

Geoff V Merrett

List of Publications by Year in descending order

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98
papers

1,883
citations

361413
20
h-index

315739
38
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98
all docs

98
docs citations

98
times ranked

1653
citing authors

#	ARTICLE	IF	CITATIONS
1	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.	2.7	5
2	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.	2.7	2
3	A High-Level Approach for Energy Efficiency Improvement of FPGAs by Voltage Trimming. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2022, 41, 3548-3552.	2.7	2
4	Similarity-Aware CNN for Efficient Video Recognition at the Edge. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2022, 41, 4901-4914.	2.7	0
5	QUAREM: Maximising QoE Through Adaptive Resource Management in Mobile MPSoC Platforms. Transactions on Embedded Computing Systems, 2022, 21, 1-29.	2.9	6
6	Mesh Networking for Intermittently Powered Devices: Architecture and Challenges. IEEE Network, 2022, 36, 122-128.	6.9	4
7	Guest Editorial: Special issue on battery-free computing. IET Computers and Digital Techniques, 2022, 16, 89-90.	1.2	0
8	Mitigating Interactive Performance Degradation From Mobile Device Thermal Throttling. IEEE Embedded Systems Letters, 2021, 13, 5-8.	1.9	1
9	Improving the Forward Progress of Transient Systems. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2021, 40, 444-452.	2.7	4
10	Partner selection in self-organised wireless sensor networks for opportunistic energy negotiation: A multi-armed bandit based approach. Ad Hoc Networks, 2021, 112, 102354.	5.5	8
11	Wake-up Radio-enabled Intermittently-powered Devices for Mesh Networking: A Power Analysis. , 2021, , .		5
12	Dynamic Transformer for Efficient Machine Translation on Embedded Devices. , 2021, , .		1
13	Emergent design challenges for embedded systems and paths forward. , 2021, , .		4
14	AdaMD: Adaptive Mapping and DVFS for Energy-Efficient Heterogeneous Multicores. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2020, 39, 2206-2217.	2.7	28
15	Energy-driven computing. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2020, 378, 20190158.	3.4	18
16	A Control Flow for Transiently Powered Energy Harvesting Sensor Systems. IEEE Sensors Journal, 2020, 20, 10687-10695.	4.7	14
17	Optimising Resource Management for Embedded Machine Learning. , 2020, , .		7
18	Efficient Deployment of UAV-powered Sensors for Optimal Coverage and Connectivity. , 2020, , .		11

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19	Intra- and Inter-Server Smart Task Scheduling for Profit and Energy Optimization of HPC Data Centers. Journal of Low Power Electronics and Applications, 2020, 10, 32.	2.0	3
20	Dynamic Energy and Thermal Management of Multi-core Mobile Platforms: A Survey. IEEE Design and Test, 2020, 37, 25-33.	1.2	32
21	Collaborative Adaptation for Energy-Efficient Heterogeneous Mobile SoCs. IEEE Transactions on Computers, 2020, 69, 185-197.	3.4	12
22	Internet of MIMO Things: UAV-Assisted Wireless-Powered Networks for Future Smart Cities. IEEE Internet of Things Magazine, 2020, 3, 8-13.	2.6	27
23	Fused: Closed-Loop Performance and Energy Simulation of Embedded Systems. , 2020, , .		12
24	Energy-aware HW/SW Co-modeling of Batteryless Wireless Sensor Nodes. , 2020, , .		3
25	Efficient State Retention through Paged Memory Management for Reactive Transient Computing. , 2019, , .		8
26	Selective policies for efficient state retention in transiently-powered embedded systems: Exploiting properties of NVM technologies. Sustainable Computing: Informatics and Systems, 2019, 22, 167-178.	2.2	8
27	Energy-Neutral Wireless-Powered Networks. IEEE Wireless Communications Letters, 2019, 8, 1373-1376.	5.0	10
28	Predictive Thermal Management for Energy-Efficient Execution of Concurrent Applications on Heterogeneous Multicores. IEEE Transactions on Very Large Scale Integration (VLSI) Systems, 2019, 27, 1404-1415.	3.1	20
29	Practical Implementation of Memristor-Based Threshold Logic Gates. IEEE Transactions on Circuits and Systems I: Regular Papers, 2019, 66, 3041-3051.	5.4	32
30	Incremental Training and Group Convolution Pruning for Runtime DNN Performance Scaling on Heterogeneous Embedded Platforms. , 2019, , .		2
31	The Circuit Breaker Pattern Targeted to Future IoT Applications. Lecture Notes in Computer Science, 2019, , 390-396.	1.3	3
32	Inter-Cluster Thread-to-Core Mapping and DVFS on Heterogeneous Multi-Cores. IEEE Transactions on Multi-Scale Computing Systems, 2018, 4, 369-382.	2.4	46
33	A model-based framework for software portability and verification in embedded power management systems. Journal of Systems Architecture, 2018, 82, 12-23.	4.3	13
34	Online concurrent workload classification for multi-core energy management. , 2018, , .		12
35	High-Speed Low-Complexity Guided Image Filtering-Based Disparity Estimation. IEEE Transactions on Circuits and Systems I: Regular Papers, 2018, 65, 606-617.	5.4	5
36	Enabling intermittent computing on high-performance out-of-order processors. , 2018, , .		4

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37	Workload-Aware Runtime Energy Management for HPC Systems. , 2018, , .		7
38	RESTOP: Retaining External Peripheral State in Intermittently-Powered Sensor Systems. Sensors, 2018, 18, 172.	3.8	23
39	Momentum. Transactions on Embedded Computing Systems, 2018, 17, 1-25.	2.9	11
40	An Application- and Platform-agnostic Runtime Management Framework for Multicore Systems. , 2018, , .		2
41	An Application- and Platform-agnostic Runtime Management Framework for Multicore Systems. , 2018, , .		0
42	Accurate and Stable Run-Time Power Modeling for Mobile and Embedded CPUs. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2017, 36, 106-119.	2.7	64
43	Intermittently-powered energy harvesting step counter for fitness tracking. , 2017, , .		10
44	Machine learning for run-time energy optimisation in many-core systems. , 2017, , .		14
45	Energy-Efficient Run-Time Mapping and Thread Partitioning of Concurrent OpenCL Applications on CPU-GPU MPSoCs. Transactions on Embedded Computing Systems, 2017, 16, 1-22.	2.9	30
46	Power neutral performance scaling for energy harvesting MP-SoCs. , 2017, , .		3
47	Exploring ARM mbed support for transient computing in energy harvesting IoT systems. , 2017, , .		6
48	Online tuning of Dynamic Power Management for efficient execution of interactive workloads. , 2017, , .		2
49	Empirical CPU power modelling and estimation in the gem5 simulator. , 2017, , .		8
50	Applications of Energy-Driven and Transient Computing. , 2017, , .		2
51	Applications of Energy-Driven Computing. , 2017, , .		5
52	Learning-Based Run-Time Power and Energy Management of Multi/Many-Core Systems: Current and Future Trends. Journal of Low Power Electronics, 2017, 13, 310-325.	0.6	27
53	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.	2.7	156
54	Improving learning of electronic engineering skills through e-learning: A case study. , 2016, , .		0

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55	Experimental validation of opportunistic direct interconnection between different Wireless Sensor Networks. , 2016, , .		2
56	Adaptive and Hierarchical Runtime Manager for Energy-Aware Thermal Management of Embedded Systems. Transactions on Embedded Computing Systems, 2016, 15, 1-25.	2.9	40
57	Graceful Performance Modulation for Power-Neutral Transient Computing Systems. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2016, 35, 738-749.	2.7	55
58	Learning Transfer-Based Adaptive Energy Minimization in Embedded Systems. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2016, 35, 877-890.	2.7	46
59	Workload Change Point Detection for Runtime Thermal Management of Embedded Systems. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2016, 35, 1358-1371.	2.7	15
60	Workload Uncertainty Characterization and Adaptive Frequency Scaling for Energy Minimization of Embedded Systems. , 2015, , .		17
61	Adaptive energy minimization of embedded heterogeneous systems using regression-based learning. , 2015, , .		23
62	Application-specific memory protection policies for energy-efficient reliable design. , 2015, , .		0
63	Towards Automatic Code Generation of Run-Time Power Management for Embedded Systems Using Formal Methods. , 2015, , .		3
64	A traffic-aware street lighting scheme for Smart Cities using autonomous networked sensors. Computers and Electrical Engineering, 2015, 45, 192-207.	4.8	78
65	Hibernus: Sustaining Computation During Intermittent Supply for Energy-Harvesting Systems. IEEE Embedded Systems Letters, 2015, 7, 15-18.	1.9	191
66	Data-driven low-complexity nitrate loss model utilizing sensor information — Towards collaborative farm management with wireless sensor networks. , 2015, , .		2
67	Empirical evaluation of OI-MAC: Direct interconnection between wireless sensor networks for collaborative monitoring. , 2015, , .		2
68	Predicting discharge using a low complexity machine learning model. Computers and Electronics in Agriculture, 2015, 118, 350-360.	7.7	24
69	Field testing a rare species bioacoustic smartphone application: Challenges and future considerations. , 2014, , .		1
70	StreetlightSim: A simulation environment to evaluate networked and adaptive street lighting. , 2014, , .		9
71	Active Mode Subclock Power Gating. IEEE Transactions on Very Large Scale Integration (VLSI) Systems, 2014, 22, 1898-1908.	3.1	13
72	A Low Complexity Data Driven Model of Environmental Discharge Dynamics for Wireless Sensor Network Applications. Procedia Engineering, 2014, 87, 544-547.	1.2	2

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73	The impact of agricultural activities on water quality: A case for collaborative catchment-scale management using integrated wireless sensor networks. Computers and Electronics in Agriculture, 2013, 96, 126-138.	7.7	103
74	Improved State Integrity of Flip-Flops for Voltage Scaled Retention Under PVT Variation. IEEE Transactions on Circuits and Systems I: Regular Papers, 2013, 60, 2953-2961.	5.4	11
75	Energy-efficient street lighting through embedded adaptive intelligence. , 2013, , .		31
76	Adding value to WSN simulation through formal modelling and analysis. , 2013, , .		2
77	Opportunistic Direct Interconnection between Co-Located Wireless Sensor Networks. , 2013, , .		5
78	A Survey of Multi-Source Energy Harvesting Systems. , 2013, , .		53
79	Energy and Accuracy Trade-Offs in Accelerometry-Based Activity Recognition. , 2013, , .		7
80	A narrative review on haptic devices: relating the physiology and psychophysical properties of the hand to devices for rehabilitation in central nervous system disorders. Disability and Rehabilitation: Assistive Technology, 2013, 8, 181-189.	2.2	45
81	Towards a principled and evolvable approach to software development for future wireless sensor networks. , 2012, , .		1
82	Supercapacitor leakage in energy-harvesting sensor nodes: Fact or fiction?. , 2012, , .		21
83	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.	5.4	49
84	An Explicit Linearized State-Space Technique for Accelerated Simulation of Electromagnetic Vibration Energy Harvesters. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2012, 31, 522-531.	2.7	13
85	Human-powered inertial energy harvesters: the effect of orientation, location and activity on obtainable power. Procedia Engineering, 2011, 25, 815-818.	1.2	12
86	Accurate Supercapacitor Modeling for Energy Harvesting Wireless Sensor Nodes. IEEE Transactions on Circuits and Systems II: Express Briefs, 2011, 58, 911-915.	3.0	105
87	Accelerated simulation of tunable vibration energy harvesting systems using a linearised state-space technique. , 2011, , .		6
88	Energy-efficient data acquisition in wireless sensor networks through spatial correlation. , 2011, , .		4
89	Ultra low-power photovoltaic MPPT technique for indoor and outdoor wireless sensor nodes. , 2011, , .		12
90	Augmenting forearm crutches with wireless sensors for lower limb rehabilitation. Measurement Science and Technology, 2010, 21, 124008.	2.6	18

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91	Energy devices for sensor networks: Properties for simulation and deployment. , 2009, , .		6
92	An instrumented crutch for monitoring patientsâ€™ weight distribution during orthopaedic rehabilitation. Procedia Chemistry, 2009, 1, 714-717.	0.7	6
93	Energy-Aware Simulation for Wireless Sensor Networks. , 2009, , .		25
94	Energy managed reporting for wireless sensor networks. Sensors and Actuators A: Physical, 2008, 142, 379-389.	4.1	20
95	An Empirical Energy Model for Supercapacitor Powered Wireless Sensor Nodes. , 2008, , .		39
96	Energy Harvesting and Management for Wireless Autonomous Sensors. Measurement and Control, 2008, 41, 104-108.	1.8	10
97	A Structured Hardware/Software Architecture for Embedded Sensor Nodes. , 2008, , .		5
98	Energy Controlled Reporting for Industrial Monitoring Wireless Sensor Networks. , 2006, , .		9