# Sergio Cuenca-Asensi

## List of Publications by Year
in descending order

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|---|---|---|
| **68** papers | **526** citations | 686830 **13** h-index | 794141 **19** g-index |
| **68** all docs | **68** docs citations | **68** times ranked | **421** citing authors |

| # | Article | IF | Citations |
|---|---------|-----|-----------|
| 1 | Compiler-Directed Soft Error Mitigation for Embedded Systems. IEEE Transactions on Dependable and Secure Computing, 2012, 9, 159-172. | 3.7 | 45 |
| 2 | A Novel Co-Design Approach for Soft Errors Mitigation in Embedded Systems. IEEE Transactions on Nuclear Science, 2011, 58, 1059-1065. | 1.2 | 34 |
| 3 | Selective SWIFT-R. Journal of Electronic Testing: Theory and Applications (JETTA), 2013, 29, 825-838. | 0.9 | 30 |
| 4 | S-SETA: Selective Software-Only Error-Detection Technique Using Assertions. IEEE Transactions on Nuclear Science, 2015, 62, 3088-3095. | 1.2 | 30 |
| 5 | A Review of the Bayesian Occupancy Filter. Sensors, 2017, 17, 344. | 2.1 | 26 |
| 6 | Autofocus method for automated microscopy using embedded GPUs. Biomedical Optics Express, 2017, 8, 1731. | 1.5 | 22 |
| 7 | Efficient Mitigation of Data and Control Flow Errors in Microprocessors. IEEE Transactions on Nuclear Science, 2014, 61, 1590-1596. | 1.2 | 21 |
| 8 | A Hardware-Software Approach for On-Line Soft Error Mitigation in Interrupt-Driven Applications. IEEE Transactions on Dependable and Secure Computing, 2016, 13, 502-508. | 3.7 | 19 |
| 9 | Reliability on ARM Processors Against Soft Errors Through SIHFT Techniques. IEEE Transactions on Nuclear Science, 2016, , 1-9. | 1.2 | 17 |
| 10 | Automatic Tuning of a Retina Model for a Cortical Visual Neuroprosthesis Using a Multi-Objective Optimization Genetic Algorithm. International Journal of Neural Systems, 2016, 26, 1650021. | 3.2 | 16 |
| 11 | Fault tolerant embedded systems design by multi-objective optimization. Expert Systems With Applications, 2013, 40, 6813-6822. | 4.4 | 15 |
| 12 | RetinaStudio: A bioinspired framework to encode visual information. Neurocomputing, 2013, 114, 45-53. | 3.5 | 14 |
| 13 | Nonintrusive Automatic Compiler-Guided Reliability Improvement of Embedded Applications Under Proton Irradiation. IEEE Transactions on Nuclear Science, 2019, 66, 1500-1509. | 1.2 | 14 |
| 14 | A Co-Design Approach for SET Mitigation in Embedded Systems. IEEE Transactions on Nuclear Science, 2012, 59, 1034-1039. | 1.2 | 13 |
| 15 | Multi-objective adaptive evolutionary strategy for tuning compilations. Neurocomputing, 2014, 123, 381-389. | 3.5 | 13 |
| 16 | Dependability evaluation of COTS microprocessors via on-chip debugging facilities. , 2016, , . | | 11 |
| 17 | Tuning compilations by multi-objective optimization: Application to Apache web server. Applied Soft Computing Journal, 2015, 29, 461-470. | 4.1 | 10 |
| 18 | Overhead Reduction in Data-Flow Software-Based Fault Tolerance Techniques. , 2016, , 279-291. | | 9 |

| # | Article | IF | Citations |
|---|---|---|---|
| 19 | Improving approximate-TMR using multi-objective optimization genetic algorithm. , 2018, , . | | 9 |
| 20 | Application-Based Analysis of Register File Criticality for Reliability Assessment in Embedded Microprocessors. Journal of Electronic Testing: Theory and Applications (JETTA), 2015, 31, 139-150. | 0.9 | 8 |
| 21 | On the Automatic Tuning of a Retina Model by Using a Multi-objective Optimization Genetic Algorithm. Lecture Notes in Computer Science, 2015, , 108-118. | 1.0 | 8 |
| 22 | Reconfigurable Computing for Tool-Path Computation. International Journal of Advanced Manufacturing Technology, 2003, 21, 945-951. | 1.5 | 7 |
| 23 | Reliability on ARM Processors against Soft Errors by a Purely Software Approach. , 2015, , . | | 7 |
| 24 | Modeling the role of fixational eye movements in real-world scenes. Neurocomputing, 2015, 151, 78-84. | 3.5 | 7 |
| 25 | Design of approximate-TMR using approximate library and heuristic approaches. Microelectronics Reliability, 2018, 88-90, 898-902. | 0.9 | 7 |
| 26 | Hybrid Lockstep Technique for Soft Error Mitigation. IEEE Transactions on Nuclear Science, 2022, 69, 1574-1581. | 1.2 | 7 |
| 27 | Rapid Prototyping of Radiation-Tolerant Embedded Systems on FPGA. , 2010, , . | | 6 |
| 28 | Soft core based embedded systems in critical aerospace applications. Journal of Systems Architecture, 2011, 57, 886-895. | 2.5 | 6 |
| 29 | Soft Error Mitigation in Soft-Core Processors. , 2016, , 239-258. | | 6 |
| 30 | A Compact Model to Evaluate the Effects of High Level C++ Code Hardening in Radiation Environments. Electronics (Switzerland), 2019, 8, 653. | 1.8 | 6 |
| 31 | MOOGA Parameter Optimization for Onset Detection in EMG Signals. Lecture Notes in Computer Science, 2017, , 171-180. | 1.0 | 6 |
| 32 | Performance Evaluation of FPGA-Embedded Web Servers. , 2007, , . | | 5 |
| 33 | Reconfigurable Architecture for Embedding Web Services. , 2008, , . | | 5 |
| 34 | Hardware approach to tool path computation for STEP-NC enabled CNC: A case study of turning operations. Computers in Industry, 2011, 62, 509-518. | 5.7 | 5 |
| 35 | On the influence of compiler optimizations in the fault tolerance of embedded systems. , 2016, , . | | 5 |
| 36 | Softerror mitigation for multi-core processors based on thread replication. , 2019, , . | | 5 |

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|---|---------|----|-----------|
| 37 | Dual-Core Lockstep enhanced with redundant multithread support and control-flow error detection. Microelectronics Reliability, 2019, 100-101, 113447. | 0.9 | 5 |
| 38 | SHARC: An efficient metric for selective protection of software against soft errors. Microelectronics Reliability, 2018, 88-90, 903-908. | 0.9 | 4 |
| 39 | Building ATMR circuits using approximate library and heuristic approaches. Microelectronics Reliability, 2019, 97, 24-30. | 0.9 | 4 |
| 40 | Metaheuristic Optimisation Algorithms for Tuning a Bioinspired Retinal Model. Sensors, 2019, 19, 4834. | 2.1 | 4 |
| 41 | Empirical Mathematical Model of Microprocessor Sensitivity and Early Prediction to Proton and Neutron Radiation-Induced Soft Errors. IEEE Transactions on Nuclear Science, 2020, 67, 1511-1520. | 1.2 | 4 |
| 42 | Application-driven co-design of fault-tolerant industrial systems. , 2010, , . | | 3 |
| 43 | Tuning software-based fault-tolerance techniques for power optimization. , 2014, , . | | 3 |
| 44 | Efficient metric for register file criticality in processor-based systems. , 2014, , . | | 3 |
| 45 | Modeling the Effect of Fixational Eye Movements in Natural Scenes. Lecture Notes in Computer Science, 2013, , 332-341. | 1.0 | 3 |
| 46 | Feature extraction with an associative neural network and its application in industrial quality control. Lecture Notes in Computer Science, 1999, , 460-466. | 1.0 | 2 |
| 47 | Efficient mitigation of data and control flow errors in microprocessors. , 2013, , . | | 2 |
| 48 | Considerations on application of selective hardening based on software fault tolerance techniques. , 2015, , . | | 2 |
| 49 | Hybrid soft error mitigation techniques for COTS processor-based systems. , 2016, , . | | 2 |
| 50 | An effective strategy for selective hardening of software. , 2017, , . | | 2 |
| 51 | Multi-Threaded Mitigation of Radiation-Induced Soft Errors in Bare-Metal Embedded Systems. Journal of Electronic Testing: Theory and Applications (JETTA), 2020, 36, 47-57. | 0.9 | 2 |
| 52 | Soft error reliability predictor based on a Deep Feedforward Neural Network. , 2020, , . | | 2 |
| 53 | Accelerating tool path computing in CAD/CAM: A FPGA architecture for turning lathe machining. , 2007, , . | | 1 |
| 54 | A Hardware/Software Architecture for Tool Path Computation. An Application to Turning Lathe Machining. , 2007, , . | | 1 |

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|---|---------|-----|-----------|
| 55 | A compiler-based infrastructure for fault-tolerant co-design. , 2010, , . | | 1 |
| 56 | A morphological-based method for inverse offset generation. An application for surface reconstruction using mechanical digitizers. International Journal of Advanced Manufacturing Technology, 2011, 54, 1067-1076. | 1.5 | 1 |
| 57 | A Comparison of FPGA and GPGPU Designs for Bayesian Occupancy Filters. Sensors, 2017, 17, 2599. | 2.1 | 1 |
| 58 | An associative neural network and its special purpose pipeline architecture in image analysis. Lecture Notes in Computer Science, 1999, , 95-106. | 1.0 | 0 |
| 59 | Texture analysis based on local semicovers. , 0, , . | | 0 |
| 60 | Accelerating Tool Path Computing in Turning Lathe Machining. , 2007, , . | | 0 |
| 61 | A co-design approach for SET mitigation in embedded systems. , 2011, , . | | 0 |
| 62 | On the definition of real conditions for a fault injection experiment on embedded systems. , 2011, , . | | 0 |
| 63 | Automatic mapping of OpenCV based systems on new heterogeneous SoCs. , 2013, , . | | 0 |
| 64 | Reducing Implicit Overheads of Soft Error Mitigation Techniques Using Selective Hardening. , 2016, , 259-278. | | 0 |
| 65 | Contrast of a HDL model and COTS version of a microprocessor for soft-error testing. , 2017, , . | | 0 |
| 66 | Assessment and Comparison of Evolutionary Algorithms for Tuning a Bio-Inspired Retinal Model. Lecture Notes in Computer Science, 2017, , 95-104. | 1.0 | 0 |
| 67 | Hardware implementation of a STEP-NC enabled CNC for turning lathe machining. , 2009, , . | | 0 |
| 68 | An Optimized Framework to Model Vertebrate Retinas. Lecture Notes in Computer Science, 2011, , 185-194. | 1.0 | 0 |