

Luis Alberto

List of Publications by Year in descending order

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117
papers

1,197
citations

471509

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27
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119
all docs

119
docs citations

119
times ranked

656
citing authors

#	ARTICLE	IF	CITATIONS
1	A New Methodology for the Coordinated Design of Robust Decentralized Power System Damping Controllers. IEEE Transactions on Power Systems, 2004, 19, 444-454.	6.5	120
2	On the invariance principle: generalizations and applications to synchronization. IEEE Transactions on Circuits and Systems Part 1: Regular Papers, 2000, 47, 730-739.	0.1	68
3	Lyapunov function for power systems with transfer conductances: extension of the invariance principle. IEEE Transactions on Power Systems, 2003, 18, 769-777.	6.5	68
4	Analysis of measurement-set qualitative characteristics for state-estimation purposes. IET Generation, Transmission and Distribution, 2007, 1, 39.	2.5	59
5	Uniform Invariance Principle and Synchronization. Robustness with Respect to Parameter Variation. Journal of Differential Equations, 2001, 169, 228-254.	2.2	48
6	Practical stability of switched systems without a common equilibria and governed by a time-dependent switching signal. European Journal of Control, 2013, 19, 206-213.	2.6	30
7	Application of Melnikov's method for computing heteroclinic orbits in a classical SMIB power system model. IEEE Transactions on Circuits and Systems Part 1: Regular Papers, 2000, 47, 1085-1089.	0.1	29
8	Characterization of Stability Region for General Autonomous Nonlinear Dynamical Systems. IEEE Transactions on Automatic Control, 2012, 57, 1564-1569.	5.7	26
9	An Invariance Principle for Nonlinear Discrete Autonomous Dynamical Systems. IEEE Transactions on Automatic Control, 2007, 52, 692-697.	5.7	25
10	Direct methods for transient stability analysis in power systems: state of art and future perspectives. , 0, , .		24
11	Power System Low-Voltage Solutions Using an Auxiliary Gradient System for Voltage Collapse Purposes. IEEE Transactions on Power Systems, 2005, 20, 1528-1537.	6.5	24
12	Preventive Control Design for Voltage Stability Considering Multiple Critical Contingencies. IEEE Transactions on Power Systems, 2016, 31, 1517-1525.	6.5	24
13	Synchronism versus stability in power systems. International Journal of Electrical Power and Energy Systems, 1999, 21, 261-267.	5.5	23
14	Smooth perturbation on a classical energy function for lossy power system stability analysis. IEEE Transactions on Circuits and Systems Part 1: Regular Papers, 2005, 52, 222-229.	0.1	21
15	An Extension of the Invariance Principle for a Class of Differential Equations with Finite Delay. Advances in Difference Equations, 2010, 2010, 1-14.	3.5	20
16	Linear matrix inequality based controller design with feedback linearisation: application to power systems. IET Control Theory and Applications, 2003, 150, 551-556.	1.7	19
17	Uniform Estimates of Attracting Sets of Extended Lurie Systems Using LMIs. IEEE Transactions on Automatic Control, 2006, 51, 1675-1678.	5.7	19
18	Geometrical approaches for gross errors analysis in power systems state estimation. , 2009, , .		19

#	ARTICLE	IF	CITATIONS
19	Theoretical foundation of CUEP method for two-time scale power system models. , 2009, , .		19
20	An extension of the invariance principle for dwell-time switched nonlinear systems. Systems and Control Letters, 2012, 61, 580-586.	2.3	19
21	Stability region bifurcations of nonlinear autonomous dynamical systems: Typeâ€zero saddleâ€node bifurcations. International Journal of Robust and Nonlinear Control, 2011, 21, 591-612.	3.7	18
22	A New and Fast Method for Preventive Control Selection in Voltage Stability Analysis. IEEE Transactions on Power Systems, 2013, 28, 4448-4455.	6.5	18
23	Parameter estimation of synchronous generators from different types of disturbances. , 2011, , .		15
24	Network observability: identification of the measurements redundancy level. , 0, , .		14
25	Geometrical approach on masked gross errors for power systems state estimation. , 2009, , .		14
26	Ultimate boundedness sufficient conditions for nonlinear systems using TS fuzzy modelling. Fuzzy Sets and Systems, 2019, 361, 88-100.	2.7	13
27	On The Computation of The Locally Closest Bifurcation Point Considering Loading Uncertainties and Reactive Power Limits. IEEE Transactions on Power Systems, 2020, 35, 3885-3894.	6.5	13
28	Decentralized output feedback controller design for the damping of electromechanical oscillations. International Journal of Electrical Power and Energy Systems, 2004, 26, 207-219.	5.5	12
29	A new methodology for parameter estimation of synchronous generator from disturbance measurements. , 2008, , .		12
30	Algebraic-graph method for identification of islanding in power system grids. International Journal of Electrical Power and Energy Systems, 2012, 35, 171-179.	5.5	12
31	Power system state estimation: Undetectable bad data. International Transactions on Electrical Energy Systems, 2014, 24, 91-107.	1.9	12
32	TYPE-ZERO SADDLE-NODE BIFURCATIONS AND STABILITY REGION ESTIMATION OF NONLINEAR AUTONOMOUS DYNAMICAL SYSTEMS. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2012, 22, 1250020.	1.7	11
33	Two-Time-Scale Approach to Characterize the Steady-State Security Region for the Electricity-Gas Integrated Energy System. IEEE Transactions on Power Systems, 2021, 36, 5863-5873.	6.5	11
34	Required damping to assure multiswing transient stability: the SMIB case. International Journal of Electrical Power and Energy Systems, 2000, 22, 179-185.	5.5	10
35	Energy function for power systems with transmission losses: extension of the invariance principle. , 0, , .		10
36	UNIFORM APPROACH FOR STABILITY ANALYSIS OF FAST SUBSYSTEM OF TWO-TIME SCALE NONLINEAR SYSTEMS. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2007, 17, 4195-4203.	1.7	10

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37	On the Foundations of Stability Analysis of Power Systems in Time Scales. IEEE Transactions on Circuits and Systems I: Regular Papers, 2015, 62, 1230-1239.	5.4	10
38	Controlling unstable equilibrium point theory for stability assessment of two-time scale power system models. , 2008, , .		9
39	A fast method for detecting limit-induced bifurcation in electric power systems. Electric Power Systems Research, 2020, 180, 106101.	3.6	9
40	Saddle-Node Bifurcations of Power Systems in the Context of Variational Theory and Nonsmooth Optimization. IEEE Access, 2020, 8, 110986-110993.	4.2	9
41	A methodology for the estimation of synchronous generator and excitation system parameters. , 2005, , .		8
42	Transient Stability of Power Systems Under High Penetrations of Wind Power Generation. Journal of Control, Automation and Electrical Systems, 2019, 30, 1116-1125.	2.0	8
43	Sufficient conditions in terms of linear matrix inequalities for guaranteed ultimately boundedness of solutions of switched Takagi-Sugeno fuzzy systems using the S-procedure. Information Sciences, 2021, 572, 501-521.	6.9	8
44	A topological approach to the identification of critical measurements in power-system state estimation. IEEE Transactions on Circuits and Systems Part 1: Regular Papers, 2005, 52, 139-147.	0.1	7
45	A methodology for parameter estimation of synchronous generators based on trajectory sensitivity and synchronization technique. , 2006, , .		7
46	Look-ahead based method for selection of preventive control for voltage stability analysis. , 2012, , .		6
47	Identifying groups of preventive controls for a set of critical contingencies in the context of voltage stability. , 2013, , .		6
48	Integrating Hierarchical Clustering and Pareto-Efficiency to Preventive Controls Selection in Voltage Stability Assessment. Lecture Notes in Computer Science, 2015, , 487-497.	1.3	6
49	FunÃ§Ã£o energia generalizada de controle para estabilizaÃ§Ã£o de sistemas nÃ£o lineares. Controle and Automacao, 2009, 20, 133-145.	0.2	6
50	Practical stability of continuous-time switched systems without a common equilibria and governed by a time-dependent switching signal. , 2011, , .		5
51	Towards the development of a two-time scale CUEP/BCU method. , 2013, , .		5
52	STABILITY BOUNDARY CHARACTERIZATION OF NONLINEAR AUTONOMOUS DYNAMICAL SYSTEMS IN THE PRESENCE OF A SUPERCRITICAL HOPF EQUILIBRIUM POINT. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2013, 23, 1350196.	1.7	5
53	Assessment of model parameters to identify an equivalent wind power plant. , 2015, , .		5
54	A constrained minimization approach for the estimation of parameters of transient generator models. Electric Power Systems Research, 2017, 143, 252-261.	3.6	5

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55	A comparative validation of a synchronous generator by trajectory sensitivity and offline methods. International Transactions on Electrical Energy Systems, 2017, 27, e2255.	1.9	5
56	Network observability: a fast topological approach to identify critical measurements. , 0, , .		4
57	An extended energy function for voltage collapse analysis considering voltage dependent load models. , 0, , .		4
58	Discussion on "Placement of PMUs to Enable Bad Data Detection in State Estimation". IEEE Transactions on Power Systems, 2008, 23, 816-817.	6.5	4
59	An uniform approach for direct transient stability analysis of electric power systems. , 2009, , .		4
60	Towards development of generalized energy functions for electric power systems. , 2012, , .		4
61	A multi-step optimization approach for power flow with transient stability constraints. , 2015, , .		4
62	Stability region of a wind power system under low-voltage ride-through constraint. , 2016, , .		4
63	Damping estimation for multi-swing transient stability analysis: the OMIB case. , 0, , .		3
64	Coherency on electrical power systems. , 0, , .		3
65	Parameter dependent control Lyapunov function for series and shunt FACTS devices considering uncertain power system model. , 2006, , .		3
66	A fast methodology for stability margin evaluation of power systems due to Hopf bifurcation. , 2010, , .		3
67	The behavior of WLS state estimator near the maximum loadability point of power systems. , 2010, , .		3
68	Trajectory sensitivity and genetic algorithm based-method for load identification. , 2014, , .		3
69	Practical stability assessment of distributed synchronous generators under variations in the system equilibrium conditions. International Journal of Electrical Power and Energy Systems, 2014, 55, 275-284.	5.5	3
70	A two-time scale framework for stability analysis of electrical power system. , 2014, , .		3
71	Generalized energy functions for a class of lossy networking preserving power system models. , 2015, , .		3
72	Stability analysis of a wind power system via PEBS method. , 2017, , .		3

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73	Smooth Power Flow Model for Unified Voltage Stability Assessment: Theory and Computation. IEEE Transactions on Power Systems, 2022, 37, 4579-4589.	6.5	3
74	A novel methodology for power angle estimation of synchronous generator based on trajectory sensitivity analysis. , 2009, , .		2
75	A fast method for islanding analysis in power system grids. , 2011, , .		2
76	Metodologia pratica para estimao de parmetros de geradores sncronos a partir de medidas de perturbaes. Controle and Automacao, 2012, 23, 453-464.	0.2	2
77	Association of the stability region with time scale analysis to study voltage stability. , 2013, , .		2
78	A new and fast method for preventive control selection in voltage stability analysis. , 2014, , .		2
79	Stability regions of two-time-scale continuous dynamical systems. , 2015, , 287-321.		2
80	Online parameter estimation of synchronous generators from accessible measurements. , 2016, , .		2
81	Extended lyapunov function for power systems with transmission losses. , 0, , .		1
82	Estimating the frequencies of load buses and their effects on the critical clearing time. , 0, , .		1
83	A New LMI-based procedure for the design of robust damping controllers for power systems. , 2004, , .		1
84	An extended energy function for voltage and transient stability analysis considering voltage dependent active loads. , 2005, , .		1
85	Power Systems Low Voltage Solutions Using an Auxiliar Gradient System for Voltage Collapse Purposes. IEEE Power Engineering Society General Meeting, 2007, , .	0.0	1
86	SYNCHRONIZATION OF A CLASS OF SECOND-ORDER NONLINEAR SYSTEMS. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2008, 18, 3461-3471.	1.7	1
87	Trajectory Sensitivity Method and Master-Slave Synchronization to Estimate Parameters of Nonlinear Systems. Mathematical Problems in Engineering, 2009, 2009, 1-14.	1.1	1
88	An extension of the invariance principle for switched nonlinear systems. , 2011, , .		1
89	A tool to group and coordinate preventive controls actions on the context of voltage stability assessment. , 2013, , .		1
90	A global group of preventive controls for critical contingencies in the context of voltage stability. , 2013, , .		1

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91	Supercritical Hopf equilibrium points on the boundary of the stability region. , 2013, , .		1
92	Application of the undetectability index to design reliable metering systems for bad data processing. , 2013, , .		1
93	Determine groups of preventive controls for a set of critical contingencies in voltage stability. , 2014, , .		1
94	Energy-guided time-domain simulation for critical clearing time reassessment in the TTS-CUEP/BCU method. , 2014, , .		1
95	Direct methods for stability assessment of two-time-scale electrical power system models. , 2015, , .		1
96	A uniform invariance principle for periodic systems with applications to synchronization. Systems and Control Letters, 2016, 97, 48-54.	2.3	1
97	Saddle-node equilibrium points on the stability boundary of nonlinear autonomous dynamical systems. Dynamical Systems, 2018, 33, 113-135.	0.4	1
98	Transient Stability Analysis of a Single Machine Infinite Bus System with Uncertainties in Generated Power. , 2019, , .		1
99	Time scale stability analysis of a Hopf bifurcation in a windâ€“diesel hybrid microgrid. IET Renewable Power Generation, 2020, 14, 1491-1501.	3.1	1
100	Generalized Energy Functions for a Class of Third-Order Nonlinear Dynamical Systems. IEEE Transactions on Automatic Control, 2021, 66, 3111-3122.	5.7	1
101	Toward a Comprehensive Theory for Stability Regions of a Class of Nonlinear Discrete Dynamical Systems. IEEE Transactions on Automatic Control, 2021, 66, 4371-4377.	5.7	1
102	Characterization of saddle-node equilibrium points on the stability boundary of nonlinear autonomous dynamical system. , 0, , .		1
103	Subcritical Hopf Equilibrium Points in Boundary of the Stability Region. TeMa, 2016, 17, 211.	0.1	1
104	Bifurcations and Stability Regions of Nonlinear Dynamical Systems. Understanding Complex Systems, 2018, , 115-146.	0.6	1
105	An analysis of structural and practical identifiability applied to a transient generator model. Electric Power Systems Research, 2022, 206, 107817.	3.6	1
106	Synchronism versus stability in power systems: Frequency dependent loads. , 0, , .		0
107	Low voltage solutions calculation for voltage stability analysis using energy methods. , 0, , .		0
108	Robust computation of the controlling unstable equilibrium points in transient stability analysis. , 2005, , .		0

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109	Robustness of stability regions of nonlinear circuits and systems under parameter variation. , 2010, , .		0
110	Towards development of a CUEP method for Network-preserving power system models. , 2013, , .		0
111	Practical stability assesement of distributed synchronous generators under load variations. , 2013, , .		0
112	Generalized Control Energy Function for controllable TCSC devices. , 2013, , .		0
113	A fast method for load margin estimation considering the reactive power generation limits. , 2016, , .		0
114	Parameter estimation of the transient model of a synchronous generator from accessible measurements and with parameter constraints. , 2017, , .		0
115	BifurcaÃ§Ãµes Sela-NÃ³ da RegiÃ£o de Estabilidade de Sistemas DinÃ¢micos AutÃªnomos nÃ£o Lineares. TeMa, 2016, 17, 71.	0.1	0
116	Direct method for transient stability assessment of a single wind turbine generator subject to LVRT requirements. IET Generation, Transmission and Distribution, 2020, 14, 6195-6205.	2.5	0
117	On The Computation of The Locally Closest Bifurcation Point Considering Loading Uncertainties and Reactive Power Limits. , 2021, , .		0