

Alex S Weddell

List of Publications by Year in descending order

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72
papers

1,654
citations

361296

20
h-index

345118

36
g-index

77
all docs

77
docs citations

77
times ranked

1095
citing authors

#	ARTICLE	IF	CITATIONS
1	Hibernus: Sustaining Computation During Intermittent Supply for Energy-Harvesting Systems. IEEE Embedded Systems Letters, 2015, 7, 15-18.	1.3	191
2	Hibernus++: A Self-Calibrating and Adaptive System for Transiently-Powered Embedded Devices. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2016, 35, 1968-1980.	1.9	156
3	Accurate Supercapacitor Modeling for Energy Harvesting Wireless Sensor Nodes. IEEE Transactions on Circuits and Systems II: Express Briefs, 2011, 58, 911-915.	2.2	105
4	A traffic-aware street lighting scheme for Smart Cities using autonomous networked sensors. Computers and Electrical Engineering, 2015, 45, 192-207.	3.0	78
5	Broadband Millimeter-Wave Textile-Based Flexible Rectenna for Wearable Energy Harvesting. IEEE Transactions on Microwave Theory and Techniques, 2020, 68, 4960-4972.	2.9	74
6	Rectennas for Radio-Frequency Energy Harvesting and Wireless Power Transfer: A Review of Antenna Design [Antenna Applications Corner]. IEEE Antennas and Propagation Magazine, 2020, 62, 95-107.	1.2	68
7	Graceful Performance Modulation for Power-Neutral Transient Computing Systems. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2016, 35, 738-749.	1.9	55
8	A Survey of Multi-Source Energy Harvesting Systems. , 2013, , .		53
9	Dual-Band Dual-Mode Textile Antenna/Rectenna for Simultaneous Wireless Information and Power Transfer (SWIPT). IEEE Transactions on Antennas and Propagation, 2021, 69, 6322-6332.	3.1	52
10	Photovoltaic Sample-and-Hold Circuit Enabling MPPT Indoors for Low-Power Systems. IEEE Transactions on Circuits and Systems I: Regular Papers, 2012, 59, 1196-1204.	3.5	49
11	Ultra-Low Power 18-Transistor Fully Static Contention-Free Single-Phase Clocked Flip-Flop in 65-nm CMOS. IEEE Journal of Solid-State Circuits, 2019, 54, 550-559.	3.5	46
12	Omnidirectional Dual-Polarized Low-Profile Textile Rectenna With Over 50% Efficiency for Sub- $\frac{1}{4}\lambda$ Wearable Power Harvesting. IEEE Transactions on Antennas and Propagation, 2021, 69, 2522-2536.	3.1	45
13	Millimeter-Wave Power Harvesting: A Review. IEEE Open Journal of Antennas and Propagation, 2020, 1, 560-578.	2.5	43
14	E-Textile Technology Reviewâ€œFrom Materials to Application. IEEE Access, 2021, 9, 97152-97179.	2.6	40
15	An Empirical Energy Model for Supercapacitor Powered Wireless Sensor Nodes. , 2008, , .		39
16	RF-Powered Wearable Energy Harvesting and Storage Module Based on E-Textile Coplanar Waveguide Rectenna and Supercapacitor. IEEE Open Journal of Antennas and Propagation, 2021, 2, 302-314.	2.5	37
17	Millimeter-Wave Textile Antenna for on-Body RF Energy Harvesting in Future 5G Networks. , 2019, , .		35
18	Dual-Polarized Wearable Antenna/Rectenna for Full-Duplex and MIMO Simultaneous Wireless Information and Power Transfer (SWIPT). IEEE Open Journal of Antennas and Propagation, 2021, 2, 844-857.	2.5	29

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19	Meshed High-Impedance Matching Network-Free Rectenna Optimized for Additive Manufacturing. IEEE Open Journal of Antennas and Propagation, 2020, 1, 615-626.	2.5	28
20	High-Temperature Self-Powered Sensing System for a Smart Bearing in an Aircraft Jet Engine. IEEE Transactions on Instrumentation and Measurement, 2020, 69, 6165-6174.	2.4	25
21	RESTOP: Retaining External Peripheral State in Intermittently-Powered Sensor Systems. Sensors, 2018, 18, 172.	2.1	23
22	Supercapacitor leakage in energy-harvesting sensor nodes: Fact or fiction?. , 2012, , .		21
23	Real-World Performance of Sub-1 GHz and 2.4 GHz Textile Antennas for RF-Powered Body Area Networks. IEEE Access, 2020, 8, 133746-133756.	2.6	21
24	Energy Harvesting for Smart City Applications. , 2018, , .		20
25	A Sub-nW/kHz Relaxation Oscillator With Ratioed Reference and Sub-Clock Power Gated Comparator. IEEE Journal of Solid-State Circuits, 2019, 54, 3097-3106.	3.5	20
26	Alternative Energy Sources for Sensor Nodes: Rationalized Design for Long-Term Deployment. , 2008, , .		18
27	Energy-driven computing. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2020, 378, 20190158.	1.6	18
28	DiStiNCT: Synchronizing Nodes With Imprecise Timers in Distributed Wireless Sensor Networks. IEEE Transactions on Industrial Informatics, 2017, 13, 938-946.	7.2	16
29	High-Efficiency Sub-1 GHz Flexible Compact Rectenna based on Parametric Antenna-Rectifier Co-Design. , 2020, , .		16
30	Millimeter-Wave Power Transmission for Compact and Large-Area Wearable IoT Devices Based on a Higher Order Mode Wearable Antenna. IEEE Internet of Things Journal, 2022, 9, 5229-5239.	5.5	15
31	A Control Flow for Transiently Powered Energy Harvesting Sensor Systems. IEEE Sensors Journal, 2020, 20, 10687-10695.	2.4	14
32	Broadband Compact Substrate-Independent Textile Wearable Antenna for Simultaneous Near- and Far-Field Wireless Power Transmission. IEEE Open Journal of Antennas and Propagation, 2022, 3, 398-411.	2.5	13
33	Ultra low-power photovoltaic MPPT technique for indoor and outdoor wireless sensor nodes. , 2011, , .		12
34	Using Sleep States to Maximize the Active Time of Transient Computing Systems. , 2017, , .		12
35	Fused: Closed-Loop Performance and Energy Simulation of Embedded Systems. , 2020, , .		12
36	Momentum. Transactions on Embedded Computing Systems, 2018, 17, 1-25.	2.1	11

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37	Energy Harvesting and Management for Wireless Autonomous Sensors. Measurement and Control, 2008, 41, 104-108.	0.9	10
38	Intermittently-powered energy harvesting step counter for fitness tracking. , 2017, , .		10
39	StreetlightSim: A simulation environment to evaluate networked and adaptive street lighting. , 2014, , .		9
40	Efficient State Retention through Paged Memory Management for Reactive Transient Computing. , 2019, , .		8
41	Efficient Energy Conversion in Electrically Assisted Bicycles Using a Switched Reluctance Machine Under Torque Control. IEEE Access, 2020, 8, 202401-202411.	2.6	8
42	Modeling of Wireless Sensor Nodes Powered by Tunable Energy Harvesters: HDL-Based Approach. IEEE Sensors Journal, 2012, 12, 2680-2689.	2.4	7
43	Sub-1 GHz Flexible Concealed Rectenna Yarn for High-Efficiency Wireless-Powered Electronic Textiles. , 2020, , .		7
44	Energy devices for sensor networks: Properties for simulation and deployment. , 2009, , .		6
45	Accelerated simulation of tunable vibration energy harvesting systems using a linearised state-space technique. , 2011, , .		6
46	Integrated Reciprocal Conversion With Selective Direct Operation for Energy Harvesting Systems. IEEE Transactions on Circuits and Systems I: Regular Papers, 2017, 64, 2370-2379.	3.5	6
47	Overcoming the Efficiency Barrier of Textile Antennas: A Transmission Lines Approach. Proceedings (mdpi), 2019, 32, .	0.2	5
48	2.4 GHz Wearable Textile Antenna/Rectenna for Simultaneous Information and Power Transfer. , 2021, , .		5
49	Pragmatic Memory-System Support for Intermittent Computing Using Emerging Nonvolatile Memory. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2023, 42, 95-108.	1.9	5
50	E-Textile Breathing Sensor Using Fully Textile Wearable Antennas. , 2022, 15, .		5
51	Design and Testing of a Sensing System for Aero-Engine Smart Bearings. Proceedings (mdpi), 2019, 2, .	0.2	4
52	Enabling intermittent computing on high-performance out-of-order processors. , 2018, , .		4
53	Improving the Forward Progress of Transient Systems. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2021, 40, 444-452.	1.9	4
54	Dispenser Printed Flexible Rectenna for Dual-ISM Band High-Efficiency Supercapacitor Charging. , 2021, , .		4

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55	Wearable E-Textile Wireless RF Power Supply based on a Textile Supercapacitor and a Flexible Rectenna Filament. , 2020, , .		4
56	Printed Non-Metallic Textile-Based Carbon Antenna for Low-Cost Green Wearable Applications. , 2022, , .		4
57	Evaluation and analysis of single-phase clock flip-flops for NTV applications. , 2017, , .		3
58	Energy-aware HW/SW Co-modeling of Batteryless Wireless Sensor Nodes. , 2020, , .		3
59	CMOS UHF RFID Rectifier Design and Matching: an Analysis of Process and Temperature Variations. , 2021, , .		3
60	Battery-Free Wireless Light-Sensing Tag Based on a Long-Range Dual-Port Dual-Polarized RFID Platform. Sensors, 2022, 22, 4782.	2.1	3
61	Exploring the Effect of Energy Storage Sizing on Intermittent Computing System Performance. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2022, 41, 492-501.	1.9	2
62	Millimeter-Wave Textile-Based Monopole Antenna for Wearable Wireless Power Transmission. , 2021, , .		2
63	Enhancing microelectronics education with large-student projects: Using the example of the University of Southampton Small Satellite. , 2016, , .		1
64	Oil-cooled thermoelectric energy harvesting for aero-engine sensing system. Proceedings (mdpi), 2018, 2, .	0.2	1
65	Powering E-Textiles Using a Single Thread Radio Frequency Energy Harvesting Rectenna. Proceedings (mdpi), 2021, 68, 16.	0.2	1
66	Analyzing and Maximizing the Power Harvesting Efficiency of a Textile Rectenna Through Reflector-Based Shielding. , 2021, , .		1
67	Screen Printing Reliable Wearable Microstrip Antennas on Rough Textile Substrates. , 2021, , .		1
68	Textile-based Radio Frequency Energy Harvesting and Storage using Ultra-Compact Rectennas with High Effective-to-Physical Area Ratio. , 2021, , .		1
69	Flexible integration of alternative energy sources for autonomous sensing. , 2008, , .		0
70	5G-Enabled E-Textiles Based on a Low-Profile Millimeter-Wave Textile Antenna. , 2022, 15, .		0
71	E-Textile RF Energy Harvesting and Storage using Organic-Electrolyte Carbon-Based Supercapacitors. , 2021, , .		0
72	Meshed Microstrip Printed Antenna for Matching Network-Free RF Energy Harvesting. , 2022, , .		0