

Louis Wehenkel

List of Publications by Year in descending order

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81
papers

9,505
citations

136950

32
h-index

155660

55
g-index

82
all docs

82
docs citations

82
times ranked

11663
citing authors

#	ARTICLE	IF	CITATIONS
1	Extremely randomized trees. Machine Learning, 2006, 63, 3-42.	5.4	4,796
2	Inferring Regulatory Networks from Expression Data Using Tree-Based Methods. PLoS ONE, 2010, 5, e12776.	2.5	1,381
3	A complete fuzzy decision tree technique. Fuzzy Sets and Systems, 2003, 138, 221-254.	2.7	333
4	Contingency Ranking With Respect to Overloads in Very Large Power Systems Taking Into Account Uncertainty, Preventive, and Corrective Actions. IEEE Transactions on Power Systems, 2013, 28, 4909-4917.	6.5	198
5	Supervised learning with decision tree-based methods in computational and systems biology. Molecular BioSystems, 2009, 5, 1593.	2.9	169
6	Collaborative analysis of multi-gigapixel imaging data using Cytomine. Bioinformatics, 2016, 32, 1395-1401.	4.1	140
7	Contingency Filtering Techniques for Preventive Security-Constrained Optimal Power Flow. IEEE Transactions on Power Systems, 2007, 22, 1690-1697.	6.5	136
8	Interior-point based algorithms for the solution of optimal power flow problems. Electric Power Systems Research, 2007, 77, 508-517.	3.6	128
9	Recent Developments in Machine Learning for Energy Systems Reliability Management. Proceedings of the IEEE, 2020, 108, 1656-1676.	21.3	115
10	Biomarker discovery for inflammatory bowel disease, using proteomic serum profiling. Biochemical Pharmacology, 2007, 73, 1422-1433.	4.4	104
11	A New Iterative Approach to the Corrective Security-Constrained Optimal Power Flow Problem. IEEE Transactions on Power Systems, 2008, 23, 1533-1541.	6.5	103
12	Discovery of new rheumatoid arthritis biomarkers using the surface-enhanced laser desorption/ionization time-of-flight mass spectrometry ProteinChip approach. Arthritis and Rheumatism, 2005, 52, 3801-3812.	6.7	102
13	PREDetector: A new tool to identify regulatory elements in bacterial genomes. Biochemical and Biophysical Research Communications, 2007, 357, 861-864.	2.1	97
14	Monomeric Calgranulins Measured by SELDI-TOF Mass Spectrometry and Calprotectin Measured by ELISA as Biomarkers in Arthritis. Clinical Chemistry, 2008, 54, 1066-1075.	3.2	85
15	A Machine Learning-Based Approximation of Strong Branching. INFORMS Journal on Computing, 2017, 29, 185-195.	1.7	81
16	Automatic induction of fuzzy decision trees and its application to power system security assessment. Fuzzy Sets and Systems, 1999, 102, 3-19.	2.7	80
17	Zebrafish Bone and General Physiology Are Differently Affected by Hormones or Changes in Gravity. PLoS ONE, 2015, 10, e0126928.	2.5	74
18	Experiments with the interior-point method for solving large scale Optimal Power Flow problems. Electric Power Systems Research, 2013, 95, 276-283.	3.6	73

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19	Exploiting SNP Correlations within Random Forest for Genome-Wide Association Studies. PLoS ONE, 2014, 9, e93379.	2.5	69
20	A Generic Approach for Solving Nonlinear-Discrete Security-Constrained Optimal Power Flow Problems in Large-Scale Systems. IEEE Transactions on Power Systems, 2014, 29, 1194-1203.	6.5	69
21	A hybrid optimization technique coupling an evolutionary and a local search algorithm. Journal of Computational and Applied Mathematics, 2008, 215, 448-456.	2.0	64
22	Proteomics for prediction and characterization of response to infliximab in Crohn's disease: A pilot study. Clinical Biochemistry, 2008, 41, 960-967.	1.9	64
23	Estimation of rotor angles of synchronous machines using artificial neural networks and local PMU-based quantities. Neurocomputing, 2007, 70, 2668-2678.	5.9	60
24	Sensitivity-Based Approaches for Handling Discrete Variables in Optimal Power Flow Computations. IEEE Transactions on Power Systems, 2010, 25, 1780-1789.	6.5	60
25	Improving the Statement of the Corrective Security-Constrained Optimal Power-Flow Problem. IEEE Transactions on Power Systems, 2007, 22, 887-889.	6.5	56
26	Cautious Operation Planning Under Uncertainties. IEEE Transactions on Power Systems, 2012, 27, 1859-1869.	6.5	53
27	Operating in the Fog: Security Management Under Uncertainty. IEEE Power and Energy Magazine, 2012, 10, 40-49.	1.6	52
28	Discovery and biochemical characterisation of four novel biomarkers for osteoarthritis. Annals of the Rheumatic Diseases, 2011, 70, 1144-1152.	0.9	43
29	Phenotype Classification of Zebrafish Embryos by Supervised Learning. PLoS ONE, 2015, 10, e0116989.	2.5	43
30	Exploiting the Use of DC SCOPF Approximation to Improve Iterative AC SCOPF Algorithms. IEEE Transactions on Power Systems, 2012, 27, 1459-1466.	6.5	42
31	Clinical data based optimal STI strategies for HIV: a reinforcement learning approach. , 2006, , .		40
32	Redispatching Active and Reactive Powers Using a Limited Number of Control Actions. IEEE Transactions on Power Systems, 2011, 26, 1221-1230.	6.5	39
33	Coupling Optimization and Dynamic Simulation for Preventive-Corrective Control of Voltage Instability. IEEE Transactions on Power Systems, 2009, 24, 796-805.	6.5	33
34	An Iterative AC-SCOPF Approach Managing the Contingency and Corrective Control Failure Uncertainties With a Probabilistic Guarantee. IEEE Transactions on Power Systems, 2019, 34, 3780-3790.	6.5	33
35	Biomarker discovery in asthma-related inflammation and remodeling. Proteomics, 2009, 9, 2163-2170.	2.2	30
36	An efficient algorithm to perform multiple testing in epistasis screening. BMC Bioinformatics, 2013, 14, 138.	2.6	29

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37	Optimal Power Flow Computations With a Limited Number of Controls Allowed to Move. IEEE Transactions on Power Systems, 2010, 25, 586-587.	6.5	28
38	Chance-Constrained Outage Scheduling Using a Machine Learning Proxy. IEEE Transactions on Power Systems, 2019, 34, 2528-2540.	6.5	27
39	Automatic Learning of Fine Operating Rules for Online Power System Security Control. IEEE Transactions on Neural Networks and Learning Systems, 2016, 27, 1708-1719.	11.3	26
40	Probabilistic Reliability Management Approach and Criteria for power system real-time operation. , 2016, , .		24
41	Decoding Semi-Constrained Brain Activity from fMRI Using Support Vector Machines and Gaussian Processes. PLoS ONE, 2012, 7, e35860.	2.5	23
42	Batch mode reinforcement learning based on the synthesis of artificial trajectories. Annals of Operations Research, 2013, 208, 383-416.	4.1	22
43	Machine learning of real-time power systems reliability management response. , 2017, , .		22
44	Computation of Worst Operation Scenarios Under Uncertainty for Static Security Management. IEEE Transactions on Power Systems, 2013, 28, 1697-1705.	6.5	19
45	Scenario Trees and Policy Selection for Multistage Stochastic Programming Using Machine Learning. INFORMS Journal on Computing, 2013, 25, 488-501.	1.7	18
46	Comparison of centralized, distributed and hierarchical model predictive control schemes for electromechanical oscillations damping in large-scale power systems. International Journal of Electrical Power and Energy Systems, 2014, 58, 32-41.	5.5	17
47	Whither probabilistic security management for real-time operation of power systems?.. , 2013, , .		16
48	Using Machine Learning to Enable Probabilistic Reliability Assessment in Operation Planning. , 2018, , .		14
49	Trajectory-Based Supplementary Damping Control for Power System Electromechanical Oscillations. IEEE Transactions on Power Systems, 2014, 29, 2835-2845.	6.5	13
50	Classifying pairs with trees for supervised biological network inference. Molecular BioSystems, 2015, 11, 2116-2125.	2.9	13
51	An AC OPF-based heuristic algorithm for optimal transmission switching. , 2014, , .		12
52	Towards generic image classification using tree-based learning: An extensive empirical study. Pattern Recognition Letters, 2016, 74, 17-23.	4.2	12
53	Unit Commitment Using Nearest Neighbor as a Short-Term Proxy. , 2018, , .		10
54	Machine learning for ranking day-ahead decisions in the context of short-term operation planning. Electric Power Systems Research, 2020, 189, 106548.	3.6	9

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55	Probabilistic Resilience Analysis of the Icelandic Power System under Extreme Weather. Applied Sciences (Switzerland), 2020, 10, 5089.	2.5	8
56	On the Relevance of Sophisticated Structural Annotations for Disulfide Connectivity Pattern Prediction. PLoS ONE, 2013, 8, e56621.	2.5	8
57	On the Encoding of Proteins for Disordered Regions Prediction. PLoS ONE, 2013, 8, e82252.	2.5	8
58	Cyber-physical risk modeling with imperfect cyber-attackers. Electric Power Systems Research, 2022, 211, 108437.	3.6	8
59	Inferring bounds on the performance of a control policy from a sample of trajectories. , 2009, , .		7
60	Pseudo-Geographical Representations of Power System Buses by Multidimensional Scaling. , 2009, , .		7
61	A new heuristic approach to deal with discrete variables in optimal power flow computations. , 2009, , .		7
62	Bayesian Estimates of Transmission Line Outage Rates That Consider Line Dependencies. IEEE Transactions on Power Systems, 2021, 36, 1095-1106.	6.5	7
63	Content-based Image Retrieval by Indexing Random Subwindows with Randomized Trees. IPSJ Transactions on Computer Vision and Applications, 2009, 1, 46-57.	4.4	6
64	A rare event approach to build security analysis tools when $N \gg k$ ($k \gg 1$) analyses are needed (as they are in large scale power systems). , 2009, , .		5
65	Robust automatic target recognition using extra-trees. , 2010, , .		5
66	Supervised learning of intra-daily recourse strategies for generation management under uncertainties. , 2009, , .		4
67	Multi-Area Security Assessment: Results using Efficient Bounding Method. , 2006, , .		3
68	Automatic learning for the classification of primary frequency control behaviour. , 2007, , .		3
69	Optimized look-ahead tree policies: a bridge between look-ahead tree policies and direct policy search. International Journal of Adaptive Control and Signal Processing, 2014, 28, 255-289.	4.1	3
70	A computational model of mid-term outage scheduling for long-term system studies. , 2017, , .		3
71	Application of the Galileo System for a Better Synchronization of Electrical Power Systems. , 2007, , .		2
72	A collaborative framework for multi-area dynamic security assessment of large scale systems. , 2007, , .		2

#	ARTICLE	IF	CITATIONS
73	Planning under uncertainty, ensembles of disturbance trees and kernelized discrete action spaces. , 2009, , .		2
74	Decoding Spontaneous Brain Activity from fMRI Using Gaussian Processes: Tracking Brain Reactivation. , 2012, , .		2
75	Towards leveraging discrete grid flexibility in chance-constrained power system operation planning. Electric Power Systems Research, 2020, 188, 106571.	3.6	2
76	Damping Control by Fusion of Reinforcement Learning and Control Lyapunov Functions. , 2006, , .		1
77	Active exploration by searching for experiments that falsify the computed control policy. , 2011, , .		1
78	Post-contingency corrective control failure: a risk to neglect or a risk to control?. , 2018, , .		1
79	Applying Bayesian estimates of individual transmission line outage rates. , 2020, , .		1
80	Analyzing transient instability phenomena beyond the classical stability boundary. , 2008, , .		0
81	Comments on: A random forest guided tour. Test, 2016, 25, 247-253.	1.1	0