Holger Claussen

List of Publications by Year
in descending order

165 papers	5,529 citations	331670 21 h-index	197818 49 g-index
174 all docs	174 docs citations	174 times ranked	3961 citing authors

#	Article	IF	Citations
1	Femtocells: Past, Present, and Future. IEEE Journal on Selected Areas in Communications, 2012, 30, 497-508.	14.0	970
2	Towards 1 Gbps/UE in Cellular Systems: Understanding Ultra-Dense Small Cell Deployments. IEEE Communications Surveys and Tutorials, 2015, 17, 2078-2101.	39.4	393
3	Performance of Macro- and Co-Channel Femtocells in a Hierarchical Cell Structure. , 2007, , .		325
4	An overview of the femtocell concept. Bell Labs Technical Journal, 0, 13, 221-245.	0.7	322
5	On Distributed and Coordinated Resource Allocation for Interference Mitigation in Self-Organizing LTE Networks. IEEE/ACM Transactions on Networking, 2013, 21, 1145-1158.	3.8	168
6	Self-optimization of coverage for femtocell deployments. Wireless Telecommunications Symposium, 2009 WTS 2009, 2008, , .	0.0	164
7	Power Minimization Based Resource Allocation for Interference Mitigation in OFDMA Femtocell Networks. IEEE Journal on Selected Areas in Communications, 2014, 32, 333-344.	14.0	164
8	Wireless RSSI fingerprinting localization. Signal Processing, 2017, 131, 235-244.	3.7	158
9	On femto deployment architectures and macrocell offloading benefits in joint macro-femto deployments. , 2010, 48, 26-32.		154
10	Effects of User-Deployed, Co-Channel Femtocells on the Call Drop Probability in a Residential Scenario. , 2007, , .		150
11	Improving Energy Efficiency of Femtocell Base Stations Via User Activity Detection. , 2010, , .		120
12	Financial Analysis of a Pico-Cellular Home Network Deployment. , 2007, , .		93
13	Efficient modelling of channel maps with correlated shadow fading in mobile radio systems. , 0, , .		92
14	Effects of joint macrocell and residential picocell deployment on the network energy efficiency. , 2008, , .		87
15	Dynamic idle mode procedures for femtocells. Bell Labs Technical Journal, 0, 15, 95-116.	0.7	76
16	Joint Optimisation of Real-Time Deployment and Resource Allocation for UAV-Aided Disaster Emergency Communications. IEEE Journal on Selected Areas in Communications, 2021, 39, 3411-3424.	14.0	71
17	On the Fundamental Characteristics of Ultra-Dense Small Cell Networks. IEEE Network, 2018, 32, 92-100.	6.9	67
18	Femtocell Coverage Optimization Using Switched Multi-Element Antennas. , 2009, , .		64

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19	Dual connectivity in LTE HetNets with split control- and user-plane. , 2013, , .		64
20	Distributed Radio Coverage Optimization in Enterprise Femtocell Networks. , 2010, , .		62
21	A fuzzy reinforcement learning approach for self-optimization of coverage in LTE networks. Bell Labs Technical Journal, 2010, 15, 153-175.	0.7	61
22	Indoor Optical Wireless Power Transfer to Small Cells at Nighttime. Journal of Lightwave Technology, 2016, 34, 3236-3258.	4.6	60
23	Deployment options for femtocells and their impact on existing macrocellular networks. Bell Labs Technical Journal, 0, 13, 145-160.	0.7	57
24	Self-optimization of capacity and coverage in LTE networks using a fuzzy reinforcement learning approach. , 2010, , .		56
25	Channel Estimation for Spatial Modulation. IEEE Transactions on Communications, 2014, 62, 4362-4372.	7.8	54
26	Energy Efficient Visible Light Communications Relying on Amorphous Cells. IEEE Journal on Selected Areas in Communications, 2016, 34, 894-906.	14.0	52
27	MPTCP Meets FEC: Supporting Latency-Sensitive Applications Over Heterogeneous Networks. IEEE/ACM Transactions on Networking, 2018, 26, 2005-2018.	3.8	52
28	3D UAV Trajectory and Data Collection Optimisation Via Deep Reinforcement Learning. IEEE Transactions on Communications, 2022, 70, 2358-2371.	7.8	51
29	Small cell backhaul: challenges and prospective solutions. Eurasip Journal on Wireless Communications and Networking, 2015, 2015, .	2.4	50
30	Lattice Partition Multiple Access: A New Method of Downlink Non-Orthogonal Multiuser Transmissions. , 2016, , .		50
31	Co-Channel Operation of Macro- and Femtocells in a Hierarchical Cell Structure. International Journal of Wireless Information Networks, 2008, 15, 137-147.	2.7	49
32	Self-Optimization of femtocell coverage to minimize the increase in core network mobility signalling. Bell Labs Technical Journal, 0, 14, 155-183.	0.7	43
33	Evolving femtocell coverage optimization algorithms using genetic programming. , 2009, , .		38
34	Using LTE in Unlicensed Bands: Potential Benefits and Coexistence Issues. , 2016, 54, 116-123.		37
35	Urban small cell deployments: Impact on the network energy consumption. , 2012, , .		36
36	Anticipatory Association for Indoor Visible Light Communications: Light, Follow Me!. IEEE Transactions on Wireless Communications, 2018, 17, 2499-2510.	9.2	36

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37	Operating Massive MIMO in Unlicensed Bands for Enhanced Coexistence and Spatial Reuse. IEEE Journal on Selected Areas in Communications, 2017, 35, 1282-1293.	14.0	31
38	Leveraging advances in mobile broadband technology to improve environmental sustainability. Telecommunications Journal of Australia, 2009, 59, 4.1-4.18.	0.2	28
39	Analysis and Design of a Latency Control Protocol for Multi-Path Data Delivery With Pre-Defined QoS Guarantees. IEEE/ACM Transactions on Networking, 2019, 27, 1165-1178.	3.8	27
40	Duty cycles and load balancing in HetNets with eICIC almost blank subframes. , 2013, , .		25
41	Self-deployment, Self-configuration:Critical Future Paradigms for Wireless Access Networks. Lecture Notes in Computer Science, 2005, , 58-68.	1.3	24
42	A comparison of grammatical genetic programming grammars for controlling femtocell network coverage. Genetic Programming and Evolvable Machines, 2013, 14, 65-93.	2.2	20
43	Small Cell Networks: Deployment, Management, and Optimization. , 2017, , .		20
44	Macrocell offloading benefits in joint macro-and femtocell deployments. , 2009, , .		18
45	Indoor Millimeter-Wave Systems: Design and Performance Evaluation. Proceedings of the IEEE, 2020, 108, 923-944.	21.3	18
46	A symbolic regression approach to manage femtocell coverage using grammatical genetic programming. , 2011, , .		16
47	Multi-carrier cell structures with angular offset. , 2012, , .		16
48	RSSI Localization with Gaussian Processes and Tracking. , 2015, , .		16
49	Autonomous Self-deployment of Wireless Access Networks in an Airport Environment. Lecture Notes in Computer Science, 2006, , 86-98.	1.3	16
50	Evolution Towards Dynamic Spectrum Sharing in Mobile Communications. , 2006, , .		15
51	Analytical Evaluation of Higher Order Sectorization, Frequency Reuse, and User Classification Methods in OFDMA Networks. IEEE Transactions on Wireless Communications, 2016, 15, 8209-8222.	9.2	15
52	Multilayer Optimization of Heterogeneous Networks Using Grammatical Genetic Programming. IEEE Transactions on Cybernetics, 2017, 47, 2938-2950.	9.5	15
53	Minimising cell transmit power. , 2011, , .		14
54	Automated Self-Optimization in Heterogeneous Wireless Communications Networks. IEEE/ACM Transactions on Networking, 2019, 27, 419-432.	3.8	14

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55	Locating user equipments and access points using RSSI fingerprints: A Gaussian process approach. , 2016, , .		13
56	Improved max-log map turbo decoding using maximum mutual information combining. , 0, , .		12
57	Distributed Algorithms for Robust Self-deployment and Load Balancing in Autonomous Wireless Access Networks. , 2006, , .		12
58	Detecting co-located mobile users. , 2015, , .		12
59	Smartphone positioning with radio measurements from a single wifi access point. , 2019, , .		12
60	I, base station: Cognisant robots and future wireless access networks. , 0, , .		11
61	Evolutionary learning of link allocation algorithms for 5G heterogeneous wireless communications networks. , 2019, , .		11
62	Improved Max-Log-MAP Turbo Decoding by Maximization of Mutual Information Transfer. Eurasip Journal on Advances in Signal Processing, 2005, 2005, 1.	1.7	10
63	Autonomous self-deployment of wireless access networks. Bell Labs Technical Journal, 0, 14, 55-72.	0.7	10
64	Improved frequency reuse schemes with horizontal sector offset for LTE. , 2013, , .		10
65	Load balancing in heterogeneous networks using an evolutionary algorithm. , 2015, , .		10
66	On the design of a free space optical link for small cell backhaul communication and power supply. , 2015, , .		10
67	Correlated shadow fading for cellular network system-level simulations with wrap-around. , 2015, , .		10
68	A multi-level grammar approach to grammar-guided genetic programming: the case of scheduling in heterogeneous networks. Genetic Programming and Evolvable Machines, 2019, 20, 245-283.	2.2	10
69	BBR-S: A Low-Latency BBR Modification for Fast-Varying Connections. IEEE Access, 2021, 9, 76364-76378.	4.2	10
70	Low complexity detection of high-order modulations in multiple antenna systems. IET Communications, 2005, 152, 789.	1.0	9
71	Partial GSM spectrum reuse for femtocells. , 2009, , .		9
72	Efficient self-optimization of neighbour cell lists in macrocellular networks. , 2010, , .		9

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73	On the design of an optical wireless link for small cell backhaul communication and energy harvesting. , 2014, , .		9
74	Scheduling in Heterogeneous Networks Using Grammar-Based Genetic Programming. Lecture Notes in Computer Science, 2016, , 83-98.	1.3	9
75	Multi-level Grammar Genetic Programming for Scheduling in Heterogeneous Networks. Lecture Notes in Computer Science, 2018, , 118-134.	1.3	9
76	Self-configuring Switched Multi-Element Antenna system for interference mitigation in femtocell networks. , 2011, , .		8
77	Self-configuration of scrambling codes for WCDMA small cell networks. , 2012, , .		8
78	LEAP: A latency control protocol for multi-path data delivery with pre-defined QoS guarantees. , 2018, , .		8
79	The HOP Protocol: Reliable Latency-Bounded End-to-End Multipath Communication. IEEE/ACM Transactions on Networking, 2021, 29, 2281-2295.	3.8	8
80	A Hierarchical Approach to Grammar-Guided Genetic Programming: The Case of Scheduling in Heterogeneous Networks. Lecture Notes in Computer Science, 2018, , 225-237.	1.3	8
81	Autonomous organization of wireless network transport in a multi-provider environment. , 0, , .		7
82	Latency As a Service: Enabling Reliable Data Delivery over Multiple Unreliable Wireless Links. , 2019, , .		7
83	Improving Small Cell Performance through Switched Multi-element Antenna Systems in Heterogeneous Networks. IEEE Transactions on Vehicular Technology, 2014, , 1-1.	6.3	6
84	Deep learning through evolution: A hybrid approach to scheduling in a dynamic environment. , 2017, , .		6
85	Coordination of SON Functions in Multi-Vendor Femtocell Networks. , 2017, 55, 165-171.		6
86	A New Method of MIMO-Based Non-Orthogonal Multiuser Downlink Transmission. , 2017, , .		6
87	High-performance MIMO receivers based on multi-stage partial parallel interference cancellation. , 2003, , .		5
88	Multi-carrier cell structures with offset sectorization for heterogeneous networks. , 2013, , .		5
89	Improved frequency reuse through sector offset configuration in LTE Heterogeneous Networks. , 2014, , .		5
90	A centralized method for PCI assignment with common reference signal frequency shift control. , 2016, , .		5

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91	Enhancing coexistence in the unlicensed band with massive MIMO. , 2017, , .		5
92	Enhanced Multiuser Superposition Transmission Through Structured Modulation. IEEE Transactions on Wireless Communications, 2019, 18, 2765-2776.	9.2	5
93	Hierarchical Grammar-Guided Genetic Programming Techniques for Scheduling in Heterogeneous Networks. , 2020, , .		5
94	Multicast Optimization for Video Delivery in Multi-RAT Networks. IEEE Transactions on Communications, 2020, 68, 4973-4985.	7.8	5
95	Femtocell Networks. Eurasip Journal on Wireless Communications and Networking, 2010, 2010, .	2.4	4
96	Characterisation of Other-Cell Interference in Co-Channel WCDMA Small Cell Networks. , 2012, , .		4
97	Neighbour cell list management in wireless heterogeneous networks. , 2013, , .		4
98	Online evolution of femtocell coverage algorithms using genetic programming. , 2013, , .		4
99	The sector offset configuration concept and its applicability to heterogeneous cellular networks. , 2015, 53, 190-198.		4
100	Evolving Coverage Optimisation Functions for Heterogeneous Networks Using Grammatical Genetic Programming. Lecture Notes in Computer Science, 2016, , 219-234.	1.3	4
101	Downward Facing Directional Antennas for Ultra-High Density Indoor Small Cells. Journal of Signal Processing Systems, 2016, 83, 255-263.	2.1	4
102	On the MIMO Capacity with Multiple Linear Transmit Covariance Constraints. , 2018, , .		4
103	Indoor massive MIMO deployments for uniformly high wireless capacity. , 2018, , .		4
104	A Low Complexity Iterative Receiver based on Successive Cancellation for MIMO. , 2003, , 105-112.		3
105	Impact of modeling errors on the performance of MIMO receivers with APP and PIC detection. , 0, , .		3
106	Improved fuzzy reinforcement learning for self-optimisation of heterogeneous wireless networks. , 2013, , .		3
107	Multi-carrier cell structures with vertical and horizontal sector Offset using static beamforming. , 2013, , .		3
108	A metric to describe access point significance in location estimation. , 2016, , .		3

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109	Massive MIMO Unlicensed for High-Performance Indoor Networks. , 2017, , .		3
110	Cell ID Management in Multi-Vendor and Multi-RAT Heterogeneous Networks. IEEE Transactions on Network and Service Management, 2019, 16, 417-429.	4.9	3
111	Evolving Femtocell Algorithms with Dynamic and Stationary Training Scenarios. Lecture Notes in Computer Science, 2012, , 518-527.	1.3	3
112	Evolutionary Learning of Scheduling Heuristics for Heterogeneous Wireless Communications Networks. , 2016, , .		3
113	Unitary checkerboard precoded OFDM for low-PAPR optical wireless communications. Journal of Optical Communications and Networking, 2022, 14, 153.	4.8	3
114	Future indoor network with a sixth sense: Requirements, challenges and enabling technologies. Pervasive and Mobile Computing, 2022, 83, 101571.	3.3	3
115	Layered encoding for 16- and 64-QAM iterative MIMO receivers. , 2003, , .		2
116	Minimising cell transmit power. Computer Communication Review, 2011, 41, 410-411.	1.8	2
117	Impact of Co-Channel Small Cell Deployments on Uplink Capacity of W-CDMA Cellular Networks. , 2014, , .		2
118	Extracting Location Information from RF Fingerprints. , 2016, , .		2
119	Self-optimization of coverage and sleep modes of multi-vendor enterprise femtocells. , 2016, , .		2
120	Weighted Sum Rate Maximization for Zero-Forcing Methods with General Linear Covariance Constraints. , 2018, , .		2
121	Towards Automation and Augmentation of the Design of Schedulers for Cellular Communications Networks. Evolutionary Computation, 2019, 27, 345-375.	3.0	2
122	Demo: Seamless Mobile Video Streaming in Multicast Multi-RAT Communications. , 2020, , .		2
123	Controlling local service access in wireless cellular networks. , 2012, , .		1
124	Handover optimisation for co-channel WCDMA heterogeneous networks. , 2012, , .		1
125	A new approach for scrambling and spreading code reuse in WCDMA networks. , 2013, , .		1
126	Uplink-oriented deployment guidelines and optimization in W-CDMA heterogeneous networks. , 2013, , .		1

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127	Digital Fountain Codes with Reduced Latency, Complexity and Buffer Requirements for Wireless Communications. , 2014, , .		1
128	Energy and Spectral Efficiency Gains from Multi-User MIMO-Based Small Cell Reassignments. , 2015, , .		1
129	Uplink-Oriented Deployment Guidelines and Auto-Configuration Algorithms for Co-Channel W-CDMA Heterogeneous Networks. IEEE Transactions on Wireless Communications, 2015, 14, 3752-3763.	9.2	1
130	Backhaul for Small Cells. , 0, , 419-441.		1
131	Multilayer optimization of heterogeneous networks using grammatical genetic programming. , 2017, , .		1
132	Managing Quality of Service Through Intelligent Scheduling in Heterogeneous Wireless Communications Networks. , 2018, , .		1
133	Towards automation & augmentation of the design of schedulers for cellular communications networks. , 2018, , .		1
134	On the Design of Optical Energy Harvesting and Storage Systems for Outdoor Small Cells. , 2021, , .		1
135	Understanding MPTCP in Multi-WAN Routers: Measurements and System Design. , 2021, , .		1
136	Layered encoding for low complexity detection of high-order modulations in MIMO channels. , 0, , .		0
137	Comparing the robustness of grammatical genetic programming solutions for femtocell algorithms. , 2012, , .		0
138	Sector offset configuration with static vertical beam-forming for LTE. , 2013, , .		0
139	Uncoordinated femtocell deployments. , 0, , 217-244.		0
140	Femtocell coverage optimization. , 0, , 161-187.		0
141	Coverage Optimization Trade-Offs in Heterogeneous W-CDMA Networks with Co-Channel Small Cells. , 2014, , .		0
142	Energy and Spectral Efficiency Gains from Multi-User MIMO-Based Small Cell Reassignments. , 2014, , .		0
143	Optimization of Demand Hotspot Capacities Using Switched Multi-Element Antenna Equipped Small Cells. , 2015, , .		0
144	Dynamic idle mode control in Small Cell networks. , 2015, , .		0

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145	100Ã— Capacity Scaling of Cellular Networks. , 2017, , 23-54.		0
146	Automation of Cellular Networks. , 2017, , 55-90.		0
147	Frequency Assignment and Access Methods. , 2017, , 91-116.		0
148	Coverage and Capacity Optimization for Outdoor Cells. , 2017, , 149-185.		0
149	Frequency-Domain Inter-cell Interference Coordination. , 2017, , 187-222.		0
150	The Sector Offset Configuration. , 2017, , 259-294.		0
151	Simulating Hetnets. , 2017, , 505-547.		0
152	Control Channel Inter-cell Interference Coordination. , 2017, , 295-321.		0
153	Mobility Management. , 2017, , 363-391.		0
154	Dormant Cells and Idle Modes. , 0, , 393-418.		0
155	Optimization of Small CellÂDeployment. , 0, , 443-465.		0
156	Ultra-Dense Networks. , 0, , 467-491.		0
157	HetNet Applications. , 2017, , 493-504.		0
158	SOS: Stochastic Object-aware Scheduler for low delay communication over multiple wireless paths. , 2020, , .		0
159	On Characterizing the Capacity Region of Massive MIMO Systems with Joint Power Constraints. , 2021, , .		0
160	BOOST: Transport-Layer Multi-Connectivity Solution for Multi-Wan Routers. , 2021, , .		0
161	Representing Communication and Learning in Femtocell Pilot Power Control Algorithms. Genetic and Evolutionary Computation, 2013, , 223-238.	1.0	0
162	Configuring Dynamic Heterogeneous Wireless Communications Networks Using a Customised Genetic Algorithm. Lecture Notes in Computer Science, 2017, , 205-220.	1.3	0

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163	Multi-RAT Multicast 360Â° Video Delivery. , 2020, , .		0
164	Energy-Aware Multi-RAT Multicast Video Delivery. , 2020, , .		0
165	On the MIMO Capacity With Joint Sum and Per-Antenna Power Constraints: A New Efficient Numerical Method. IEEE Transactions on Vehicular Technology, 2022, 71, 10179-10184.	6.3	0