

Geoff V Merrett

List of Publications by Year in descending order

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98
papers

1,883
citations

361045

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315357

38
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98
all docs

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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. | 1.9 | 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. | 1.9 | 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. | 1.9 | 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. | 1.9 | 0 |
| 5 | QUAREM: Maximising QoE Through Adaptive Resource Management in Mobile MPSoC Platforms. Transactions on Embedded Computing Systems, 2022, 21, 1-29. | 2.1 | 6 |
| 6 | Mesh Networking for Intermittently Powered Devices: Architecture and Challenges. IEEE Network, 2022, 36, 122-128. | 4.9 | 4 |
| 7 | Guest Editorial: Special issue on battery-free computing. IET Computers and Digital Techniques, 2022, 16, 89-90. | 0.9 | 0 |
| 8 | Mitigating Interactive Performance Degradation From Mobile Device Thermal Throttling. IEEE Embedded Systems Letters, 2021, 13, 5-8. | 1.3 | 1 |
| 9 | 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 |
| 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. | 3.4 | 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. | 1.9 | 28 |
| 15 | Energy-driven computing. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2020, 378, 20190158. | 1.6 | 18 |
| 16 | A Control Flow for Transiently Powered Energy Harvesting Sensor Systems. IEEE Sensors Journal, 2020, 20, 10687-10695. | 2.4 | 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 |

| # | ARTICLE | IF | CITATIONS |
|----|---|-----|-----------|
| 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. | 1.3 | 3 |
| 20 | Dynamic Energy and Thermal Management of Multi-core Mobile Platforms: A Survey. IEEE Design and Test, 2020, 37, 25-33. | 1.1 | 32 |
| 21 | Collaborative Adaptation for Energy-Efficient Heterogeneous Mobile SoCs. IEEE Transactions on Computers, 2020, 69, 185-197. | 2.4 | 12 |
| 22 | Internet of MIMO Things: UAV-Assisted Wireless-Powered Networks for Future Smart Cities. IEEE Internet of Things Magazine, 2020, 3, 8-13. | 2.0 | 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. | 1.6 | 8 |
| 27 | Energy-Neutral Wireless-Powered Networks. IEEE Wireless Communications Letters, 2019, 8, 1373-1376. | 3.2 | 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. | 2.1 | 20 |
| 29 | Practical Implementation of Memristor-Based Threshold Logic Gates. IEEE Transactions on Circuits and Systems I: Regular Papers, 2019, 66, 3041-3051. | 3.5 | 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. | 1.0 | 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. | 2.5 | 46 |
| 33 | A model-based framework for software portability and verification in embedded power management systems. Journal of Systems Architecture, 2018, 82, 12-23. | 2.5 | 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. | 3.5 | 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. | 2.1 | 23 |
| 39 | Momentum. Transactions on Embedded Computing Systems, 2018, 17, 1-25. | 2.1 | 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. | 1.9 | 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. | 2.1 | 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. | 1.9 | 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. | 2.1 | 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. | 1.9 | 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. | 1.9 | 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. | 1.9 | 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. | 3.0 | 78 |
| 65 | Hibernus: Sustaining Computation During Intermittent Supply for Energy-Harvesting Systems. IEEE Embedded Systems Letters, 2015, 7, 15-18. | 1.3 | 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. | 3.7 | 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. | 2.1 | 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. <i>Computers and Electronics in Agriculture</i> , 2013, 96, 126-138. | 3.7 | 103 |
| 74 | Improved State Integrity of Flip-Flops for Voltage Scaled Retention Under PVT Variation. <i>IEEE Transactions on Circuits and Systems I: Regular Papers</i> , 2013, 60, 2953-2961. | 3.5 | 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. <i>Disability and Rehabilitation: Assistive Technology</i> , 2013, 8, 181-189. | 1.3 | 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. <i>IEEE Transactions on Circuits and Systems I: Regular Papers</i> , 2012, 59, 1196-1204. | 3.5 | 49 |
| 84 | An Explicit Linearized State-Space Technique for Accelerated Simulation of Electromagnetic Vibration Energy Harvesters. <i>IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems</i> , 2012, 31, 522-531. | 1.9 | 13 |
| 85 | Human-powered inertial energy harvesters: the effect of orientation, location and activity on obtainable power. <i>Procedia Engineering</i> , 2011, 25, 815-818. | 1.2 | 12 |
| 86 | Accurate Supercapacitor Modeling for Energy Harvesting Wireless Sensor Nodes. <i>IEEE Transactions on Circuits and Systems II: Express Briefs</i> , 2011, 58, 911-915. | 2.2 | 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. <i>Measurement Science and Technology</i> , 2010, 21, 124008. | 1.4 | 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. | 2.0 | 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. | 0.9 | 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 |