

# Gregory D Durgin

## List of Publications by Year in descending order

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89  
papers

2,521  
citations

623699

14  
h-index

345203

36  
g-index

91  
all docs

91  
docs citations

91  
times ranked

1974  
citing authors

#	ARTICLE	IF	CITATIONS
1	Harvesting Wireless Power: Survey of Energy-Harvester Conversion Efficiency in Far-Field, Wireless Power Transfer Systems. IEEE Microwave Magazine, 2014, 15, 108-120.	0.8	656
2	Complete Link Budgets for Backscatter-Radio and RFID Systems. IEEE Antennas and Propagation Magazine, 2009, 51, 11-25.	1.4	417
3	Gains For RF Tags Using Multiple Antennas. IEEE Transactions on Antennas and Propagation, 2008, 56, 563-570.	5.1	207
4	Power-optimized waveforms for improving the range and reliability of RFID systems. , 2009, , .		136
5	Theoretical Energy-Conversion Efficiency for Energy-Harvesting Circuits Under Power-Optimized Waveform Excitation. IEEE Transactions on Microwave Theory and Techniques, 2015, 63, 1758-1767.	4.6	77
6	Survey of range improvement of commercial RFID tags with Power Optimized Waveforms. , 2010, , .		65
7	Link Envelope Correlation in the Backscatter Channel. IEEE Communications Letters, 2007, 11, 735-737.	4.1	58
8	Multipath Fading Measurements at 5.8 GHz for Backscatter Tags With Multiple Antennas. IEEE Transactions on Antennas and Propagation, 2010, 58, 3693-3700.	5.1	57
9	Optimal Sliding Correlator Channel Sounder Design. IEEE Transactions on Wireless Communications, 2008, 7, 3488-3497.	9.2	55
10	Tunneling RFID Tags for Long-Range and Low-Power Microwave Applications. IEEE Journal of Radio Frequency Identification, 2018, 2, 93-103.	2.3	55
11	Optically Transparent Antennas: A Survey of Transparent Microwave Conductor Performance and Applications. IEEE Antennas and Propagation Magazine, 2021, 63, 27-39.	1.4	48
12	RFID Backscattering in Long-Range Scenarios. IEEE Transactions on Wireless Communications, 2018, 17, 2718-2725.	9.2	46
13	The Practical Behavior of Various Edge-Diffraction Formulas. IEEE Antennas and Propagation Magazine, 2009, 51, 24-35.	1.4	40
14	Multipath fading measurements for multi-antenna backscatter RFID at 5.8 GHz. , 2009, , .		37
15	Long range and low powered RFID tags with tunnel diode. , 2015, , .		32
16	Multi-antenna techniques for enabling passive RFID tags and sensors at microwave frequencies. , 2012, , .		31
17	An Overview on Position Location: Past, Present, Future. International Journal of Wireless Information Networks, 2021, 28, 45-76.	2.7	31
18	Hybrid Inertial Microwave Reflectometry for mm-Scale Tracking in RFID Systems. IEEE Transactions on Wireless Communications, 2015, 14, 6805-6814.	9.2	27

#	ARTICLE	IF	CITATIONS
19	Modulation and sensitivity limits for backscatter receivers. , 2013, , .		25
20	Antennas for Intraoral Tongue Drive System at 2.4 GHz: Design, Characterization, and Comparison. IEEE Transactions on Microwave Theory and Techniques, 2018, 66, 2546-2555.	4.6	25
21	Breaking the Range Limit of RFID Localization: Phase-based Positioning with Tunneling Tags. , 2019, , .		23
22	Parametric analysis and design guidelines of RF-to-DC Dickson charge pumps for RFID energy harvesting. , 2015, , .		22
23	RF thermoelectric generation for passive RFID. , 2016, , .		19
24	Amplitude and phase difference estimation bounds for multisensor based tracking of RFID Tags. , 2015, , .		17
25	Reduced fading for RFID tags with multiple antennas. , 2007, , .		15
26	Improved Channel Coding for Next-Generation RFID. IEEE Journal of Radio Frequency Identification, 2017, 1, 68-74.	2.3	12
27	Design and evaluation of a multi-modulation retrodirective RFID tag. , 2018, , .		12
28	A Stand-Alone Intraoral Tongue-Controlled Computer Interface for People With Tetraplegia. IEEE Transactions on Biomedical Circuits and Systems, 2019, 13, 848-857.	4.0	12
29	Design and Characterization of Meshed Microstrip Transmission Lines. , 2019, , .		12
30	Theory and Design of a Retrodirective Rat-Race-Based RFID Tag. IEEE Journal of Radio Frequency Identification, 2019, 3, 25-34.	2.3	12
31	Orientation sensing using backscattered phase from multi-antenna tag at 5.8 GHz. , 2016, , .		10
32	On-Wall, Wide Bandwidth E-Shaped Patch Antenna for Improved Whole-Home Radio Tomography. IEEE Journal of Radio Frequency Identification, 2017, 1, 22-31.	2.3	10
33	2.5 GHz Meshed Inset-Fed Patch Antenna. , 2019, , .		10
34	A Phase-Based Ranging Method for Long-Range RFID Positioning With Quantum Tunneling Tags. IEEE Journal of Radio Frequency Identification, 2021, 5, 163-173.	2.3	10
35	Beyond the limits of classic backscattering communications: A quantum tunneling RFID tag. , 2017, , .		9
36	A 5.8 GHz Energy Harvesting Tag for Sensing Applications in Space. , 2018, , .		9

#	ARTICLE	IF	CITATIONS
37	Kalman filter based localization and tracking estimation for HIMR RFID systems. , 2018, , .		9
38	Spatial Fading in Backscatter Channels: Theory and Models. , 2019, , .		9
39	Staggered pattern charge collection: Antenna technique to improve RF energy harvesting. , 2013, , .		8
40	A Theoretical Channel Model for Spatial Fading in Retrodirective Backscatter Channels. IEEE Transactions on Wireless Communications, 2019, 18, 5845-5854.	9.2	8
41	Reflected electro-material signatures for self-sensing passive RFID sensors. , 2011, , .		7
42	Realizing ReMoRa (Reflection of Modulated Radio) Ambient Scatter Communication Links With Perfect Pulses. IEEE Journal of Radio Frequency Identification, 2017, 1, 59-67.	2.3	7
43	Analysis of Kalman Filter-Based Localization for HIMR RFID Systems. IEEE Journal of Radio Frequency Identification, 2019, 3, 164-172.	2.3	7
44	An Adaptive Impedance Matching Transmitter for a Wireless Intraoral Tongue-Controlled Assistive Technology. IEEE Transactions on Circuits and Systems II: Express Briefs, 2020, 67, 240-244.	3.0	7
45	A multi-modulation retrodirective feed network for backscatter communications. , 2017, , .		6
46	Low-power and Compact Microwave RFID Reader for Sensing Applications in Space. , 2018, , .		6
47	IEEE Council on Radio-Frequency Identification: History, Present, and Future Vision. IEEE Journal of Radio Frequency Identification, 2020, 4, 170-175.	2.3	6
48	Digital Spectrum Twinning and the Role of RFID and Backscatter Communications in Spectral Sensing. , 2021, , .		6
49	Range estimation for passive RFID systems that use power-optimized waveforms. , 2012, , .		5
50	Signal-to-noise ratio measurements for IoT communications with quantum tunneling reflectors. , 2016, , .		5
51	A better channel code than FM0 for next-generation RFID. , 2017, , .		5
52	Revisiting the spread spectrum sliding correlator: why filtering matters. IEEE Transactions on Wireless Communications, 2009, 8, 3454-3457.	9.2	4
53	Quasi 2-D Field Reconstruction Using the Conjoint Cylindrical Wave Expansion. IEEE Transactions on Antennas and Propagation, 2009, 57, 1095-1104.	5.1	4
54	Backscatter channel measurements at 5.8 GHz across high-voltage corona. , 2010, , .		4

#	ARTICLE	IF	CITATIONS
55	Link budgets for backscatter radio and RFID systems using power-optimized waveforms. , 2013, , .		4
56	Analysis of $\hat{I}$ -patch antenna performance over various dielectric materials at 2.4 GHz. , 2016, , .		4
57	Ultra-low-power energy harvesting using power-optimized waveforms. <i>Wireless Power Transfer</i> , 2016, 3, 1-8.	1.1	4
58	Perfect pulses for ambient backscatter communication. , 2017, , .		4
59	Planar Position and Orientation Estimation Using a 5.8 GHz RFID System. , 2019, , .		4
60	Two-Dimensional Position and Orientation Estimation Using a 5.8 GHz RFID System. <i>IEEE Journal of Radio Frequency Identification</i> , 2020, 4, 365-372.	2.3	4
61	Fine-Scale Phase-Based Ranging Through Walls and Obstructions Using Tunneling RFID Tags. <i>IEEE Journal of Radio Frequency Identification</i> , 2021, 5, 397-406.	2.3	4
62	Focusing through walls: An E-shaped patch antenna improves whole-home radio tomography. , 2017, , .		3
63	Simontool: Simulation Support for the Simon Cipher. <i>IEEE Journal of Radio Frequency Identification</i> , 2017, 1, 195-201.	2.3	3
64	Low-Power and Compact Frequency Hopping RFID Reader at 5.8 GHz for Sensing Applications in Space. <i>IEEE Journal of Radio Frequency Identification</i> , 2019, 3, 133-142.	2.3	3
65	A Comparative Study of Coupler-Based Retrodirective Arrays for Next-Generation RFID Tags. , 2019, , .		3
66	Achieving Long-Range Ambient Scatter Communication Networks: A Primary User Interference Perspective. <i>IEEE Journal of Radio Frequency Identification</i> , 2021, 5, 324-330.	2.3	3
67	Practical geometrical behavior of Knife-Edge Diffraction. , 2008, , .		2
68	High-Voltage-Environment Backscatter-Channel Measurements at 5.8 GHz. <i>IEEE Antennas and Propagation Magazine</i> , 2011, 53, 231-240.	1.4	2
69	DC power pattern analysis of N-by-N staggered pattern charge collector and $N \times N$ rectenna array. , 2013, , .		2
70	Staggered pattern charge collector design and optimization. , 2013, , .		2
71	On the Simon Cipher 4-block key schedule as a hash. , 2017, , .		2
72	A Modified Simon Cipher 4-Block Key Schedule as a Hash. <i>IEEE Journal of Radio Frequency Identification</i> , 2017, 1, 85-89.	2.3	2

#	ARTICLE	IF	CITATIONS
73	Propagation measurements and modeling techniques for 3.5 GHz radar-LTE spectrum sharing. , 2017, , .		2
74	Reflection of Modulated Radio (ReMoRa): Link Analysis of Ambient Scatter Radio Using Perfect Pulses. , 2018, , .		2
75	Design and Experimentation of a Novel Five Coil Asymmetric Magnetic Resonance Wireless Power Transfer System. IEEE Journal of Radio Frequency Identification, 2021, 5, 335-342.	2.3	2
76	Fine-scale Through-Wall Positioning Using Tunneling RFID Tags. , 2020, , .		2
77	Simulation Model of RFID System for RFID-Based Motion-Capture and Localization. , 2020, , .		1
78	A Backscatter Channel Sounder Using Tunneling RFID Tags. , 2021, , .		1
79	Spatial Fading in Retrodirective Channels: An Experimental Study. IEEE Transactions on Wireless Communications, 2021, 20, 5812-5820.	9.2	1
80	Nonlinear Least-Squares State Estimation for 2D RFID-Based Motion Capture. , 2020, , .		1
81	Achieving practical MIMO network planning using the Two-Curve MIMO Performance Model. Digest / IEEE Antennas and Propagation Society International Symposium, 2009, , .	0.0	0
82	RFID performance in high-voltage corona. , 2012, , .		0
83	Broadband backscatter based technique to identify the presence of skimming electronics on payment terminals. , 2016, , .		0
84	Low-Observable Reflectors Using Perfect Pulses. , 2018, , .		0
85	A Real-time RFID Positioning System Using Tunneling Tags. , 2021, , .		0
86	Synthesis of Compact, Low-Loss Beam-forming Networks for RF Energy Harvesting. , 2021, , .		0
87	Theoretical Modeling of Complicated Inductive Wireless Power Transfer Systems. , 2020, , .		0
88	A 5.8 GHz Sensor-Fusion Energy-Harvesting Tag for Sensing Applications in Space. IEEE Journal of Radio Frequency Identification, 2022, 6, 307-317.	2.3	0
89	RF Coverage Mapping of Bistatic Radio Links Using the Terrain Integrated Rough Earth Model (TIREM). , 2022, , .		0