Stations. IEEE Transactions on Sustainable Energy, 2018, 9, 884-894.	5.9	97
41	Restoration of Electrical Distribution Systems Using a Relaxed Mathematical Model. Journal of Control, Automation and Electrical Systems, 2018, 29, 259-269.	1.2	3
42	Optimal Restoration/Maintenance Switching Sequence of Unbalanced Three-Phase Distribution Systems. IEEE Transactions on Smart Grid, 2018, 9, 6058-6068.	6.2	66
43	Optimal Delivery Scheduling and Charging of EVs in the Navigation of a City Map. IEEE Transactions on Smart Grid, 2018, 9, 4815-4827.	6.2	47
44	AC OPF for Smart Distribution Networks: An Efficient and Robust Quadratic Approach. IEEE Transactions on Smart Grid, 2018, 9, 4613-4623.	6.2	71
45	A VNS algorithm for the design of supplementary damping controllers for small-signal stability analysis. International Journal of Electrical Power and Energy Systems, 2018, 94, 41-56.	3.3	26
46	Specialized Heuristic Algorithms for AC Transmission Expansion Planning Problem. , 2018, , .		0
47	Bus-Angle Difference Structural Cuts for Transmission System Expansion Planning with L-I Reliability. , 2018, , .		2
48	Optimal Sizing of Stationary Energy Storage Systems Participating in Primary Frequency Regulation Markets. , 2018, , .		2
49	Biased Random-Key Genetic Algorithm Applied to the Optimal Reconfiguration of Radial Distribution Systems. , 2018, , .		0
50	Optimal Distribution Systems Expansion Planning for Improving Service Restoration. , 2018, , .		2
51	Analysis of Optimal Power Flow Formulations for HVAC and VSC-HVDC Transmission Networks. , 2018, , .		1
52	Transmission and Generation Expansion Planning Considering System Reliability and Line Maintenance. , 2018, , .		33
53	A Contribution to the Optimization of the Reconfiguration Problem in Radial Distribution Systems. Journal of Control, Automation and Electrical Systems, 2018, 29, 756-768.	1.2	36
54	Joint optimal operation of photovoltaic units and electric vehicles in residential networks with storage systems: A dynamic scheduling method. International Journal of Electrical Power and Energy Systems, 2018, 103, 136-145.	3.3	34

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55	V2G enabled EVs providing frequency containment reserves: Field results. , 2018, , .		13
56	Critical analysis of the transmission systems expansion planning problem considering multiple generation scenarios. , 2018, , .		0
57	Optimal operation of storage systems in distribution networks considering battery degradation. , 2018, , .		1
58	Multistage Security-Constrained HVAC/HVDC Transmission Expansion Planning With a Reduced Search Space. IEEE Transactions on Power Systems, 2017, 32, 4805-4817.	4.6	49
59	High-performance hybrid genetic algorithm to solve transmission network expansion planning. IET Generation, Transmission and Distribution, 2017, 11, 1111-1118.	1.4	19
60	Reliability Effects of Maintenance on TNEP Considering Preventive and Corrective Repairs. IEEE Transactions on Power Systems, 2017, 32, 3768-3781.	4.6	28
61	Design of the UPFC-POD and PSS Damping Controllers Using an Artificial Bee Colony Algorithm. Journal of Control, Automation and Electrical Systems, 2017, 28, 762-773.	1.2	22
62	Metaheuristic optimization algorithms for the optimal coordination of plug-in electric vehicle charging in distribution systems with distributed generation. Electric Power Systems Research, 2017, 142, 351-361.	2.1	50
63	Increasing the hosting capacity for renewable energy in distribution networks. , 2017, , .		13
64	Joint reconfiguration of feeders and allocation of capacitor banks in distribution systems using a multi-start strategy. , 2017, , .		2
65	An analysis of the optimal switching problem in transmission systems. , 2017, , .		3
66	Transmission network expansion planning considering HVAC/HVDC lines and technical losses. , 2016, , .		9
67	An MILP model for the analysis of operation of energy storage devices in distribution systems. , 2016, , .		5
68	GRASP algorithm for charging coordination of plug-in electric vehicles in electrical distribution systems. , 2016, , .		0
69	Artificial immune algorithm applied to distribution system reconfiguration with variable demand. International Journal of Electrical Power and Energy Systems, 2016, 82, 561-568.	3.3	63
70	Reconfiguration of Radial Distribution Systems with Variable Demands Using the Clonal Selection Algorithm and the Specialized Genetic Algorithm of Chu's Beasley. Journal of Control, Automation and Electrical Systems, 2016, 27, 689-701.	1.2	10
71	Coordinated tuning of the parameters of PI, PSS and POD controllers using a Specialized Chu's Beasley's Genetic Algorithm. Electric Power Systems Research, 2016, 140, 708-721.	2.1	32
72	MILP branch flow model for concurrent AC multistage transmission expansion and reactive power planning with security constraints. IET Generation, Transmission and Distribution, 2016, 10, 3023-3032.	1.4	52

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73	Distribution System Reconfiguration with variable demands using the Opt-aiNet algorithm. , 2016, , .		1
74	A Multi-Objective Distribution System Expansion Planning Incorporating Customer Choices on Reliability. IEEE Transactions on Power Systems, 2016, 31, 1330-1340.	4.6	42
75	Reliability and Economic Effects of Maintenance on TNEP Considering Line Loading and Repair. IEEE Transactions on Power Systems, 2016, 31, 3381-3393.	4.6	32
76	An object-based visual selection framework. Neurocomputing, 2016, 180, 35-54.	3.5	2
77	A New Methodology for the Optimal Charging Coordination of Electric Vehicles Considering Vehicle-to-Grid Technology. IEEE Transactions on Sustainable Energy, 2016, 7, 596-607.	5.9	71
78	Robust Multi-Stage Substation Expansion Planning Considering Stochastic Demand. IEEE Transactions on Power Systems, 2016, 31, 2125-2134.	4.6	31
79	A New Mathematical Model for the Restoration Problem in Balanced Radial Distribution Systems. IEEE Transactions on Power Systems, 2016, 31, 1259-1268.	4.6	106
80	A matheuristic algorithm for the three-dimensional loading capacitated vehicle routing problem (3L-CVRP). Revista Facultad De IngenierÃa, 2015, , .	0.5	4
81	Optimal charging coordination of electric vehicles in unbalanced electrical distribution system considering vehicle-to-grid technology. , 2015, , .		2
82	Distribution System Reconfiguration with variable demands using the Clonal selection Algorithm. , 2015, , .		4
83	Analysis of the radial operation of distribution systems considering operation with minimal losses. International Journal of Electrical Power and Energy Systems, 2015, 67, 453-461.	3.3	17
84	A MILP model for optimal charging coordination of storage devices and electric vehicles considering V2G technology. , 2015, , .		2
85	Optimal Operation of Distribution Networks Considering Energy Storage Devices. IEEE Transactions on Smart Grid, 2015, 6, 2825-2836.	6.2	150
86	Plug-in electric vehicle charging coordination in electrical distribution systems using a Tabu Search algorithm. , 2015, , .		2
87	A Mixed-Integer Linear Programming Model for the Electric Vehicle Charging Coordination Problem in Unbalanced Electrical Distribution Systems. IEEE Transactions on Smart Grid, 2015, 6, 2200-2210.	6.2	115
88	Specialized genetic algorithm of Chu-Beasley applied to the Distribution System Reconfiguration problem considering several demand scenarios. , 2015, , .		2
89	A Hybrid Heuristic and Evolutionary Algorithm for Distribution Substation Planning. IEEE Systems Journal, 2015, 9, 1396-1408.	2.9	21
90	Artificial immune networks Copt-aiNet and Opt-aiNet applied to the reconfiguration problem of radial electrical distribution systems. Electric Power Systems Research, 2015, 119, 304-312.	2.1	35

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91	Multistage transmission expansion planning considering fixed series compensation allocation. , 2014, , .		1
92	An MILP model for the plug-in electric vehicle charging coordination problem in electrical distribution systems. , 2014, , .		11
93	A mixed-integer quadratically-constrained programming model for the distribution system expansion planning. International Journal of Electrical Power and Energy Systems, 2014, 62, 265-272.	3.3	69
94	Multistage Transmission Expansion Planning Considering Fixed Series Compensation Allocation. IEEE Transactions on Power Systems, 2013, 28, 3795-3805.	4.6	38
95	Strategies to Reduce the Number of Variables and the Combinatorial Search Space of the Multistage Transmission Expansion Planning Problem. IEEE Transactions on Power Systems, 2013, 28, 2164-2173.	4.6	53
96	Optimal Conductor Size Selection and Reconductoring in Radial Distribution Systems Using a Mixed-Integer LP Approach. IEEE Transactions on Power Systems, 2013, 28, 10-20.	4.6	85
97	Closure to Discussion on "Imposing Radiality Constraints in Distribution System Optimization Problems" IEEE Transactions on Power Systems, 2013, 28, 568-569.	4.6	3
98	A mixed-integer LP model for the optimal allocation of voltage regulators and capacitors in radial distribution systems. International Journal of Electrical Power and Energy Systems, 2013, 48, 123-130.	3.3	85
99	A mixed-integer linear programming approach for optimal type, size and allocation of distributed generation in radial distribution systems. Electric Power Systems Research, 2013, 97, 133-143.	2.1	175
100	A mixed-integer LP model for the reconfiguration of radial electric distribution systems considering distributed generation. Electric Power Systems Research, 2013, 97, 51-60.	2.1	141
101	Risk/investment-driven transmission expansion planning with multiple scenarios. IET Generation, Transmission and Distribution, 2013, 7, 154-165.	1.4	33
102	Specialized genetic algorithm to solve the electrical distribution system expansion planning. , 2013, , .		11
103	Transmission Network Expansion Planning Considering Phase-Shifter Transformers. Journal of Electrical and Computer Engineering, 2012, 2012, 1-10.	0.6	11
104	Applications of Heuristics and Metaheuristics in Power Systems. Journal of Electrical and Computer Engineering, 2012, 2012, 1-2.	0.6	2
105	Strategic capacitor placement in distribution systems by minimisation of harmonics amplification because of resonance. IET Generation, Transmission and Distribution, 2012, 6, 646.	1.4	7
106	Imposing Radiality Constraints in Distribution System Optimization Problems. IEEE Transactions on Power Systems, 2012, 27, 172-180.	4.6	408
107	Domain Reduction Using GRASP Construction Phase for Transmission Expansion Planning Problem. Lecture Notes in Computer Science, 2012, , 87-98.	1.0	3
108	Primary power distribution systems planning taking into account reliability, operation and expansion costs. IET Generation, Transmission and Distribution, 2012, 6, 274.	1.4	56

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109	A set of linear equations to calculate the steady-state operation of an electrical distribution system. , 2011, , .		6
110	A Strategy to Solve the Multistage Transmission Expansion Planning Problem. IEEE Transactions on Power Systems, 2011, 26, 2574-2576.	4.6	57
111	Generalised single-equation load flow method for unbalanced distribution systems. IET Generation, Transmission and Distribution, 2011, 5, 347.	1.4	11
112	Optimal allocation of capacitors in radial distribution systems with distributed generation. , 2011, , .		2
113	Efficient heuristic algorithm used for optimal capacitor placement in distribution systems. International Journal of Electrical Power and Energy Systems, 2010, 32, 71-78.	3.3	85
114	Efficient method for AC transmission network expansion planning. Electric Power Systems Research, 2010, 80, 1056-1064.	2.1	67
115	A Constructive Heuristic Algorithm for Distribution System Planning. IEEE Transactions on Power Systems, 2010, 25, 1734-1742.	4.6	97
116	Distribution systems operation optimisation through reconfiguration and capacitor allocation by a dedicated genetic algorithm. IET Generation, Transmission and Distribution, 2010, 4, 1213.	1.4	74
117	Market-driven security-constrained Transmission Network Expansion Planning. , 2010, , .		3
118	A specialized genetic algorithm to solve the short term transmission network expansion planning. , 2009, , .		13
119	A Bilevel Approach to Transmission Expansion Planning Within a Market Environment. IEEE Transactions on Power Systems, 2009, 24, 1513-1522.	4.6	220
120	Planning and Projects of Secondary Electric Power Distribution Systems. IEEE Transactions on Power Systems, 2009, 24, 1599-1608.	4.6	47
121	Specialized Genetic Algorithm for Transmission Network Expansion Planning Considering Reliability. , 2009, , .		3
122	Distribution network planning using a constructive heuristic algorithm. , 2009, , .		4
123	An Efficient Codification to Solve Distribution Network Reconfiguration for Loss Reduction Problem. IEEE Transactions on Power Systems, 2008, 23, 1542-1551.	4.6	196
124	Transmission system expansion planning by a branch-and-bound algorithm. IET Generation, Transmission and Distribution, 2008, 2, 90.	1.4	77
125	Power system transmission network expansion planning using AC model. IET Generation, Transmission and Distribution, 2007, 1, 731.	1.4	182
126	Constructive heuristic algorithm in branch-and-bound structure applied to transmission network expansion planning. IET Generation, Transmission and Distribution, 2007, 1, 318.	1.4	32

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127	Heuristic Algorithm to Solve the Short Term Transmission Network Expansion Planning. IEEE Power Engineering Society General Meeting, 2007, , .	0.0	21
128	Reconfiguration of distribution systems by a modified genetic algorithm. , 2007, , .		3
129	Branch and Bound Algorithm for Transmission Network Expansion Planning Using DC Model. , 2007, , .		5
130	A Metaheuristic to Solve the Transmission Expansion Planning. IEEE Transactions on Power Systems, 2007, 22, 2289-2291.	4.6	72
131	Artificial Neural Networks and Clustering Techniques Applied in the Reconfiguration of Distribution Systems. IEEE Transactions on Power Delivery, 2006, 21, 1735-1742.	2.9	106
132	Artificial Immune Systems Applied to Optimal Capacitor Placement in Radial Distribution Networks. , 2006, , .		3
133	Transmission Network Expansion Planning Considering Uncertainty in Demand. IEEE Transactions on Power Systems, 2006, 21, 1565-1573.	4.6	94
134	Constructive heuristic algorithm for the DC model in network transmission expansion planning. IET Generation, Transmission and Distribution, 2005, 152, 277.	1.1	100
135	Transmission network expansion planning with security constraints. IET Generation, Transmission and Distribution, 2005, 152, 828.	1.1	150
136	Transmission-expansion planning using the DC model and nonlinear-programming technique. IET Generation, Transmission and Distribution, 2005, 152, 763.	1.1	50
137	Interior point algorithm for linear programming used in transmission network synthesis. Electric Power Systems Research, 2005, 76, 9-16.	2.1	13
138	Planning of Secondary Distribution Circuits Through Evolutionary Algorithms. IEEE Transactions on Power Delivery, 2005, 20, 205-213.	2.9	43
139	Transmission network expansion planning in full open market considering security constraints. , 2005, , .		12
140	Multistage and Coordinated Planning of the Expansion of Transmission Systems. IEEE Transactions on Power Systems, 2004, 19, 735-744.	4.6	182
141	Efficient linear programming algorithm for the transmission network expansion planning problem. IET Generation, Transmission and Distribution, 2003, 150, 536.	1.1	33
142	Analysis of heuristic algorithms for the transportation model in static and multistage planning in network expansion systems. IET Generation, Transmission and Distribution, 2003, 150, 521.	1.1	56
143	Test systems and mathematical models for transmission network expansion planning. IET Generation, Transmission and Distribution, 2002, 149, 27.	1.1	336
144	Optimal capacitor placement in radial distribution networks. IEEE Transactions on Power Systems, 2001, 16, 630-637.	4.6	241

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145	Specialised branch-and-bound algorithm for transmission network expansion planning. IET Generation, Transmission and Distribution, 2001, 148, 482.	1.1	61
146	Branch and bound algorithm for transmission system expansion planning using a transportation model. IET Generation, Transmission and Distribution, 2000, 147, 149.	1.1	137
147	Tabu search algorithm for network synthesis. IEEE Transactions on Power Systems, 2000, 15, 490-495.	4.6	183
148	Transmission system expansion planning by an extended genetic algorithm. IET Generation, Transmission and Distribution, 1998, 145, 329.	1.1	155
149	Comparative studies on nonconvex optimization methods for transmission network expansion planning. IEEE Transactions on Power Systems, 1998, 13, 822-828.	4.6	109
150	Parallel simulated annealing applied to long term transmission network expansion planning. IEEE Transactions on Power Systems, 1997, 12, 181-188.	4.6	121
151	Transmission system expansion planning by simulated annealing. IEEE Transactions on Power Systems, 1996, 11, 364-369.	4.6	247
152	A zero-one implicit enumeration method for optimizing investments in transmission expansion planning. IEEE Transactions on Power Systems, 1994, 9, 1385-1391.	4.6	120
153	A hierarchical decomposition approach for transmission network expansion planning. IEEE Transactions on Power Systems, 1994, 9, 373-380.	4.6	305