David W Matolak

List of Publications by Year
in descending order

		394421	175258
131	3,405	19	52
papers	citations	h-index	g-index

133	133	133	2722
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	A Survey of Air-to-Ground Propagation Channel Modeling for Unmanned Aerial Vehicles. IEEE Communications Surveys and Tutorials, 2019, 21, 2361-2391.	39.4	450
2	Vehicleâ€“Vehicle Channel Models for the 5-GHz Band. IEEE Transactions on Intelligent Transportation Systems, 2008, 9, 235-245.	8.0	378
3	Challenges Toward Wireless Communications for High-Speed Railway. IEEE Transactions on Intelligent Transportation Systems, 2014, 15, 2143-2158.	8.0	376
4	Airâ€“Ground Channel Characterization for Unmanned Aircraft Systemsâ€”Part I: Methods, Measurements, and Models for Over-Water Settings. IEEE Transactions on Vehicular Technology, 2017, 66, 26-44.	6.3	246
5	Airâ€“Ground Channel Characterization for Unmanned Aircraft Systemsâ€”Part III: The Suburban and Near-Urban Environments. IEEE Transactions on Vehicular Technology, 2017, 66, 6607-6618.	6.3	227
6	Airâ€“Ground Channel Characterization for Unmanned Aircraft Systems Part II: Hilly and Mountainous Settings. IEEE Transactions on Vehicular Technology, 2017, 66, 1913-1925.	6.3	175
7	A Machine Learning Approach for Power Allocation in HetNets Considering QoS. , 2018, , .		85
8	Air-Ground Channel Characterization for Unmanned Aircraft Systemsâ€”Part IV: Airframe Shadowing. IEEE Transactions on Vehicular Technology, 2017, 66, 7643-7652.	6.3	80
9	iWISE: Inter-router Wireless Scalable Express Channels for Network-on-Chips (NoCs) Architecture. , 2011, , .		75
10	5-GHz Obstructed Vehicle-to-Vehicle Channel Characterization for Internet of Intelligent Vehicles. IEEE Internet of Things Journal, 2019, 6, 100-110.	8.7	74
11	The 5-GHz Airport Surface Area Channelâ€”Part II: Measurement and Modeling Results for Small Airports. IEEE Transactions on Vehicular Technology, 2008, 57, 2027-2035.	6.3	71
12	A New Frontier in Ultralow Power Wireless Links: Network-on-Chip and Chip-to-Chip Interconnects. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2015, 34, 186-198.	2.7	62
13	5-GHz-Band Vehicle-to-Vehicle Channels: Models for Multiple Values of Channel Bandwidth. IEEE Transactions on Vehicular Technology, 2010, 59, 2620-2625.	6.3	57
14	The 5-GHz Airport Surface Area Channelâ€”Part I: Measurement and Modeling Results for Large Airports. IEEE Transactions on Vehicular Technology, 2008, 57, 2014-2026.	6.3	50
15	UAV Command and Control, Navigation and Surveillance: A Review of Potential 5G and Satellite Systems. , 2019, , .		44
16	Detection, localization, and tracking of unauthorized UAS and Jammers. , 2017, , .		38
17	Air-ground channel characterization for unmanned aircraft systems: The near-urban environment. , 2015, , .		37
18	FBMC and L-DACS Performance for Future Air-to-Ground Communication Systems. IEEE Transactions on Vehicular Technology, 2017, 66, 5043-5055.	6.3	34

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19	A 3-D Geometry-Based Stochastic Model for Unmanned Aerial Vehicle MIMO Ricean Fading Channels. IEEE Internet of Things Journal, 2020, 7, 8674-8687.	8.7	34
20	Modeling the vehicleâ€toâ€vehicle propagation channel: A review. Radio Science, 2014, 49, 721-736.	1.6	33
21	Shadowing Characterization for 5-GHz Vehicle-to-Vehicle Channels. IEEE Transactions on Vehicular Technology, 2018, 67, 1855-1866.	6.3	30
22	Reverberation-Chamber Test Environment for Outdoor Urban Wireless Propagation Studies. IEEE Antennas and Wireless Propagation Letters, 2010, 9, 52-56.	4.0	29
23	Air-Ground Channel Characterization for Unmanned Aircraft Systems: The Hilly Suburban Environment. , 2014, , .		27
24	5-GHz Vehicle-to-Vehicle Channel Characterization for Example Overpass Channels. IEEE Transactions on Vehicular Technology, 2016, 65, 5862-5873.	6.3	27
25	Attenuation of Several Common Building Materials: Millimeter-Wave Frequency Bands 28, 73, and 91 GHz. IEEE Antennas and Propagation Magazine, 2021, 63, 40-50.	1.4	20
26	Antennas and Channel Characteristics for Wireless Networks on Chips. Wireless Personal Communications, 2017, 95, 5039-5056.	2.7	19
27	Energy-efficient adaptive wireless NoCs architecture. , 2013, , .		18
28	Over-Harbor Channel Modeling with Directional Ground Station Antennas for the Air-Ground Channel. , 2014, , .		18
29	5-GHz V2V Channel Characteristics for Parking Garages. IEEE Transactions on Vehicular Technology, 2016, , 1-1.	6.3	18
30	60-GHz Millimeter-Wave Pathloss Measurements in Boise Airport. , 2018, , .		18
31	Performance Evaluation of 802.16e in Vehicle to Vehicle Channels. Vehicular Technology Conference-Fall (VTC-FALL), Proceedings, IEEE, 2007, , .	0.0	17
32	Exploiting Shadowing Stationarity for Antenna Selection in V2V Communications. IEEE Transactions on Vehicular Technology, 2019, 68, 1607-1615.	6.3	17
33	Ultra-Wideband Air-to-Ground Propagation Channel Characterization in an Open Area. IEEE Transactions on Aerospace and Electronic Systems, 2020, 56, 4533-4555.	4.7	16
34	Air-ground channel measurements and modeling for UAS. IEEE Aerospace and Electronic Systems Magazine, 2014, 29, 30-35.	1.3	15
35	Experimental Characterization and Correlation Analysis of Indoor Channels at 15â€‰GHz. International Journal of Antennas and Propagation, 2015, 2015, 1-11.	1.2	15
36	Millimeter-Wave Path Loss at 73 GHz in Indoor and Outdoor Airport Environments. , 2019, , .		15

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37	Parking Garage Channel Characteristics at 5 GHz for V2V Applications. , 2013, , .		14
38	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.	2.2	14
39	Channel Modeling for V2V Communications. , 2006, , .		13
40	Channel Modeling for V2V Communications. , 2006, , .		13
41	Air-ground channel measurements & modeling for UAS. , 2013, , .		12
42	Spatial Variation Analysis for Measured Indoor Massive MIMO Channels. IEEE Access, 2017, 5, 20828-20840.	4.2	12
43	Wideband Airâ€“Ground Channel Model for a Regional Airport Environment. IEEE Transactions on Vehicular Technology, 2019, 68, 6243-6256.	6.3	12
44	Dual-Polarization FBMC for Improved Performance in Wireless Communication Systems. IEEE Transactions on Vehicular Technology, 2019, 68, 349-358.	6.3	12
45	DFT-Spread-OFDM-Based Chirp Transmission. IEEE Communications Letters, 2021, 25, 902-906.	4.1	12
46	Aircraft intra-vehicular channel characterization in the 5 GHz band. , 2008, , .		11
47	Path Loss in an Urban Peer-to-Peer Channel for Six Public-Safety Frequency Bands. IEEE Wireless Communications Letters, 2013, 2, 263-266.	5.0	11
48	Investigation of MIMO Channel Characteristics in a Two-Section Tunnel at 1.4725â€‰GHz. International Journal of Antennas and Propagation, 2017, 2017, 1-12.	1.2	11
49	Spectrum occupancy prediction based on functional link artificial neural network (FLANN) in ISM band. Neural Computing and Applications, 2018, 29, 1363-1376.	5.6	11
50	Analysis of Non-Stationary 3D Air-to-Air Channels Using the Theory of Algebraic Curves. IEEE Transactions on Wireless Communications, 2019, 18, 3767-3780.	9.2	11
51	Indoor and Outdoor Penetration Loss Measurements at 73 and 81 GHz. , 2019, , .		11
52	Pedestrian-to-Vehicle Communications in an Urban Environment: Channel Measurements and Modeling. IEEE Transactions on Antennas and Propagation, 2019, 67, 1790-1803.	5.1	11
53	Outdoor-to-Indoor Channel Dispersion and Power-Delay Profile Models for the 700-MHz and 4.9-GHz Bands. IEEE Antennas and Wireless Propagation Letters, 2016, 15, 441-443.	4.0	10
54	Software defined radios as cognitive relays for satellite ground stations incurring terrestrial interference. , 2017, , .		10

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55	Stationarity Investigation of a LOS Massive MIMO Channel in Stadium Scenarios. , 2015, , .		9
56	FG-MC-CDMA System Performance in Multi-band Channels. , 2008, , .		8
57	On ultra-short wireless interconnects for NoCs and SoCs: Bridging the ‘THz Gap’. , 2013, , .		8
58	Characterization of the 5-GHz Elevator Shaft Channel. IEEE Transactions on Wireless Communications, 2013, 12, 5138-5145.	9.2	8
59	Ray-Based Statistical Propagation Modeling for Indoor Corridor Scenarios at 15â€‰GHz. International Journal of Antennas and Propagation, 2016, 2016, 1-12.	1.2	8
60	Reconfigurable Antenna Multiple Access for 5G mmWave Systems. , 2018, , .		8
61	V2V Channels and Performance of Multi-User Spread Spectrum Modulation. Vehicular Technology Conference-Fall (VTC-FALL), Proceedings, IEEE, 2007, , .	0.0	7
62	Kilo-core Wireless Network-on-Chips (NoCs) Architectures. , 2015, , .		7
63	Geometry based large scale attenuation over linear massive MIMO systems. , 2016, , .		7
64	Non-coherent FSK: An attractive modulation set for millimeter-wave communications. , 2016, , .		7
65	Performance of 5G terrestrial network deployments for serving UAV communications. , 2020, , .		7
66	Far Region Boundary Definition of Linear Massive MIMO Antenna Arrays. , 2015, , .		6
67	Performance of L-band aeronautical communication system candidates in the presence of multiple DME interferers. , 2016, , .		6
68	L- and C-band airframe shadowing measurements and statistics for a medium-sized aircraft. , 2017, , .		6
69	UAV Air-Ground Channel Ray Tracing Simulation Validation. , 2018, , .		6
70	Geometric Analysis of the Doppler Frequency for General Non-Stationary 3D Mobile-to-Mobile Channels Based on Prolate Spheroidal Coordinates. IEEE Transactions on Vehicular Technology, 2020, 69, 10419-10434.	6.3	6
71	Modeling wireless channel delay spread trends. , 2009, , .		5
72	Energy efficient modulation for a wireless network-on-chip architecture. , 2012, , .		5

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73	Investigation of Shadowing Effects in Typical Propagation Scenarios for High-Speed Railway at 2350â€‰MHz. International Journal of Antennas and Propagation, 2016, 2016, 1-8.	1.2	5
74	Exploring Wireless Technology for Off-Chip Memory Access. , 2016, , .		5
75	Analysis of an Upper Bound on the Effects of Large Scale Attenuation on Uplink Transmission Performance for Massive MIMO Systems. IEEE Access, 2017, 5, 4285-4297.	4.2	5
76	Spatial and frequency correlations in two-ray air-ground SIMO channels. , 2017, , .		5
77	Joint Power Allocation in Interference-Limited Networks via Distributed Coordinated Learning. , 2018, , .		5
78	Aviation Multicarrier Communication System Performance in Several 5 GHz Band Air-Ground Channels - Invited Paper. , 2018, , .		5
79	Chirp Spread Spectrum Signaling for Future Air-Ground Communications. , 2019, , .		5
80	Nonlinear Quasi-Synchronous Multi User Chirp Spread Spectrum Signaling. IEEE Transactions on Communications, 2021, 69, 3079-3090.	7.8	5
81	Channel estimation in an over-water air-ground channel using low complexity OFDM-OQAM modulations. , 2016, , .		4
82	Path loss and delay spread for the stairwell channel at 5â€‰GHz. International Journal of Communication Systems, 2017, 30, e2920.	2.5	4
83	Measurementâ€based determination of parameters for nonâ€stationary TDL models with reduced number of taps. IET Microwaves, Antennas and Propagation, 2020, 14, 1719-1732.	1.4	4
84	Performance of IEEE 802.16 OFDMA Standard Systems in Airport Surface Area Channels. , 2007, , .		3
85	Double gate MOSFET based efficient wide band tunable power amplifiers. , 2012, , .		3
86	Downlink “feedback” channel design for LTE femtocell inter-cell interference mitigation. , 2014, , .		3
87	Antenna and frequency diversity in the unmanned aircraft systems bands for the over-sea setting. , 2014, , .		3
88	Comparison of L-DACS and FBMC performance in over-water air-ground channels. , 2015, , .		3
89	Multicarrier Air to Ground MIMO Communication System Performance. , 2016, , .		3
90	Enhanced airport surface multi-carrier communication systems: Filterbank advantages over AeroMACS OFDM. , 2017, , .		3

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91	Modeling of Highly Non-Stationary Low Altitude Aircraft-to-Aircraft Channels. , 2018, , .		3
92	PAPR Analysis for Dual-Polarization FBMC. , 2018, , .		3
93	Shadowing-Based Antenna Selection for V2V Communications. , 2018, , .		3
94	Hyper-Spectral Communications, Networking & ATM: Progress and Perspectives. , 2018, , .		3
95	Wide band channel characterization for low altitude unmanned aerial system communication using software defined radios. , 2018, , .		3
96	IEEE Access Special Section Editorial: High Mobility 5G LTE-V: Challenges and Solutions. IEEE Access, 2018, 6, 40221-40225.	4.2	3
97	Path Loss at 5 GHz and 31 GHz for Two Distinct Indoor Airport Settings. , 2019, , .		3
98	Anti-Jamming Performance of Spectrally Shaped Generalized MC-DS-SS with Dual Band Combining. , 2006, , .		2
99	Spectrally shaped generalized MC-DS-CDMA with dual band combining for increased diversity. IEEE Transactions on Wireless Communications, 2008, 7, 1676-1686.	9.2	2
100	Evaluation and performance analysis of energy efficient wireless NoC architecture. , 2012, , .		2
101	Channel characteristics for elevator shafts at 5 GHz. , 2013, , .		2
102	Ad Hoc Network Duplexing, Multiplexing, and Multiple Access: Canonical Results for Two Limiting Topologies. Wireless Personal Communications, 2014, 75, 965-985.	2.7	2
103	Initial results for airframe shadowing in L- and C-band air-ground channels. , 2015, , .		2
104	Worst Month Tropospheric Attenuation Variability Analysis: ITU Model vs. Rain Gauge Data for Air-Satellite Links. , 2018, , .		2
105	Wide band channel characterization for low altitude unmanned aerial system communication using software defined radios. , 2018, , .		2
106	In-Stationary Tapped Delay Line Channel Modeling and Simulation. , 2020, , .		2
107	TDMA and CDMA Capacities in Air-Ground Communications. Journal of Aerospace Computing, Information, and Communication, 2006, 3, 340-353.	0.8	1
108	Probability density functions for SNIR in DS-CDMA. IEEE Transactions on Communications, 2009, 57, 1628-1633.	7.8	1

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109	5 GHz near-ground indoor channel measurements and models. , 2009, , .		1
110	Characterization of massive MIMO UWB channel for indoor environments. , 2017, , .		1
111	Hyper-spectral communications, networking & ATM as foundation for safe and efficient future flight: Transcending aviation operational limitations with diverse and secure multi-band, multi-mode, and mmWave wireless links: Project overview, aviation communications and new signaling. , 2017, , .		1
112	Dual-Polarization OFDM-OQAM Wireless Communication System. , 2018, , .		1
113	31 GHz path loss measurement and modeling for indoor/outdoor environments. , 2018, , .		1
114	Advanced Air Mobility [From the Guest Editors]. IEEE Vehicular Technology Magazine, 2021, 16, 87-164.	3.4	1
115	Multicarrier Spectral Shaping Performance in Non-White Interference Channels: Experimental Results. , 2020, , .		1
116	A new multi-state fading model for mobile satellite channels based upon AFD and LCR data. International Journal of Satellite Communications and Networking, 2004, 22, 181-192.	1.8	0
117	Simplified group interference cancelling for asynchronous DS-CDMA. International Journal of Communication Systems, 2006, 19, 1117-1136.	2.5	0
118	Performance analysis of multitone direct-sequence spread spectrum in the presence of carrier frequency offset. , 2009, , .		0
119	MLO spreading codes for CDMA systems using DCT/DST. , 2009, , .		0
120	Spectrally Shaped DSâ€“CDMA with Dual Sideband Combining for Increased Diversity on Dispersive Fading Channels. Wireless Personal Communications, 2010, 54, 605-621.	2.7	0
121	Intraâ€volume, centralised array concept for improved publicâ€safety communications. IET Microwaves, Antennas and Propagation, 2013, 7, 916-925.	1.4	0
122	A 60 GHz tunable LNA in 32 nm double gate MOSFET for a wireless NoC architecture. , 2013, , .		0
123	Wave-guide effects in urban viaduct propagation channels for high-speed railway at 930 MHz. , 2014, , .		0
124	Quantifying performance of duplexing, multiplexing and multiple access in mesh, relay, and ad-hoc networks. , 2014, , .		0
125	Spectrally shaped filter bank multicarrier systems for L-band aeronautical communication systems. , 2017, , .		0
126	OBSTRUCTED VEHICLE-TO-VEHICLE CHANNEL MODELING FOR INTELLIGENT VEHICULAR COMMUNICATIONS. , 2018, , .		0

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127	Vegetation Attenuation for Several Evergreen Shrubs at 31 and 5 GHz. , 2018, , .		0
128	Modeling millimeter wave tropospheric attenuations for UAS and terrestrial aviation communications. , 2018, , .		0
129	Multicarrier Spectral Shaping for Non-White Interference Channels: Application to Aeronautical Communications in the L-band. IEEE Transactions on Vehicular Technology, 2021, , 1-1.	6.3	0
130	Noncoherent Multiuser Chirp Spread Spectrum: Performance With Doppler Shift and Asynchronism. IEEE Transactions on Communications, 2021, 69, 4558-4568.	7.8	0
131	Indoor 90 GHz Channel Measurement Results for LOS to NLOS Transitions. , 2021, , .		0