Thomas Kuerner

List of Publications by Year
in descending order

167 papers	5,962 citations	136740 32 h-index	98622 67 g-index
171 all docs	171 docs citations	171 times ranked	3532 citing authors

#	Article	IF	Citations
1	Short-Range Ultra-Broadband Terahertz Communications: Concepts and Perspectives. IEEE Antennas and Propagation Magazine, 2007, 49, 24-39.	1.2	440
2	Challenges Toward Wireless Communications for High-Speed Railway. IEEE Transactions on Intelligent Transportation Systems, 2014, 15, 2143-2158.	4.7	376
3	Towards THz Communications - Status in Research, Standardization and Regulation. Journal of Infrared, Millimeter, and Terahertz Waves, 2014, 35, 53-62.	1.2	295
4	Future railway services-oriented mobile communications network. IEEE Communications Magazine, 2015, 53, 78-85.	4.9	271
5	Scattering Analysis for the Modeling of THz Communication Systems. IEEE Transactions on Antennas and Propagation, 2007, 55, 3002-3009.	3.1	263
6	The Design and Applications of High-Performance Ray-Tracing Simulation Platform for 5G and Beyond Wireless Communications: A Tutorial. IEEE Communications Surveys and Tutorials, 2019, 21, 10-27.	24.8	221
7	Stochastic Modeling of THz Indoor Radio Channels. IEEE Transactions on Wireless Communications, 2013, 12, 4445-4455.	6.1	212
8	On Millimeter Wave and THz Mobile Radio Channel for Smart Rail Mobility. IEEE Transactions on Vehicular Technology, 2017, 66, 5658-5674.	3.9	190
9	Channel and Propagation Measurements at 300 GHz. IEEE Transactions on Antennas and Propagation, 2011, 59, 1688-1698.	3.1	171
10	Diffraction in mm and Sub-mm Wave Indoor Propagation Channels. IEEE Transactions on Microwave Theory and Techniques, 2012, 60, 833-844.	2.9	162
11	IEEE 802.15.3d: First Standardization Efforts for Sub-Terahertz Band Communications toward 6G. IEEE Communications Magazine, 2020, 58, 28-33.	4.9	158
12	Diffuse Scattering From Rough Surfaces in THz Communication Channels. IEEE Transactions on Terahertz Science and Technology, 2011, 1, 462-472.	2.0	154
13	Handover Parameter Optimization in LTE Self-Organizing Networks. , 2010, , .		148
14	Performance Analysis of Future Multigigabit Wireless Communication Systems at THz Frequencies With Highly Directive Antennas in Realistic Indoor Environments. IEEE Journal of Selected Topics in Quantum Electronics, 2008, 14, 421-430.	1.9	138
15	Ultra broadband indoor channel measurements and calibrated ray tracing propagation modeling at THz frequencies. Journal of Communications and Networks, 2013, 15, 547-558.	1.8	115
16	Towards MMIC-Based 300GHz Indoor Wireless Communication Systems. IEICE Transactions on Electronics, 2015, E98.C, 1081-1090.	0.3	113
17	Towards Realistic High-Speed Train Channels at 5G Millimeter-Wave Bandâ€"Part I: Paradigm, Significance Analysis, and Scenario Reconstruction. IEEE Transactions on Vehicular Technology, 2018, 67, 9112-9128.	3.9	109
18	Stochastic Channel Modeling for Kiosk Applications in the Terahertz Band. IEEE Transactions on Terahertz Science and Technology, 2017, 7, 502-513.	2.0	98

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19	Simulation and Measurement-Based Vehicle-to-Vehicle Channel Characterization: Accuracy and Constraint Analysis. IEEE Transactions on Antennas and Propagation, 2015, 63, 3208-3218.	3.1	89
20	Propagation Measurements and Analysis for Train Stations of High-Speed Railway at 930 MHz. IEEE Transactions on Vehicular Technology, 2014, 63, 3499-3516.	3.9	84
21	5-GHz Obstructed Vehicle-to-Vehicle Channel Characterization for Internet of Intelligent Vehicles. IEEE Internet of Things Journal, 2019, 6, 100-110.	5.5	74
22	Channel Characterization for Intra-Wagon Communication at 60 and 300 GHz Bands. IEEE Transactions on Vehicular Technology, 2019, 68, 5193-5207.	3.9	68
23	Deterministic Propagation Modeling for the Realistic High-Speed Railway Environment. , 2013, , .		67
24	Terahertz Wireless Channels: A Holistic Survey on Measurement, Modeling, and Analysis. IEEE Communications Surveys and Tutorials, 2022, 24, 1670-1707.	24.8	67
25	Towards Realistic High-Speed Train Channels at 5G Millimeter-Wave Bandâ€”Part II: Case Study for Paradigm Implementation. IEEE Transactions on Vehicular Technology, 2018, 67, 9129-9144.	3.9	62
26	Measurement, Simulation, and Characterization of Train-to-Infrastructure Inside-Station Channel at the Terahertz Band. IEEE Transactions on Terahertz Science and Technology, 2019, 9, 291-306.	2.0	60
27	Analyzing human body shadowing at 60 GHz: Systematic wideband MIMO measurements and modeling approaches. , 2012, , .		51
28	Propagation Measurements and Modeling of Crossing Bridges on High-Speed Railway at 930 MHz. IEEE Transactions on Vehicular Technology, 2014, 63, 502-517.	3.9	48
29	Channel Measurements and Modeling for Low-Terahertz Band Vehicular Communications. IEEE Journal on Selected Areas in Communications, 2021, 39, 1590-1603.	9.7	45
30	Channel sounding techniques for applications in THz communications: A first correlation based channel sounder for ultra-wideband dynamic channel measurements at 300 GHz. , 2017, , .		44
31	Vehicle-to-Vehicle IEEE 802.11p performance measurements at urban intersections. , 2012, , .		40
32	Reverberation and Absorption in an Aircraft Cabin With the Impact of Passengers. IEEE Transactions on Antennas and Propagation, 2012, 60, 2472-2480.	3.1	40
33	On the Influence of Scattering From Traffic Signs in Vehicle-to-X Communications. IEEE Transactions on Vehicular Technology, 2016, 65, 5835-5849.	3.9	40
34	Weighted Performance Based Handover Parameter Optimization in LTE. , 2011, , .		37
35	The impact of antenna directivities on THz indoor channel characteristics. , 2012, , .		37
36	Channel Modeling and System Concepts for Future Terahertz Communications: Getting Ready for Advances Beyond 5G. IEEE Vehicular Technology Magazine, 2020, 15, 136-143.	2.8	36

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37	Performance and Optimization of Reconfigurable Intelligent Surface Aided THz Communications. IEEE Transactions on Communications, 2022, 70, 3575-3593.	4.9	36
38	A dynamic 60 GHz radio channel model for system level simulations with MAC protocols for IEEE 802.11ad. , 2010, , .		35
39	Empirical Models for Extra Propagation Loss of Train Stations on High-Speed Railway. IEEE Transactions on Antennas and Propagation, 2014, 62, 1395-1408.	3.1	34
40	Channel Sounding and Ray Tracing for Intrawagon Scenario at mmWave and Sub-mmWave Bands. IEEE Transactions on Antennas and Propagation, 2021, 69, 1007-1019.	3.1	34
41	Effects of Antenna Characteristics and Placements on a Vehicle-to-Vehicle Channel Scenario. , 2010, , .		32
42	Three Dimensional Angle of Arrival Estimation in Dynamic Indoor Terahertz Channels Using Forward-Backward Algorithm. IEEE Transactions on Vehicular Technology, 2016, , 1-1.	3.9	32
43	Semi-Deterministic Path-Loss Modeling for Viaduct and Cutting Scenarios of High-Speed Railway. IEEE Antennas and Wireless Propagation Letters, 2013, 12, 789-792.	2.4	31
44	Comparison of Ray Tracing and Channel-Sounder Measurements for Vehicular Communications. , 2013, , .		31
45	On the Impact of the Results of WRC 2019 on THz Communications. , 2020, , .		30
46	SiMoNe - Simulator for Mobile Networks: System-Level Simulations in the Context of Realistic Scenarios. , 2015, , .		27
47	Scenario modules, rayâ€tracing simulations and analysis of millimetre wave and terahertz channels for smart rail mobility. IET Microwaves, Antennas and Propagation, 2018, 12, 501-508.	0.7	27
48	Angular and RMS delay spread modeling in view of THz indoor communication systems. Radio Science, 2014, 49, 242-251.	0.8	26
49	Affection of THz indoor communication links by antenna misalignment. , 2012, , .		25
50	Foliage Attenuation Over Mixed Terrains in Rural Areas for Broadband Wireless Access at 3.5 GHz. IEEE Transactions on Antennas and Propagation, 2011, 59, 2698-2706.	3.1	24
51	Measurements of Reflection and Penetration Losses in Low Terahertz Band Vehicular Communications. , 2020, , .		24
52	Millimeter-Wave and Terahertz Fixed Wireless Link Budget Evaluation for Extreme Weather Conditions. IEEE Access, 2021, 9, 163476-163491.	2.6	23
53	Scenario modules and ray-tracing simulations of millimeter wave and terahertz channels for smart rail mobility. , 2017, , .		22
54	Testbed for phased array communications from 275 to 325 GHz. , 2017, , .		22

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55	Performance Evaluation of Wiener Filter Designs for Channel Estimation in Vehicular Environments. , 2011, , .		21
56	Measurements and Modeling of Basic Propagation Characteristics for Intra-Device Communications at 60 GHz and 300 GHz. Journal of Infrared, Millimeter, and Terahertz Waves, 2015, 36, 144-158.	1.2	21
57	Channel Characterization and Capacity Analysis for THz Communication Enabled Smart Rail Mobility. IEEE Transactions on Vehicular Technology, 2021, 70, 4065-4080.	3.9	21
58	A stochastic channel model for future wireless THz data centers. , 2015, , .		20
59	Radiowave Propagation Prediction in Vegetated Residential Environments. IEEE Transactions on Vehicular Technology, 2013, 62, 486-499.	3.9	19
60	Safety-Critical Driver Assistance Over LTE: Toward Centralized ACC. IEEE Transactions on Vehicular Technology, 2016, 65, 9471-9478.	3.9	19
61	Coupling of simulators for the investigation of car-to-x communication aspects. , 2009, , .		18
62	Physical Layer Performance Comparison of LTE and IEEE 802.11p for Vehicular Communication in an Urban NLOS Scenario. , 2014, , .		18
63	Excess Propagation Loss Modeling of Semiclosed Obstacles for Intelligent Transportation System. IEEE Transactions on Intelligent Transportation Systems, 2016, 17, 2171-2181.	4.7	17
64	Predictive Communication and Its Application to Vehicular Environments: Doppler-Shift Compensation. IEEE Transactions on Vehicular Technology, 2018, 67, 7380-7393.	3.9	17
65	Simulation and Automatic Planning of 300 GHz Backhaul Links. , 2019, , .		17
66	Calibration of a UWB Sub-Band Channel Model Using Simulated Annealing. IEEE Transactions on Antennas and Propagation, 2009, 57, 3439-3443.	3.1	16
67	Analysis of Channel Parameters for Different Antenna Configurations in Vehicular Environments. , 2010, , .		16
68	Indoor to outdoor propagation — Measuring and modeling of femto cells in LTE networks at 800 and 2600 MHz. , 2011, , .		15
69	Challenges and chances for smart rail mobility at mmWave and THz bands from the channels viewpoint. , 2017, , .		15
70	Statistical Characteristics Study of Human Blockage Effect in Future Indoor Millimeter and Sub-Millimeter Wave Wireless Communications. , 2018, , .		15
71	Power-Angular Spectra Correlation Based Two Step Angle of Arrival Estimation for Future Indoor Terahertz Communications. IEEE Transactions on Antennas and Propagation, 2019, 67, 7097-7105.	3.1	15
72	Excess Propagation Loss of Semi-Closed Obstacles for Inter/Intra-Device Communications in the Millimeter-Wave Range. Journal of Infrared, Millimeter, and Terahertz Waves, 2016, 37, 676-690.	1.2	14

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73	Indoor-to-Outdoor Path Loss Measurements in an Aircraft for Terahertz Communications. , 2020, , .		14
74	An Analytical 3D Ray-Launching Method Using Arbitrary Polygonal Shapes for Wireless Propagation Prediction. , 2014, , .		13
75	A Data Traffic Steering Algorithm for IEEE 802.11p/LTE Hybrid Vehicular Networks. , 2016, , .		13
76	Cooperative Dynamic Angle of Arrival Estimation Considering Spaceâ€“Time Correlations for Terahertz Communications. IEEE Transactions on Wireless Communications, 2018, 17, 6029-6041.	6.1	13
77	Outdoor-to-indoor propagation — Accurate measuring and modelling of indoor environments at 900 and 1800 MHz. , 2012, , .		11
78	Reflection and transmission properties of plastic materials at THz frequencies. , 2013, , .		11
79	Spatial Traffic Distributions for Cellular Networks with Time Varying Usage Intensities Per Land-Use Class. , 2014, , .		11
80	Investigation of MPC Correlation and Angular Characteristics in the Vehicular Urban Intersection Channel Using Channel Sounding and Ray Tracing. IEEE Transactions on Vehicular Technology, 2016, 65, 5874-5886.	3.9	11
81	Impact of modulation type and baud rate on a 300GHz fixed wireless link. , 2017, , .		11
82	Building an end user focused THz based ultra high bandwidth wireless access network: The TERAPOD approach. , 2017, , .		11
83	THz Communications: Challenges and Applications beyond 100 Gbit/s. , 2018, , .		11
84	Link-Level and System-Level Simulation of 300 GHz wireless Backhaul Links. , 2021, , .		11
85	Linear Diversity Combining Techniques Employed in Car-to-X Communication Systems. , 2011, , .		10
86	Fast beam searching concept for indoor Terahertz communications. , 2014, , .		10
87	Managing and altering mobile radio networks by using SON function performance models. , 2014, , .		9
88	Environment-Aware Communications for Cooperative Collision Avoidance Applications. , 2018, , .		9
89	Tri-Band Mm-wave Directional Channel Measurements in Indoor Environment. , 2018, , .		9
90	Sidelink Technologies Comparison for Highway High-Density Platoon Emergency Braking. , 2018, , .		9

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91	Towards Propagation and Channel Models for the Simulation and Planning of 300 GHz Backhaul/Fronthaul Links. , 2020, , .		9
92	An Overview of Ongoing Activities in the Field of Channel Modeling, Spectrum Allocation and Standardization for mm-Wave and THz Indoor Communications. , 2009, , .		8
93	3D ray-tracing embedded into an integrated simulator for car-to-X communications. , 2010, , .		8
94	LTE link level performance evaluation using stochastic channel models for V2X communication. , 2015, , .		8
95	Impact of Realistic Pedestrian Mobility Modelling in the Context of Mobile Network Simulation Scenarios. , 2015, , .		8
96	Channel characteristics study for future indoor millimeter and submillimeter wireless communications. , 2016, , .		8
97	Channel modeling for Kiosk downloading communication system at 300 GHz. , 2017, , .		8
98	Wireless Communications in Smart Rail Transportation Systems. Wireless Communications and Mobile Computing, 2017, 2017, 1-10.	0.8	8
99	Modular Link Level Simulator for the Physical Layer of Beyond 5G Wireless Communication Systems. Radio Science, 2022, 57, .	0.8	8
100	Modeling and Performance Analyses of Hybrid Cellular and Broadcasting Networks. International Journal of Digital Multimedia Broadcasting, 2009, 2009, 1-9.	0.4	7
101	Application of ray tracing to derive channel models for future multi-gigabit systems. , 2009, , .		7
102	MRC performance benefit in V2V communication systems in urban traffic scenarios. , 2012, , .		7
103	Time-Domain propagation investigations for Terahertz intra-device communications. , 2014, , .		7
104	Angle of arrival estimation in dynamic indoor THz channels with Bayesian filter and reinforcement learning. , 2016, , .		7
105	Path Loss Models and Large Scale Fading Statistics for C-Band Train-to-Train Communication. , 2020, , .		7
106	Introduction to THz Communications. Springer Series in Optical Sciences, 2022, , 1-12.	0.5	7
107	Coverage Estimation for Multiburst FEC Mobile TV Services in DVB-H Systems. IEEE Transactions on Vehicular Technology, 2010, 59, 3491-3500.	3.9	6
108	Influence of Positioning Error on X-Map Estimation in LTE. , 2011, , .		6

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109	Performance evaluation of 60 GHz WLAN antennas under realistic propagation conditions with human shadowing. , 2011, , .		6
110	SON Management simulator implementation and findings. , 2014, , .		6
111	Effects of phase shift errors on the antenna directivity of phased arrays in indoor terahertz communications. , 2014, , .		6
112	Classification of Cells Based on Mobile Network Context Information for the Management of SON Systems. , 2015, , .		6
113	The Urban Hannover Scenario - Realistic 3D Pathloss Predictions and Mobility Patterns. , 2016, , .		6
114	Sensor-based communication prediction for dynamic Doppler-shift compensation. , 2017, , .		6
115	Stochastic Channel Parameters for Train-to-Train Communications. IEEE Open Journal of Antennas and Propagation, 2021, 2, 778-792.	2.5	6
116	Angle of Arrival and Angle of Departure Estimation Using Compressed Sensing for Terahertz Communications. , 2021, , .		6
117	UWB propagation channels within an aircraft and an office building environment. , 2008, , .		5
118	Modeling of Femto Cells - Simulation of Interference and Handovers in LTE Networks. , 2011, , .		5
119	Effects of Carrier Frequency, Antenna Height and Season on Broadband Wireless Access in Rural Areas. IEEE Transactions on Antennas and Propagation, 2012, 60, 3432-3443.	3.1	5
120	Performance of prediction models in suburban/rural residential areas at 860, 2300 and 3500 MHz. , 2012, , .		5
121	Propagation prediction for composite scenarios of dense semi-closed obstacles in high-speed railway. , 2014, , .		5
122	Exploration of Centralized Car2X-Systems over LTE. , 2015, , .		5
123	A model for the reflection of terahertz signals from printed circuit board surfaces. International Journal of Microwave and Wireless Technologies, 2018, 10, 179-186.	1.5	5
124	On Building Realistic Reference Scenarios for IEEE 802.11p/LTE-Based Vehicular Network Evaluations. , 2018, , .		5
125	Realistic Interference Simulations in a Data Center Offering Wireless Communication at Low Terahertz Frequencies. , 2021, , .		5
126	Satellite digital broadcast services to handheld DVB-SH: The complementary ground component. International Journal of Satellite Communications and Networking, 2009, 27, 241-274.	1.2	4

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127	Simulator for the analysis of the mutual impact between indoor femtocells and urban macrocells. , 2012, , .		4
128	Self-Management for Unified Heterogeneous Radio Access Networks. , 2013, , .		4
129	Modeling tree scattering in rural residential areas at 3.5 GHz. Radio Science, 2014, 49, 44-52.	0.8	4
130	Performance analysis of 300â€‰GHz backhaul links using historic weather data. Advances in Radio Science, 0, 19, 153-163.	0.7	4
131	Geometry-Based Stochastic Channel Model for Train-to-Train Communication in Open Field Environment. , 2022, , .		4
132	Influence of Different Factors on X-Map Estimation in LTE. , 2011, , .		3
133	Ray-tracing approach versus double difference, multipath characterization in a multiple ray scenario. , 2012, , .		3
134	Automated modelling of realistic multi-storey buildings and the impact of windows on small cell propagation. , 2014, , .		3
135	Automated modelling of realistic indoor walls in the context of small cell propagation. , 2014, , .		3
136	Impact of SON function combinations on the KPI behaviour in realistic mobile network scenarios. , 2018, , .		3
137	Electromagnetic Parameter Calibration for a Broadband Ray-Launching Simulator With SAGE Algorithm for Millimeter-Wave Communications. IEEE Access, 2020, 8, 138331-138339.	2.6	3
138	Standards for THz Communications. Springer Series in Optical Sciences, 2022, , 503-514.	0.5	3
139	Spectrum optimization in DVB-H single frequency networks with local service areas. , 2008, , .		2
140	A Systematic Approach for UWB Channel Modeling in Aircraft Cabins. , 2009, , .		2
141	Towards a Performance Boundary in Calibrating Indoor Ray Tracing Models. Eurasip Journal on Wireless Communications and Networking, 2009, 2009, .	1.5	2
142	Special issue on THz communications. Journal of Communications and Networks, 2013, 15, 543-546.	1.8	2
143	Radio Wave Propagation and Wireless Channel Modeling. International Journal of Antennas and Propagation, 2013, 2013, 1-3.	0.7	2
144	SON management demonstrator. , 2014, , .		2

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145	Estimation of optimum antenna configurations supported by realistic propagation models at 60 GHz. , 2014, , .		2
146	Impact of Correlated Group Mobility Modelling in the Context of Realistic Mobile Network Simulation Scenarios. , 2016, , .		2
147	Spectrum for THz Communications. Springer Series in Optical Sciences, 2022, , 515-527.	0.5	2
148	(m,n)-Relaying as an Alternative to Base Station Cooperation for Cellular OFDMA Networks. , 2011, , .		1
149	On propagation characteristics of waveguide-like ABS-structures in 60 and 300 GHz communications. , 2013, , .		1
150	Radio Wave Propagation and Wireless Channel Modeling 2013. International Journal of Antennas and Propagation, 2014, 2014, 1-2.	0.7	1
151	Investigation on the influence of diffraction by wedges in satellite navigation systems. , 2014, , .		1
152	Cover Letter for the Special Issue on THz Communications. Journal of Infrared, Millimeter, and Terahertz Waves, 2015, 36, 95-96.	1.2	1
153	Effects of Hyper-Dense Small-Cell Network Deployments on a Realistic Urban Environment. , 2016, , .		1
154	Evolution from network planning to SON management using the simulator for mobile networks (SiMoNe). , 2016, , .		1
155	Integrating composite urban furniture into ray-tracing simulator for 5G small cells and outdoor device-to-device communications. , 2016, , .		1
156	Differential 3D ray-launching using arbitrary polygonal shapes in time-variant indoor scenarios. , 2016, , .		1
157	Sensor-based predictive communication for highly dynamic multi-hop vehicular networks. , 2017, , .		1
158	Simulation of GPS localisation based on ray tracing. Advances in Radio Science, 0, 19, 85-92.	0.7	1
159	Feasibility studies of LTE for the broadband service delivery in Professional Mobile Radio. , 2012, , .		0
160	Guest Editorial: Special section on self-organizing radio networks. IEEE Transactions on Vehicular Technology, 2013, 62, 1881-1882.	3.9	0
161	Multihop relaying for broadband wireless access systems at 800 and 3500â€‰MHz in rural areas. Radio Science, 2014, 49, 106-117.	0.8	0
162	Demonstrator for objective driven SON operation. , 2014, , .		0

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163	Policy-Based SON Management Demonstrator. , 2015, , .		0
164	NF-Huygens & MaxVal. Two new methods for determining the safety distances to base station antennas. , 2016, , .		0
165	Wireless Communications in Transportation Systems. Wireless Communications and Mobile Computing, 2017, 2017, 1-2.	0.8	0
166	Appendix B: X-Map Estimation for LTE. , 0, , 273-277.		0
167	Diffraction and Blockage. Springer Series in Optical Sciences, 2022, , 75-84.	0.5	0