

Ruben Romero

List of Publications by Year in descending order

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153
papers

7,375
citations

41344

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g-index

153
all docs

153
docs citations

153
times ranked

3190
citing authors

#	ARTICLE	IF	CITATIONS
1	Imposing Radiality Constraints in Distribution System Optimization Problems. IEEE Transactions on Power Systems, 2012, 27, 172-180.	6.5	408
2	Test systems and mathematical models for transmission network expansion planning. IET Generation, Transmission and Distribution, 2002, 149, 27.	1.1	336
3	A hierarchical decomposition approach for transmission network expansion planning. IEEE Transactions on Power Systems, 1994, 9, 373-380.	6.5	305
4	Transmission system expansion planning by simulated annealing. IEEE Transactions on Power Systems, 1996, 11, 364-369.	6.5	247
5	Optimal capacitor placement in radial distribution networks. IEEE Transactions on Power Systems, 2001, 16, 630-637.	6.5	241
6	A Bilevel Approach to Transmission Expansion Planning Within a Market Environment. IEEE Transactions on Power Systems, 2009, 24, 1513-1522.	6.5	220
7	An Efficient Codification to Solve Distribution Network Reconfiguration for Loss Reduction Problem. IEEE Transactions on Power Systems, 2008, 23, 1542-1551.	6.5	196
8	Tabu search algorithm for network synthesis. IEEE Transactions on Power Systems, 2000, 15, 490-495.	6.5	183
9	Multistage and Coordinated Planning of the Expansion of Transmission Systems. IEEE Transactions on Power Systems, 2004, 19, 735-744.	6.5	182
10	Power system transmission network expansion planning using AC model. IET Generation, Transmission and Distribution, 2007, 1, 731.	2.5	182
11	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.	3.6	175
12	Transmission system expansion planning by an extended genetic algorithm. IET Generation, Transmission and Distribution, 1998, 145, 329.	1.1	155
13	Transmission network expansion planning with security constraints. IET Generation, Transmission and Distribution, 2005, 152, 828.	1.1	150
14	Optimal Operation of Distribution Networks Considering Energy Storage Devices. IEEE Transactions on Smart Grid, 2015, 6, 2825-2836.	9.0	150
15	A mixed-integer LP model for the reconfiguration of radial electric distribution systems considering distributed generation. Electric Power Systems Research, 2013, 97, 51-60.	3.6	141
16	Branch and bound algorithm for transmission system expansion planning using a transportation model. IET Generation, Transmission and Distribution, 2000, 147, 149.	1.1	137
17	Parallel simulated annealing applied to long term transmission network expansion planning. IEEE Transactions on Power Systems, 1997, 12, 181-188.	6.5	121
18	A zero-one implicit enumeration method for optimizing investments in transmission expansion planning. IEEE Transactions on Power Systems, 1994, 9, 1385-1391.	6.5	120

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19	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.	9.0	115
20	Distribution System Services Provided by Electric Vehicles: Recent Status, Challenges, and Future Prospects. IEEE Transactions on Intelligent Transportation Systems, 2019, 20, 4277-4296.	8.0	110
21	Comparative studies on nonconvex optimization methods for transmission network expansion planning. IEEE Transactions on Power Systems, 1998, 13, 822-828.	6.5	109
22	Artificial Neural Networks and Clustering Techniques Applied in the Reconfiguration of Distribution Systems. IEEE Transactions on Power Delivery, 2006, 21, 1735-1742.	4.3	106
23	A New Mathematical Model for the Restoration Problem in Balanced Radial Distribution Systems. IEEE Transactions on Power Systems, 2016, 31, 1259-1268.	6.5	106
24	Constructive heuristic algorithm for the DC model in network transmission expansion planning. IET Generation, Transmission and Distribution, 2005, 152, 277.	1.1	100
25	A Constructive Heuristic Algorithm for Distribution System Planning. IEEE Transactions on Power Systems, 2010, 25, 1734-1742.	6.5	97
26	Robust Joint Expansion Planning of Electrical Distribution Systems and EV Charging Stations. IEEE Transactions on Sustainable Energy, 2018, 9, 884-894.	8.8	97
27	Transmission Network Expansion Planning Considering Uncertainty in Demand. IEEE Transactions on Power Systems, 2006, 21, 1565-1573.	6.5	94
28	Efficient heuristic algorithm used for optimal capacitor placement in distribution systems. International Journal of Electrical Power and Energy Systems, 2010, 32, 71-78.	5.5	85
29	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.	6.5	85
30	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.	5.5	85
31	Transmission system expansion planning by a branch-and-bound algorithm. IET Generation, Transmission and Distribution, 2008, 2, 90.	2.5	77
32	Distribution systems operation optimisation through reconfiguration and capacitor allocation by a dedicated genetic algorithm. IET Generation, Transmission and Distribution, 2010, 4, 1213.	2.5	74
33	A Metaheuristic to Solve the Transmission Expansion Planning. IEEE Transactions on Power Systems, 2007, 22, 2289-2291.	6.5	72
34	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.	8.8	71
35	AC OPF for Smart Distribution Networks: An Efficient and Robust Quadratic Approach. IEEE Transactions on Smart Grid, 2018, 9, 4613-4623.	9.0	71
36	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.	5.5	69

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37	Efficient method for AC transmission network expansion planning. Electric Power Systems Research, 2010, 80, 1056-1064.	3.6	67
38	Optimal Restoration/Maintenance Switching Sequence of Unbalanced Three-Phase Distribution Systems. IEEE Transactions on Smart Grid, 2018, 9, 6058-6068.	9.0	66
39	Artificial immune algorithm applied to distribution system reconfiguration with variable demand. International Journal of Electrical Power and Energy Systems, 2016, 82, 561-568.	5.5	63
40	Transmission Expansion Planning: Literature Review and Classification. IEEE Systems Journal, 2019, 13, 3129-3140.	4.6	63
41	Specialised branch-and-bound algorithm for transmission network expansion planning. IET Generation, Transmission and Distribution, 2001, 148, 482.	1.1	61
42	A Strategy to Solve the Multistage Transmission Expansion Planning Problem. IEEE Transactions on Power Systems, 2011, 26, 2574-2576.	6.5	57
43	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
44	Primary power distribution systems planning taking into account reliability, operation and expansion costs. IET Generation, Transmission and Distribution, 2012, 6, 274.	2.5	56
45	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.	6.5	53
46	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.	2.5	52
47	Transmission-expansion planning using the DC model and nonlinear-programming technique. IET Generation, Transmission and Distribution, 2005, 152, 763.	1.1	50
48	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.	3.6	50
49	Multistage Security-Constrained HVAC/HVDC Transmission Expansion Planning With a Reduced Search Space. IEEE Transactions on Power Systems, 2017, 32, 4805-4817.	6.5	49
50	Planning and Projects of Secondary Electric Power Distribution Systems. IEEE Transactions on Power Systems, 2009, 24, 1599-1608.	6.5	47
51	Optimal Delivery Scheduling and Charging of EVs in the Navigation of a City Map. IEEE Transactions on Smart Grid, 2018, 9, 4815-4827.	9.0	47
52	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.	5.5	44
53	Planning of Secondary Distribution Circuits Through Evolutionary Algorithms. IEEE Transactions on Power Delivery, 2005, 20, 205-213.	4.3	43
54	A Multi-Objective Distribution System Expansion Planning Incorporating Customer Choices on Reliability. IEEE Transactions on Power Systems, 2016, 31, 1330-1340.	6.5	42

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55	A strategy for transmission network expansion planning considering multiple generation scenarios. <i>Electric Power Systems Research</i> , 2019, 172, 22-31.	3.6	41
56	Multistage Transmission Expansion Planning Considering Fixed Series Compensation Allocation. <i>IEEE Transactions on Power Systems</i> , 2013, 28, 3795-3805.	6.5	38
57	A Real Test System For Power System Planning, Operation, and Reliability. <i>Journal of Control, Automation and Electrical Systems</i> , 2018, 29, 192-208.	2.0	38
58	Line maintenance within transmission expansion planning: a multistage framework. <i>IET Generation, Transmission and Distribution</i> , 2019, 13, 3057-3065.	2.5	38
59	A Contribution to the Optimization of the Reconfiguration Problem in Radial Distribution Systems. <i>Journal of Control, Automation and Electrical Systems</i> , 2018, 29, 756-768.	2.0	36
60	Reconfiguration of Radial Distribution Systems: An Efficient Mathematical Model. <i>IEEE Latin America Transactions</i> , 2021, 19, 1172-1181.	1.6	36
61	Artificial immune networks Copt-aiNet and Opt-aiNet applied to the reconfiguration problem of radial electrical distribution systems. <i>Electric Power Systems Research</i> , 2015, 119, 304-312.	3.6	35
62	Joint optimal operation of photovoltaic units and electric vehicles in residential networks with storage systems: A dynamic scheduling method. <i>International Journal of Electrical Power and Energy Systems</i> , 2018, 103, 136-145.	5.5	34
63	Efficient linear programming algorithm for the transmission network expansion planning problem. <i>IET Generation, Transmission and Distribution</i> , 2003, 150, 536.	1.1	33
64	Risk/investment-driven transmission expansion planning with multiple scenarios. <i>IET Generation, Transmission and Distribution</i> , 2013, 7, 154-165.	2.5	33
65	Transmission and Generation Expansion Planning Considering System Reliability and Line Maintenance. , 2018, , .		33
66	Constructive heuristic algorithm in branch-and-bound structure applied to transmission network expansion planning. <i>IET Generation, Transmission and Distribution</i> , 2007, 1, 318.	2.5	32
67	Coordinated tuning of the parameters of PI, PSS and POD controllers using a Specialized Chu's Beasley's Genetic Algorithm. <i>Electric Power Systems Research</i> , 2016, 140, 708-721.	3.6	32
68	Reliability and Economic Effects of Maintenance on TNEP Considering Line Loading and Repair. <i>IEEE Transactions on Power Systems</i> , 2016, 31, 3381-3393.	6.5	32
69	Robust Multi-Stage Substation Expansion Planning Considering Stochastic Demand. <i>IEEE Transactions on Power Systems</i> , 2016, 31, 2125-2134.	6.5	31
70	Reliability Effects of Maintenance on TNEP Considering Preventive and Corrective Repairs. <i>IEEE Transactions on Power Systems</i> , 2017, 32, 3768-3781.	6.5	28
71	Assessment of economic benefits for EV owners participating in the primary frequency regulation markets. <i>International Journal of Electrical Power and Energy Systems</i> , 2020, 120, 105985.	5.5	28
72	A VNS algorithm for the design of supplementary damping controllers for small-signal stability analysis. <i>International Journal of Electrical Power and Energy Systems</i> , 2018, 94, 41-56.	5.5	26

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73	Simultaneous Distributed Generation and Electric Vehicles Hosting Capacity Assessment in Electric Distribution Systems. IEEE Access, 2021, 9, 110927-110939.	4.2	26
74	Optimal Restoration of Active Distribution Systems With Voltage Control and Closed-Loop Operation. IEEE Transactions on Smart Grid, 2021, 12, 2295-2306.	9.0	24
75	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.	2.0	22
76	Heuristic Algorithm to Solve the Short Term Transmission Network Expansion Planning. IEEE Power Engineering Society General Meeting, 2007, , .	0.0	21
77	A Hybrid Heuristic and Evolutionary Algorithm for Distribution Substation Planning. IEEE Systems Journal, 2015, 9, 1396-1408.	4.6	21
78	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.	9.0	21
79	Increasing RES Hosting Capacity in Distribution Networks Through Closed-Loop Reconfiguration and Volt/VAr Control. IEEE Transactions on Industry Applications, 2022, 58, 4424-4435.	4.9	20
80	High-performance hybrid genetic algorithm to solve transmission network expansion planning. IET Generation, Transmission and Distribution, 2017, 11, 1111-1118.	2.5	19
81	Optimal Service Restoration in Active Distribution Networks Considering Microgrid Formation and Voltage Control Devices. IEEE Transactions on Industry Applications, 2021, 57, 5758-5771.	4.9	18
82	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.	5.5	17
83	Alternative Mathematical Models for the Optimal Transmission Switching Problem. IEEE Systems Journal, 2021, 15, 1245-1255.	4.6	14
84	Interior point algorithm for linear programming used in transmission network synthesis. Electric Power Systems Research, 2005, 76, 9-16.	3.6	13
85	A specialized genetic algorithm to solve the short term transmission network expansion planning. , 2009, , .		13
86	Increasing the hosting capacity for renewable energy in distribution networks. , 2017, , .		13
87	V2G enabled EVs providing frequency containment reserves: Field results. , 2018, , .		13
88	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.	4.2	13
89	Transmission network expansion planning in full open market considering security constraints. , 2005, , .		12
90	Optimal Restoration of Distribution Systems Considering Temporary Closed-Loop Operation. IEEE Systems Journal, 2021, 15, 5483-5494.	4.6	12

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91	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.	5.5	12
92	Generalised single-equation load flow method for unbalanced distribution systems. IET Generation, Transmission and Distribution, 2011, 5, 347.	2.5	11
93	Transmission Network Expansion Planning Considering Phase-Shifter Transformers. Journal of Electrical and Computer Engineering, 2012, 2012, 1-10.	0.9	11
94	Specialized genetic algorithm to solve the electrical distribution system expansion planning. , 2013, , .		11
95	An MILP model for the plug-in electric vehicle charging coordination problem in electrical distribution systems. , 2014, , .		11
96	Enhanced Coordination Strategy for an Aggregator of Distributed Energy Resources Participating in the Day-Ahead Reserve Market. Energies, 2020, 13, 1965.	3.1	11
97	Reconfiguration of Radial Distribution Systems with Variable Demands Using the Clonal Selection Algorithm and the Specialized Genetic Algorithm of Chuâ€“Beasley. Journal of Control, Automation and Electrical Systems, 2016, 27, 689-701.	2.0	10
98	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.	1.9	10
99	Transmission network expansion planning considering HVAC/HVDC lines and technical losses. , 2016, , .		9
100	Strategic capacitor placement in distribution systems by minimisation of harmonics amplification because of resonance. IET Generation, Transmission and Distribution, 2012, 6, 646.	2.5	7
101	A set of linear equations to calculate the steady-state operation of an electrical distribution system. , 2011, , .		6
102	A Stochastic Model for Medium-Term Distribution System Planning Considering CO ₂ Emissions. , 2020, , .		6
103	Transmission Network Expansion Planning Considering Line Switching. IEEE Access, 2020, 8, 115148-115158.	4.2	6
104	Branch and Bound Algorithm for Transmission Network Expansion Planning Using DC Model. , 2007, , .		5
105	An MILP model for the analysis of operation of energy storage devices in distribution systems. , 2016, , .		5
106	Distribution network planning using a constructive heuristic algorithm. , 2009, , .		4
107	A matheuristic algorithm for the three-dimensional loading capacitated vehicle routing problem (3L-CVRP). Revista Facultad De IngenierÃa, 2015, , .	0.5	4
108	Distribution System Reconfiguration with variable demands using the Clonal selection Algorithm. , 2015, , .		4

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109	Artificial Immune Systems Applied to Optimal Capacitor Placement in Radial Distribution Networks. , 2006, , .		3
110	Reconfiguration of distribution systems by a modified genetic algorithm. , 2007, , .		3
111	Specialized Genetic Algorithm for Transmission Network Expansion Planning Considering Reliability. , 2009, , .		3
112	Market-driven security-constrained Transmission Network Expansion Planning. , 2010, , .		3
113	Domain Reduction Using GRASP Construction Phase for Transmission Expansion Planning Problem. Lecture Notes in Computer Science, 2012, , 87-98.	1.3	3
114	Closure to Discussion on "Imposing Radiality Constraints in Distribution System Optimization Problems" IEEE Transactions on Power Systems, 2013, 28, 568-569.	6.5	3
115	An analysis of the optimal switching problem in transmission systems. , 2017, , .		3
116	Mathematical Optimization of Unbalanced Networks with Smart Grid Devices. Power Systems, 2018, , 65-114.	0.5	3
117	Restoration of Electrical Distribution Systems Using a Relaxed Mathematical Model. Journal of Control, Automation and Electrical Systems, 2018, 29, 259-269.	2.0	3
118	Business models for flexibility of electric vehicles. , 2019, , .		3
119	Planning of Reserve Branches to Increase Reconfiguration Capability in Distribution Systems: A Scenario-Based Convex Programming Approach. IEEE Access, 2021, 9, 104707-104721.	4.2	3
120	Secondary Reserve Provision through a Smart Aggregation Strategy of Electric Vehicles. , 2021, , .		3
121	Optimal Restoration of Distribution Networks through Reconfiguration and Microgrid Formation. , 2020, , .		3
122	Optimal allocation of capacitors in radial distribution systems with distributed generation. , 2011, , .		2
123	Applications of Heuristics and Metaheuristics in Power Systems. Journal of Electrical and Computer Engineering, 2012, 2012, 1-2.	0.9	2
124	Optimal charging coordination of electric vehicles in unbalanced electrical distribution system considering vehicle-to-grid technology. , 2015, , .		2
125	A MILP model for optimal charging coordination of storage devices and electric vehicles considering V2G technology. , 2015, , .		2
126	Plug-in electric vehicle charging coordination in electrical distribution systems using a Tabu Search algorithm. , 2015, , .		2

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127	Specialized genetic algorithm of Chu-Beasley applied to the Distribution System Reconfiguration problem considering several demand scenarios. , 2015, , .		2
128	An object-based visual selection framework. Neurocomputing, 2016, 180, 35-54.	5.9	2
129	Joint reconfiguration of feeders and allocation of capacitor banks in distribution systems using a multi-start strategy. , 2017, , .		2
130	Bus-Angle Difference Structural Cuts for Transmission System Expansion Planning with L-I Reliability. , 2018, , .		2
131	Optimal Sizing of Stationary Energy Storage Systems Participating in Primary Frequency Regulation Markets. , 2018, , .		2
132	Optimal Distribution Systems Expansion Planning for Improving Service Restoration. , 2018, , .		2
133	Flexible Solution Approach for Multistage Transmission Network Expansion Planning with Multiple Generation Scenarios. Journal of Control, Automation and Electrical Systems, 2020, 31, 705-717.	2.0	2
134	An AC Mathematical Model for Solving Complex Restoration Problems in Radial Distribution Systems in a Treatable Runtime. IEEE Access, 2020, 8, 228303-228314.	4.2	2
135	Efficient Multi-Start With Path Relinking Search Strategy for Transmission System Expansion Planning. IEEE Access, 2021, 9, 153213-153225.	4.2	2
136	A Branch and Bound Algorithm for Transmission Network Expansion Planning Using Nonconvex Mixed-Integer Nonlinear Programming Models. IEEE Access, 2022, 10, 39875-39888.	4.2	2
137	Multistage transmission expansion planning considering fixed series compensation allocation. , 2014, , .		1
138	Distribution System Reconfiguration with variable demands using the Opt-aiNet algorithm. , 2016, , .		1
139	Analysis of Optimal Power Flow Formulations for HVAC and VSC-HVDC Transmission Networks. , 2018, , .		1
140	Optimal operation of storage systems in distribution networks considering battery degradation. , 2018, , .		1
141	Optimal Service Restoration in Active Distribution Networks Considering Microgrid Formation and Voltage Control Devices. , 2020, , .		1
142	Optimal Operation of Active Distribution Systems with Voltage Control and Closed-Loop Topology. , 2021, , .		1
143	Power Flow Control and Small-Signal Stability Analysis Considering the SSSC FACTS. , 2021, , .		1
144	Increasing the RES Hosting Capacity in Distribution Systems Through Reconfiguration with Closed-Loop Operation and Voltage Control. , 2021, , .		1

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145	Increasing the PV Hosting Capacity in Unbalanced Three-Phase Distribution Networks Through Reconfiguration with Closed-Loop Operation. , 2021, , .		1
146	GRASP algorithm for charging coordination of plug-in electric vehicles in electrical distribution systems. , 2016, , .		0
147	Specialized Heuristic Algorithms for AC Transmission Expansion Planning Problem. , 2018, , .		0
148	Biased Random-Key Genetic Algorithm Applied to the Optimal Reconfiguration of Radial Distribution Systems. , 2018, , .		0
149	Critical analysis of the transmission systems expansion planning problem considering multiple generation scenarios. , 2018, , .		0
150	Mathematical models and optimization techniques to support local electricity markets. , 2021, , 259-276.		0
151	LQR Design Using LMIs and the Robust D-Stability Criterion for Low-Frequency Oscillation Damping in Power Systems. , 2021, , .		0
152	Robust Control via LMIs Applied to Small-Signal Stability in Power Systems. , 2021, , .		0
153	Robust Model Predictive Control via LMIs Applied for Damping Low-Frequency Electromechanical Oscillations in Power Systems. , 2021, , .		0