Curriculum Vitae

I. PERSONAL INFORMATION

LAST NAME   : KAKAROUNTAS

NAME   : ATHANASIOS

FATHER'S NAME   : PANAGIOTIS

CITIZENSHIP   : GREEK

Office Address	*Home Address*
Intelligent Systems Lab	Marathonos 1 (2nd byroad)
Dpt. of Computer Science and Biomedical Informatics	GR-35131, Lamia
School of Science	GREECE
University of Thessaly	
GR-35131, Lamia	
GREECE	

tel.: +30 22310 66723

e-mail : kakarountas@uth.gr

Short Bio

Dr. Athanasios Kakarountas (S'98-M'04-SM'12) was born in Lamia city, Greece. He holds a Diploma (1998) and a Ph.D. (2004) in Electrical & Computer Engineering from the University of Patras, Greece, and an MBA (2015) form Cyprus Open University. He is currently an Associate Professor at the University of Thessaly, holding a position for "Embedded Computing Systems" at the Department of Computer Science and Biomedical Informatics. He is the Head of Intelligent Systems Laboratory-iSL, Chair of the Research and Innovation Regional Committee for the Region of Central Greece and the Deputy Chairman in the Board of Directors of the National Infrastructures for Research and Technology (GRNET). In parallel to his academic career, he has served as a Director for Strategic Development of the Patras Science Park (2007-2008), as a tutor and auditor of the educational material of the Hellenic Open University, and IT expert for the Region of Western Greece and the General Secretariat for Research and Technology (GSRT) of the Greek Government (2007-2008).

His research interests are focused on Computer and Embedded Systems Architecture, VLSI Circuits & Systems Design, Low-power Design and/or Design-for-Test, and Design of Hardware Accelerators for a variety of applications (e.g. Smart City, Smart environments, smart devices, cryptography, medical devices etc.). As a researcher he has participated in 24 research projects funded by EU and the Greek Secretariat for Research and Technology. He has published more than 110 articles in international journals and conference proceedings. His research has received more than 1000 citations. He is also the co-author of 8 chapters in technical books.

He has been an evaluator (Expert) in Horizon 2020 (2020), CHIST-ERA (2020), COST (2017), E.U. Funding, and national Calls in Greece (2020-today), and RESEARCH 2016-2020 (2018), Cyprus.

He is a Member of IEEE since 2004 (student 1998, Senior Member since 2012), of IET and Senior Member of ACM. He is reviewer in 37 magazines and journals and a permanent reviewer to more than 20 conferences. He has been member of the Organizing Committee of numerous IEEE conferences. He is a judge in WRO Hellas, Open Robotics Contest, and the founder of creative team A2rTEST. He is also in the organizing committee of TEDxLamia, Central Hackathon and has served as Mentor for various creative teams in Contests and Hackathons. He is also the recipient of 3 international awards and 2 national awards. Dr. Kakarountas serves as delegate of Greece at the IEEE Region 8 Committee Meetings since 2008. Currently, he has been elected in the Board of the Greece IEEE Section and he is the interim chairman of the Consumer Technology Society – Greece Chapter.

II. STUDIES

06/2009 – 07/2015

MBA in "Business Management" from the Open University of Cyprus

02/2004 – 05/2007

Post-Doc in the Dpt. of Electrical & Computer Engineering from the University of Patras, Greece, Laboratory of VLSI Design.

02/2004:

Ph.D. of Electrical & Computer Engineering from the University of Patras, Greece, Laboratory of VLSI Design.

Thesis: "Design of low-power fault-secure systems"

06/1998:

Diploma of Electrical & Computer Engineering, from the University of Patras, Greece.

III. RESEARCH INTERESTS

- Embedded Systems for Smart Cities and Medical applications
- Computer Architecture
- Design for Testability
- Safety-critical system design
- Design Low Power Systems
- Security System Design and Optimization
- Design of Cryptographic primitives
- Wearable devices (e.g., medical)
- Integration of ML Algorithms on portable systems
- ML at the edge
- Hardware accelerators
- Microprocessors
- Neuromorphic circuits/systems

IV. LANGUAGES

1. Fluent Greek
2. Fluent English
3. Good knowledge of the French language
4. Satisfactory knowledge of the German language

V. ACADEMIC POSITIONS

2/2021-today: Associate Professor at the University of Thessaly, Dpt. of Computer Science and Biomedical Informatics, topic "Embedded Computing Systems".

3/2016-2/2021:   Assistant Professor at the University of Thessaly, Dpt. of Computer Science and Biomedical Informatics, topic "Computer Architecture".

12/2012-3/2016   Assistant Professor at the TEI of Ionian Islands, Dpt. of Computer Science for Management and Economy, topic "Computing Embedded Systems' Architecture".

VI. Participation in Projects

1. "EASY: Energy-Aware SYstem-on-Chip design of the HIPERLAN/2 standard" IST-2000-30093, European Union funding (1/9/2001-31/8/2004)
2. "COSAFE : Low Power Hardware-Software Co-Design for Safety-Critical Applications" IST-1998-28593, European Union funding KE 846, (1/8/1998 – 30/1/2001)
3. "A memory management methodology for real-time and low-power embedded multimedia systems", in the bounds of PENED'99 – 99ED501, Greek Secretariat of Research and Technology funding
4. "LPGD: A low-power design methodology/flow and its application to the implementation of a DCS1800-GSM/DECT Modulator-Demodulator" ESPRIT IV European Union funding through INTRACOM, (11/97 - 10/99).
5. "AMDREL: Architectures and Methodologies for Dynamic Reconfigurable Logic", IST-2001-34379, European Union funding
6. "TARDIS: Technical Coordination and Dissemination", Esprit project 25213-ESD-LPD, European Union funding
7. "MARLOW: A central market place for dissemination of lowpower microelectronics", IST-2001-37115, European Union funding
8. "INTRALED: Industry-driven training for low-power European designers", IST-2001-34631, European Union funding
9. "AMIED: Asynchronous low-power methodology and implementation of an encryption-decryption system", Esprit project 25249-ESD-LPD, European Union funding
10. "PYTHAGORAS: Methodologies for Revealing Reconfigurable Architectures for Embedded Systems", Greek Secretariat of Research and Technology funding
11. "ARCHIMIDIS II: Design of crypto-systems based on residual structures", Greek Secretariat of Research and Technology funding
12. «Regional Innovation pole – Region of Western Greece», development project from General Secretariat of Research and Technology (researcher of Patras Science Park)
13. «ALMA: Architecture oriented paraLlelization for high performance embedded Multicore systems using scilAb», funded by EU as researcher (duration: 01/09/2012 - 31/08/2013)

14. "Development of JPEG-XR encoder for integration into digital electronic systems" in the framework of the "New Business Support for Research & Technological Development Activities" Act, as an experienced researcher, funded by EYDE-ETAK for applied research. (Duration: 1/1/11 - 12/2012) (Proposal writer rated 1st in the respective ranking list)

15. "MOTHER LANGUAGE", as project coordinator, development project, financing INTERREG IIIA (duration: 1/6/07 - 31/5/08)

16. TOPEKO LEFKADAS, development project, NSRF funding (Duration: 1/2011 - 11/2014) as Scientific Supervisor for the Ionian Islands TEI (24th issue, Committee on Education and Research, 18th Regular Board Meeting, 16/05/2012)

17. "Regions 4 Green Growth" - Regional policy instruments and approaches to improve access to finance and accelerated investment in sustainable energy, development work, financing INTERREG IVC, as a researcher for the preparation of a Regional Action and Implementation Plan (Duration) 01/07/2014 - 30/09/2014)

18. "Runtime Verification Beyond Monitoring (ARVI)", ICT COST Action IC1402, as the representative of Greece to the Management Committee. (12/2014 - 2017)

19. "Bio-informatics IoT Security Research (SmartBIoT)", International grant by Nokia Corporation (Bell Labs), 30 k€. (01.09.2017 - 31.08.2019)

20. "Smart Delivery", National Research-Creator-Innovative National Program, EYDE-ETAK, as a Scientific Supervisor and Researcher, 320 k€ out of a total of 1 M€. (01.06.2018 - 30.05.2021)

21. "Monitoring the supply chain and process of producing food products using blockchain technology," Action "Support for Research, Technological Development and Innovation Plans in areas of RIS3 of the Central Greece Business Program 2014-2020", P.I. Vassilis Plagianakos, Budget: €698.000, duration: 2020-2022

22. "GeoMake-It: Geo-Games Organization and Development Integrated System", National Research-Creator-Innovative National Program, EYDE-ETAK, as a Researcher, 668 k€ out of a total of 1 M€. (2019 - 2021)

23. "Development of a statistical machine learning toolbox for integrating medical data bases," as Deputy P.I. (2020-2022)

24. "ParICT_CENG: ICT Research infrastructures enhancement in Central Greece for the processing of Big Data from sensor streams, multimedia, and complex mathematical models simulations," Action "Reinforcement of the Research and Innovation Infrastructure," funded by the Operational Programme "Competitiveness, Entrepreneurship and Innovation" (NSRF 2014-2020) and co-financed by Greece and the European Union (European Regional Development Fund), P.I. Athanasios Kakarountas, Budget: € 1.200.000, duration: 11/2019-04/2022

25. "Population Health Information Research Infrastructure (PHIRI) for COVID-19", Horizon 2020, No 101018317, Researcher (sub-contractor)

26. "ARTEMIS - Securing Supply Chain Traceability Using Distributed and Embedded Security Mechanisms", National Research-Creator-Innovative National Program, EYDE-ETAK, as a Scientific Supervisor and Researcher, € 996.650. (2021-2023)

VII. PROFESSIONAL EXPERIENCE

1. Collaboration with Micrel Medical Devices (01/10/98 - 15/08/02). Design, testing and development of a medical medicine infusion pump, including hardware and software.

2. Collaboration with Alma Techologies (01/01/02 - 31/01/04). Author of numerous scripts for automatic VHDL code generation.

3. Collaboration wirh Alma Techologies (01/01/02 - 31/01/04). Responsible for optimizing the synthesis algorithms for electronic circuits and systems.

4. Collaboration with Alma Techologies (01/01/02 - today). Technical Advisor for Design and Testing topics.

5. Collaboration with Sciensis Ltd (01/09/03 - 28/02/05). Programmer for embedded systems' kernels.

6. Collaboration with Sciensis Ltd (01/09/03 - 28/02/05). Technical Advisor for Design and Testing topics.

VIII. SCIENTIFIC MEMBERSHIP

- Senior Member of IEEE
- IEEE Societies
  - Member of the Consumer Technology Society
  - Member of Computer Society
  - Member of the Circuits and Systems Society (CAS)
  - Member of the Engineering in Medicine and Biology (EMB) Society
  - Member of the Solid-Satete Society
  - Member of the Test Technology Technical Council
- Member of the Greek CAS & SSC IEEE Chapter
- Senior Member of the Association Computing Machinery (ACM)
- Member of the IET
- Member of the Greek Technical Chamber (TEE)
- Member of the EPY
- Member of EmiPEE

IX. PARTICIPATION IN THE LABORATORY'S ACTIVITIES

Director of the Intelligent Systems Laboratory (2019-today). He has organized the laboratory to become one of the largest research laboratories in Central Greece and Thessaly, employing 4 Professors, 1 Senior Researcher as Laboratory Teaching Staff, 3 PostDoc researchers, more than 15 Ph.D. candidates, more than 10 MSc, and approximately 20 undergraduate students. The laboratory supports its activities by one technician, one financial assistant, one marketing expert, and one secretary. Its premises include more than 70 sq.m. of offices and 30 sq.m. of laboratory facilities. The funding of the iSL exceeds 5M€ for the last five years, attracting collaborations with

prestigious organizations and enterprizes. iSL operates one the argest HPC node in Central Greece; that is one the four competitive HPC nodes of Greece.

X. PUBLICATIONS

A. Ph.D. Thesis

A1. A.P. Kakarountas: "Design of Low-Power Fault-Secure Systems", University of Patras, Patra, Greece, 2004.

B. Book Chapter

B1. A.P. Kakarountas, K.S. Papadomanolakis, C.E. Goutis, "*Low-Power Design for Safety-Critical Applications* " in "Designing CMOS Circuits for Low Power," editors D. Soudris, C. Piguet, and C.E. Goutis, September 2002, Dordrecht/London/Boston, Kluwer Academic Publishers, September 2002, Dordrecht/London/Boston, pp. 9-22.

B2. A.P. Kakarountas, R.E. King, "*Simulation and Virtual Reality*" in "Industrial Informatics," (greek language) editor R.E. King, 2004, Tziolas Publications, pp. 177-185.

B3. A.P. Kakarountas, H.E. Michail, "Chapter 12: Performance for Cryptography: hardware and software approach", in "Supercomputing Research Advances", Ed. Yongge Huang, Nova Science Publishers, Inc., ISBN: 978-1-60456-186-9, 2008, pp. 403-418.

B4. A.P. Kakarountas, H.E. Michail, "Chapter 9. Performance for Cryptography: a hardware approach", in "Cryptography Research Perspectives", Ed. Roland E. Chen, Nova Science Publishers, Inc., ISBN: 978-1-60456-492-1, 2009, pp. 217-232.

B5. A.P. Kakarountas, H.E. Michail, "Chapter 5: Performance for Cryptography: a hardware approach", in "Computer Security: Intrusion, Detection and Prevention", Eds. Ronald D. Hopkins and Wesley P. Tokere, Nova Science Publishers, Inc., ebook, ISBN: 978-1-60876-657-4, Q2 2009, pp. 91-106.

B6. E. Boumpa and A. Kakarountas, "Home Supporting Smart Systems for elderly people", in "Convergence of ICT and Smart Devices for Emerging Applications", editors Sara Paiva and Suman Paul, 2020, EAI/Springer Innovations in Communications and Computing, ISBN: 978-3-030-41367-5, DOI: 10.1007/978-3-030-41368-2, pp. , 2020.

B7. D. Myridakis and A. Kakarountas, "Mimicking Biometrics on Smart devices and its application in IoT Security for Health systems", in "IoT and ICT for Healthcare Applications", editors Nishu Gupta and Sara Paiva, 2020, EAI/Springer Innovations in Communications and Computing, ISBN: 978-3-030-42933-1, DOI: 10.1007/978-3-030-42934-8, pp. , 2020.

B8. V. Chioktour and A. Kakarountas, " Degradation of reliability of digital electronic equipment over time and redundant hardware-based solutions", accepted for inclusion in the collective book "Statistical Modeling of Reliability Structures and Industrial Processes", Triantafyllou, I. and Ram, M. (eds), CRC Press, Taylor & Francis Group, USA. (to appear), 2021.

C. Journals and Magazines

C1. S. Nikolaidis, E. Karaolis, A. Kakarountas, K. Papadomanolakis and C.E. Goutis, "A Methodology for Calculating the Undetactable Double-Faults in Self-Checking Circuits", Journal of Circuits, Systems and Computers, World Scientific, Vol. 12, No. 1, pp. 75-91, February 2003. (I.F. 1.363)

C2. A. Milidonis, G. Dimitroulakos, M. D. Galanis, A. P. Kakarountas, G. Theodoridis, C.Goutis, and F.Catthoor, "A Framework for Data Partitioning for C++ Data-Intensive Applications", Journal of Design Automation for Embedded Systems, Springer Science+Business Media B.V., Vol. 9, No. 2, pp. 101-121, June. 2004. (I.F. 2.767)

C3. M.D. Galanis, A. Milidonis, A.P. Kakarountas, and C.E. Goutis, "A Design Flow for Speeding-up DSP Applications in Heterogeneous Reconfigurable Systems", Microelectronics Journal, Elsevier, vol 37, pp. 554-564, 2006. (I.F. 1.405)

C4. A.P. Kakarountas, H. Michail, A. Milidonis, G. Theodoridis, C.E Goutis, "High-Speed FPGA Implementation of Secure Hash Algorithm for IPSec and VPN Applications", Journal of Supercomputing, Springer Science + Business Media, vol. 37, pp. 179-195, 2006. (I.F. 2.469)

C5. H.E. Michail, A.P. Kakarountas, A.Milidonis, C.E. Goutis, "Efficient FPGA Implementation of Novel Cryptographic Hashing Core", Computing Letters, VSP/Brill Publishing, vol. 2, num. 1-2, pp. 21-27(7), 2006.

C6. I. Yiakoumis, M. Papadonikolakis, H.E. Michail, A.P. Kakarountas, C.E. Goutis "Maximizing the hash function of authentication codes", IEEE Potentials, vol. 25, iss. 2, pp. 9-12, 2006. (SJR Q3: 0.23)

C7. H.E. Michail, A.P. Kakarountas, C.E. Goutis "Server Side Hashing Core Exceeding 3 Gbps of Throughput", International Journal of Network Security (special issue), Vol. 1, Nos. 1/2/3, pp. 43-53, 2007. (SJR Q4: 0.12)

C8. A.P. Kakarountas, N.D. Zervas, H.E. Michail, G. Theodoridis, and D. Soudris, "Power Management through Dynamic Frequency Scaling for Low and Medium bit-rate Digital Receivers", Journal of Low Power Electronics, ASP, vol.2, no 3, pp. 356-364, 2006. (SJR Q4: 0.14)

C9. G. N. Selimis, A.P. Kakarountas, A. P. Fournaris, A. Milidonis and O.Koufopavlou, "A Low Power Design for SBOX Cryptographic Primitive of Advanced Encryption Standard for Mobile End-Users", in Journal of Low Power Electronics, ASP, vol.3, no.3, pp. 327-336, 2007. (SJR Q4: 0.14)

C10. H.E. Michail, A. P. Kakarountas, A. S. Milidonis and C. E. Goutis, "A Top-Down Design Methodology for Ultrahigh-Performance Hashing Cores", IEEE Transactions on Dependable and Secure Computing, vol.6, is.4, pp.255-268, 2009. (I.F. 6.864)

C11. M. Papadonikolakis, A.P. Kakarountas, C.E. Goutis, "Efficient High-Performance Implementation of JPEG-LS Encoder", in Journal of Real-Time Image Processing, Springer. vol. 3, no. 4, pp 303-310, 2008. (I.F. 1.968)

C12. A. Milidonis, V. Porpodas, N. Alachiotis, A. P. Kakarountas, H. Michail, G. Panagiotakopoulos and C. E. Goutis, "Low Power Architecture with Scratch-Pad Memory for Accelerating Embedded Applications with Run Time Reuse", IET Computers & Digital Techniques, IET, vol. 3, is. 1, pp.109-123, 2009. (I.F. 0.803)

C13. D.M. Schinianakis, A.P. Fournaris, H.E. Michail, A.P. Kakarountas and T. Stouraitis, "An RNS Architecture of an Fp Elliptic Curve Point Multiplier", IEEE Transactions on Circuits and Systems I, vol.56, no.6, pp. 1202-1213, June 2009. (I.F. 3.318)

C14. A.P. Kakarountas, H.E. Michail, C.E. Goutis, A.M. Rjoub, "High-Throughput Implementation of RipeMD-160", International Journal for Internet Technology and Secured Transactions, Inderscience Ltd, vol. 1, no. 3/4, pp. 309 - 316, 2009.

C15. A. Milidonis, N. Alachiotis, V. Porpodas, H. Michail, G. Panagiotakopoulos, A.P. Kakarountas, C.E. Goutis, "Decoupled Processors Architecture for Accelerating Data Intensive Applications using Scratch-Pad Memory Hierarchy", Journal of Signal Processing Systems. Springer Science + Business Media, LLC, vol. 59, no.3, pp. 281-296, 2010. (I.F. 1.013)

C16. H.E. Michail, A.P. Kakarountas, D. Schinianakis, G. Selimis, C.E. Goutis, "Cipher Block based Authentication Module: A Hardware Design Perspective", Journal of Circuits, Systems and Computers, World Scientific Publishing, Vol. 20, No. 2, pp. 163-184, 2011. (I.F. 1.363)

C17. A.P. Kakarountas, H.E. Michail, "Performance for Cryptography: A Hardware Approach", International Journal of Computer Research, Nova Science Publishers, Inc., vol. 19, is. 2/3, pp. - , 2013.

C18. A.P. Kakarountas, "Safety and Security for Shared Storage Media", in Journal of Engineering Science and Technology Review - JESTR, Vol.9, No. 5, pp. 142 - 144, 2016. (SJR Q2: 0.19)

C19. P. Oikonomou, A. Dadaliaris, K. Kolomvatsos, T. Loukopoulos, A. Kakarountas, and G. Stamoulis, "Improved Parallel Legalization Schemes for Standard Cell Placement with Obstacles", Technologies, MDPI, vol. 7, no. 1, p. 3, Dec. 2018.

C20. A.P. Kakarountas, "The Internet of Things: Trends, Threats, and Applications", editorial, in IEEE Potentials Magazine, vol. 38, is. 2, 2019. (SJR Q3: 0.23)

C21. E. Boumpa, A. Gkogkidis, I. Charalampou, A. Ntaliani, A. Kakarountas, V. Kokkinos, "An Acoustic-based Smart Home System for People suffering from Dementia", Technologies, MDPI, vol. 7(1), is. 29, Mar. 2019. Part of the Special Issue Smart Homes and Assisted

Living for Ageing Population: From Sensors to Services. https://doi.org/10.3390/technologies7010029

C22. D. Myridakis, G. Spathoulas, A. Kakarountas, D. Schinianakis, "Smart Devices Security Enhancement via Power Supply Monitoring", Future Internet, MDPI, vol. 12, no. 3, is. 48, Mar. 2020. Part of the Special Issue Security and Reliability of IoT---Selected Papers from SecRIoT 2019. https://doi.org/10.3390/fi12030048 (SJR Q2: 0.39)

C23. K. Kalovrektis, A. Xenakis, I. Korinthios, A. Kakarountas, A. Gotsinas, G. Stamoulis, "An IoT - Sensor Based Hand Trembling Robotic System for Studying Parkinson's Symptoms", International Journal of Internet of Things, SAP, vol. 9, is. 1., pp. 12-19, 2020. https://doi.org/10.5923/j.ijit.20200901.02

C24. D. Myridakis, S. Papafotikas, K. Kalovrektis, A. Kakarountas, "Enhancing Security on IoT Devices via Machine Learning on Conditional Power Dissipation", Special Issue "Hardware Support for the Security of Computing Devices", in Electronics, MDPI, 9(11), pp. 1799, 2020. https://doi.org/10.3390/electronics9111799 (I.F. 2.412)

C25. D. Myridakis, P. Myridakis, A. Kakarountas, "A Power Dissipation Monitoring Circuit for Intrusion Detection and Botnet Prevention on IoT Devices", Special Issue "Recent Advances in Computation Engineering", Computation, MDPI, 9(2), pp.19, 2021. https://doi.org/10.3390/computation9020019 (SJR Q2: 0.34)

C26. V. Chioktour, A. Kakarountas, "Constant Delay Systolic Binary Counter with Variable Size Cellular Automaton-Based Prescaler", accepted for publication in Computers and Electrical Engineering, Elsevier, 2021. (I.F. 2.663)

C27. G. Giannoukos, A. Kakarountas and V. Chioktour, "Interaction between two cells based on a recurrent neural network using the impedance concept", Journal of Computational Methods in Sciences and Engineering, IOS Press, vol. 21, no. 2, pp. 293-299, 2021. https://doi.org/10.3233/JCM-204367 (SJR Q3: 0.16)

C28. C. Velaora, I. Dimos, S. Tsagiopoulou, A. Kakarountas, "A game-based learning approach in Digital Design course to enhance students' competency", Information, MDPI, 13(4), 177, pp. 1–25, 2022. https://doi.org/10.3390/info13040177 (SJR Q3: 0.35, Scopus CiteScore Q2: 3.0)

C29. A. Gkogkidis, V.Tsoukas, A. Kampa, G. Spathoulas, A. Kakarountas, "Enhancing food supply chain security through the use of blockchain and TinyML", accepted for publication in Information, MDPI, pp. -, 2022. (SJR Q3: 0.35, Scopus CiteScore Q2: 3.0)

C30. A. Fragkou, I. Dimos, A. Kakarountas, V. Kokkinos, "Low Power EEG Data Encoding For Brain Neurostimulation Implants", Information, MDPI, 13(4), 194, pp. 1–15, 12 April 2022. https://doi.org/10.3390/info13040194 (SJR Q3: 0.35, Scopus CiteScore Q2: 3.0)

D. Conferences

D1. A.P.Kakarountas, K. Papadomanolakis, E. Karaolis, S. Nikolaidis, N. Alachiotis, C.E. Goutis, "*Hardware and Power Requirements of Self-Checking Circuits*", in Proc. of 6th IEEE

International Conference on Electronics, Circuits and Systems (ICECS'99), Pafos, Cyprus, pp 1655-1658, Sept. 1999.

D2. A.P.Kakarountas, K. Papadomanolakis, E. Karaolis, S. Nikolaidis, C.E. Goutis, "*Hardware/Power Requirements vs. Fault Detection Effectiveness in Self-Checking Circuits*", in Proc. of IEEE International Workshop on Power And Timing Modeling, Optimization and Simulation (PATMOS'99), Kos, Greece, pp. 387-396, Oct, 1999.

D3. A.P.Kakarountas, K. Papadomanolakis, V. Kokkinos, C.E. Goutis, "*Comparative Study on Self-Checking Carry-Propagate Adders in Terms of Area, Power and Performance*", in Proc. of IEEE International Workshop on Power And Timing Modeling, Optimization and Simulation (PATMOS'00), Göttingen, Germany, pp. 187-194, Sept. 2000.

D4. A.P. Kakarountas, V. Kokkinos, C.E. Goutis, "*Design of Low-Power On-Line Reconfigurable Datapaths Using Self-Checking Circuits*", in Proc. of 8th IEEE International Conference on Electronics, Circuits and Systems (ICECS'01), Malta, vol.III, pp.1565-1568, Sept. 2001.

D5. K. Papadomanolakis, A.P. Kakarountas, V. Kokkinos, S. Nikolaidis, C.E. Goutis, "*Low-Power Design of a Safety Critical Microcontroller*", in Proc. of 1st Conference on Microelectronics, Microsystems and Nanotechnology (MMN'00), Athens, Greece, Nov. 2000.

D6. K. Papadomanolakis, A.P. Kakarountas, V. Kokkinos, N. Sklavos, C.E. Goutis, "*The Effect of Fault Secureness in Low-Power Multiplier Designs*", in Proc. of IEEE International Workshop on Power And Timing Modeling, Optimization and Simulation (PATMOS'01), Yverdon-Les-Bains, Switzerland, pp. 10.3, Sept. 2001.

D7. K. Papadomanolakis, A.P. Kakarountas, V. Kokkinos, N. Sklavos, C.E. Goutis, "*A Comparative Study on Fault Secure Signed Multiplication Designs*", in Proc. of 11th IFIP International Conference on Very Large Scale Integration (IFIP VLSI-SOC'01), Montpellier, France, pp. 183-188, Dec. 2001.

D8. A.P. Kakarountas, K. Papadomanolakis, V. Spiliotopoulos, S. Nikolaidis, C.E. Goutis, "*Designing a Low-Power Fault-Tolerant Microcontroller for Medicine Infusion Devices*", in Proc. of Design, Automation & Test in Europe (DATE'02), Paris, France, pp. 205-211, March 2002.

D9. A.P. Kakarountas, K. Papadomanolakis, S. Nikolaidis, D. Soudris, C.E. Goutis, "*Confronting Violations of the TSCG(t) in Low-Power Design*", in Proc. of the IEEE International Symposium on Circuits and Systems (ISCAS'02), Scottsdale, Arizona, USA, pp. 2606-2609, May 2002.

D10. N.D. Zervas, S. Theoharis, A.P.Kakarountas, G. Theodoridis, D. Soudris, C.E. Goutis, "Reducing Power Consumption *through Dynamic Frequency Scaling for a Class of Digital Receivers*", in Proc. of IEEE International Workshop on Power And Timing Modeling, Optimization and Simulation (PATMOS'00), Göttingen, Germany, pp. 47-55, Sept. 2000.

D11. N. Liveris, N.D. Zervas, A.P. Kakarountas, C.E. Goutis, "*A code Transformation-Based Methodology for Improving I-Cache Performance*", in Proc. of 8th IEEE International

Conference on Electronics, Circuits and Systems (ICECS'01), Malta, vol.II, pp.917-920, Sept. 2001.

D12. K. Masselos, F. Catthoor, A.P. Kakarountas, C.E. Goutis, H. DeMan, "Memory Hierarchy Layer Assignment for Data Re-Use Exploitation in Multimedia Algorithms Realized on Predefined Processor Architectures", in Proc. of 8th IEEE International Conference on Electronics, Circuits and Systems (ICECS'01), Malta, vol.I, pp.285-288, Sept. 2001.

D13. K.S. Papadomanolakis, A.P. Kakarountas, N. Sklavos, C.E. Goutis, "*A Low-Power Fault-Secure Timer Implementation*", in Proc. of the IEEE International Conference on Electronics, Circuits and Systems (ICECS'02), Croatia, pp. 537-540, Sept. 2002.

D14. A.P. Kakarountas, G. Theodoridis, K.S. Papadomanolakis, C.E. Goutis, "*A Novel High-Speed Counter with Counting Rate Independent of the Counter's Length*", in Proc. of the IEEE International Conference on Electronics, Circuits and Systems (ICECS'03), UAE, pp. 1164 - 1167, Dec. 2003.

D15. K.S. Papadomanolakis, A.P. Kakarountas, N. Sklavos, C.E. Goutis, "*A Fast Johnson-Mobius Encoding Scheme for Fault Secure Binary Counters*", in Design, Automation & Test in Europe (DATE'02), Paris, France, Mar. 2002.

D16. D. Karatasos, A.P. Kakarountas, G. Theodoridis, C.E. Goutis, "*A Novel Constant-Time Fault-Secure Binary Counter*", in Proc. of IEEE Internationsl Workshop on Power and Timing Modeling, Optimization and Simulation (PATMOS'04), Santorini island, Greece, Sept. 2004.

D17. A.P. Kakarountas, V. Spiliotopoulos, S. Nikolaidis, C.E. Goutis, "*The Impact of Low-Power Techniques on the Design of Portable Safety-Critical Systems*", in Proc. of the IEEE International Workshop on Power and Timing Modeling, Optimization and Simulation (PATMOS'04), Santorini island, Greece, September 2004.

D18. H.E. Michail, A.P. Kakarountas, C.E. Goutis, "*Efficient Implementation of the Keyed-Hash Message Authentication Code (HMAC) Using the SHA-1 Hash Function*", in Proc. of the IEEE International Conference on Electronics, Circuits and Systems (ICECS'04), Tel-Aviv, Israel, pp. -, Dec. 2004.

D19. A.P. Kakarountas, V. Spiliotopoulos, S. Nikolaidis, C.E. Goutis, "*COSAFE: Efficient Safety-Critical Portable System*", in Proc. of the IEEE International Workshop on Biomedical Circuits and Systems (BioCAS'04), Singapore, pp. S1.6(13-16), Dec. 2004.

D20. H. Michail, A.P. Kakarountas, O. Koufopavlou, C.E. Goutis, "*A Low-Power and High-Throughput Implementation of the SHA-1 Hash Function*", in Proc. of IEEE 2005 International Symposium on Circuits and Systems (ISCAS'05), Kobe, Japan, pp. 4086-4089, May 2005.

D21. A.P. Kakarountas, H. Michail, C.E. Goutis, "*Design of High-Speed Cryptographic Algorithms for Data Authenticity and Integrity*", in the Proc. of the 1st Hellenic Conference of Electricel Engineers, Athens, Mar. 2005.

D22. H. Michail, A.P. Kakarountas, A. Milidonis, C.E. Goutis, "*Low Power and High Throughput Implementation of SHA-256 Hash Function*", in Proc. of IeCCS e-confernce, May 2005.

D23. A.P. Kakarountas, G. Theodoridis, T. Laopoulos, C.E. Goutis, "*A High-Speed FPGA Implementation of the SHA-1 Hash Function*", in Proc. of IEEE Third International Workshop on Intelligent Data Acquisition and Advanced Computing Systems (IDAACS'05), Sofia, Bulgaria, Sep. 5-7, 2005.

D24. H.E. Michail, A.P. Kakarountas, G.N. Selimis, C.E. Goutis, "*State-of-the-Art Implementation of SHA-1 Hash Function for Low-Power and High Throughput*", in Proc. of IEEE 2005 International Workshop on Power And Timing Modeling, Optimization and Simulation (PATMOS'05), Leuven, Belgium, pp. 591-600, Sep. 2005.

D25. K. Aisopos, A.P. Kakarountas, H. Michail, C.E. Goutis, "*High throughput implementation of the new Secure Hash Algorithm through partial unrolling*", in Proc. of IEEE 2005 International Workshop on Signal Processing Systems (SiPS'05), Athens, Greece, pp. 99-103, Nov. 2-4, 2005.

D26. A. Brokalakis, A.P. Kakarountas, C.E. Goutis, "*A High-Throughput Area Efficient FPGA Implementation of AES-128 Encryption*", in Proc. of IEEE 2005 International Workshop on Signal Processing Systems (SiPS'05), Athens, Greece, pp. 116-121, Nov. 2-4, 2005.

D27. H. Michail, A. Milidonis, A.P. Kakarountas, C.E. Goutis, "*Novel High Throughput Implementation of SHA-256 Hash Function Through Pre-Computation Technique*", to appear in Proc. of the IEEE 2005 International Conference on Electronics, Circuits and Systems (ICECS'05), Gammarth, Tunisia, pp. -, Dec. 2005.

D28. M. D. Galanis, G. Dimitroulakos, A. P. Kakarountas, and C.E. Goutis, "*Speedups from Partitioning Software Kernels to FPGA Hardware in Embedded SoCs*", in Proc. of IEEE 2005 International Workshop on Signal Processing Systems (SiPS'05), Athens, Greece, pp. 485-490, Nov. 2-4, 2005.

D29. I. Yiakoumis, M. Papadonikolakis, H. Michail, A.P. Kakarountas, C.E. Goutis, "*Efficient small-sized implementation of the keyed-hash message authentication code*", in Proc. of IEEE 2005 EUROCON as finalist in the IEEE Region 8 Best Student Paper Contest, Belgrade, Yugoslavia, pp. 1875-1878, Nov. 21-24, 2005.

D30. D.M. Schinianakis, A.P. Fournaris, A.P. Kakarountas and T. Stouraitis, "*An RNS Architecture of an Fp Elliptic Curve Point Multiplier*", in Proc. of IEEE International Symposium on Circuits and Systems (ISCAS) 2006, Kos Island, Greece, May 21-24, 2006.

D31. F. Aisopos, K. Aisopos, D.M. Schinianakis, H.E. Michail, A.P. Kakarountas, "*A Novel High-Throughput Implementation of a Partially Unrolled SHA-512*" in Proc. of IEEE Mediterranean Electrotechnical Conference, MELECON 2006, Malaga, Spain, pp. 61-65, May 16-19, 2006.

D32. D.M. Schinianakis, A.P. Kakarountas, T. Stouraitis, "*A New Approach to Elliptic Curve Cryptography: An RNS Architecture*", in Proc. of IEEE Mediterranean Electrotechnical Conference, MELECON 2006, Malaga, Spain, pp. 1241-1245, May 16-19, 2006.

D33. H.E. Michail, A.P. Kakarountas, A.S. Milidonis, G.A. Panagiotakopoulos, V.N. Thanasoulis, C. E.Goutis, "*Temporal and System Level Modifications for High Speed VLSI Implementations of*

Cryptographic Core", in Proc. of the IEEE 2006 International Conference on Electronics, Circuits and Systems (ICECS'06), Nice, France, pp. 1180-1183, Dec. 2006.

D34. A. Milidonis, N. Alachiotis, V. Porpodas, H. Michail, A. P. Kakarountas, and C. E. Goutis, "*A Decoupled Architecture of Processors with Scratch-Pad Memory Hierarchy*", in Proc. of Design, Automation & Test in Europe (DATE'07), Nice, France, pp. 612-617, April 2007.

D35. M. Papadonikolakis, V. Pantazis, and A.P. Kakarountas, "*Efficient High-Performance ASIC Implementation of JPEG-LS Encoder*", in Proc. of Design, Automation & Test in Europe (DATE'07), Nice, France, pp. 159-164, April 2007.

D36. A.P. Kakarountas, H.E. Michail, and C.E. Goutis, "*RipeMD-160 Implementation Optimized in Terms of Throughput*", in Proc. of 3rd International Conference on Information Technology (ICIT'07), Amman, Jordan, pp. - , May 2007.

D37. H.E. Michail, A.P. Kakarountas, G. Selimis and C.E. Goutis, "*Throughput Optimization of the Cipher Message Authentication Code*", in Proc. of the 2007 IEEE Intl. Conf. on Digital Signal Processing (DSP'07), Cardiff, Wales, UK, July 2007, pp. 495-498.

D38. A.P. Kakarountas, H. Michail, C.E. Goutis, and C. Efstathiou, "*Implementation of HSSec: a High-Speed Cryptographic Co-processor*", in Proc. of the 2007 IEEE Conference on Emerging Technologies and Factory Automation, (ETFA 2007), Patras, Greece, Sept. 2007, pp. -.

D39. A. Kakarountas, H. Michail, and C.E. Goutis "*Integration of a Concurrent Signature Monitoring Mechanism in a System-on-a-Chip*", in Proc. of the 2007 IEEE International Conference on Design & Technology of Integrated Systems in Nanoscale Era (DTIS'07), Rabat, Morocco, pp. 47-51, Sept. 2007.

D40. A. P. Kakarountas, H.E. Michail, G. Theodoridis and C. E. Goutis "*A Segmented High-Speed Counter Based on the Use of Redundant Bits*", in Proc. of the 16th IFIP/IEEE Conference on Very Large Scale Integration (VLSI-SOC'08), Rhodes, Greece, pp. 42 – 48, Oct. 2008.

D41. A. Milidonis, V. Porpodas, N. Alachiotis, A. Kakaroudas, H. Michail, G. Panagiotakopoulos and C.E. Goutis, "*A Scratch-Pad Memory Accelerator for Exploiting Run-Time Reuse*", in Proc. of the 16th IFIP/IEEE Conference on Very Large Scale Integration (VLSI-SOC'08), Rhodes, Greece, pp. 271 – 276, Oct. 2008.

D42. D. Schinianakis, A. Kakarountas, T. Stouraitis, "*Elliptic Curve Point Multiplication in GF(2^n) Using Polynomial Residue Arithmetic*", in Proc. of the IEEE 2009 International Conference on Electronics, Circuits and Systems (ICECS'09), Medina, Tunisia, pp. -, Dec. 2009.

D43. E. Hatzidimitriou, A.P. Kakarountas, "*Implementation of a Low Cost Crypto-System for P1619 (XTS) on FPGA*", in Proc. of 11th International Workshop on Computer Science and Information Technologies (CSIT), Rethymnon, Crete, Greece, pp. 1 – 4, Oct. 2009.

D44. C. Chrysoulas, N. Sklavos, A.P. Kakarountas, "*Enhancing Service Portability in Upcoming 3G UMTS Networks & Security Aspects*", to appear in Proc. of IEEE Mediterranean Electrotechnical Conference, MELECON 2010, Valetta, Malta, pp. -, June 2010.

D45. E. Hatzidimitriou, A.P. Kakarountas, "*Implementation of a P1619 Crypto-Core for Shared Storage Media*", to appear in Proc. of IEEE Mediterranean Electrotechnical Conference, MELECON 2010, Valetta, Malta, pp. -, June 2010.

D46. E. Arvaniti, I. Mavridis, A. Kakarountas, "Exploration of 2D Cellular Automata as Binary Sequence Generators", in Proc. of IEEE Computer Society Annual Symposium on VLSI, ISVLSI 2010, Lixouri Kefalonia, Greece, pp. 41-45, July 2010.

D47. D. Tychalas, A. Kakarountas, "Planning and Development of the Backend Software for an Electronic Health Record Client based on the Android Platform", in Proc. of 14th Panhellenic Conference on Informatics, PCI 2010, Tripoli, Greece, pp. 3-6, September 2010.

D48. E. Hatzidimitriou, A.P. Kakarountas, A. Milidonis, "Exploration and Enhancement of P1619-Based Crypto-Cores for Efficient Performance", in Proc. of the IEEE 2011 International Conference on Consumer Electronics (ICCE'11), Las Vegas, Nevada, USA, pp. 369-370, Jan. 2011.

D49. A.P. Kakarountas, E. Hatzidimitriou, A. Milidonis, "A Survey on Throughput-Efficient Architectures for IEEE P1619 for Shared Storage Media", in Proc. of the 16th IEEE symposium on Computers and Communications, ISCC 2011, Corfu, Greece, pp. 758-763, June 2011.

D50. A.P. Kakarountas, E. Hatzidimitriou, A. Milidonis, "High-Throughput ASIC Implementation of an Encryption Core for Securing Shared Storage Media", in Proc. of the 17th International Conference on Digital Signal Processing, DSP 2011, Corfu, Greece, pp. – (TC3.1), July 2011.

D51. A.P. Kakarountas, I. Mavridis, "Efficient Exploitation of Parallel Computing on the Server-Side of Health Organizations' Intranet for Distributing Medical Images to Smart Devices", in Proc. of the 2nd International ICST Conference on Wireless Mobile Communication and Healthcare, Mobihealth 2011, Kos Island, Greece, pp. , October 2011.

D52. A.P. Kakarountas, E. Hatzidimitriou, P. Kitsos, "Cipher Text Stealing Integrated in Implementations of IEEE P1619 for Shared Storage Media", in Proc. of the 6th International Symposium on Communications, Control, and Signal Processing, ISCCSP 2014, Athens, Greece, pp. 574 - 577, May 2014.

D53. A.P. Kakarountas, S. Dragoumanos, K. Kakarountas, "Extending Visitor's Reality at Museums", in Proc. of the 5th International Conference on Information, Intelligence, Systems and Applications, IISA 2014, Chania, Greece, pp. 196 - 200, July 2014.

D54. P. Christodoulou, I. Diamantis, S. Dragoumanos, A.P. Kakarountas, "A Marketing Tool Based on Games for Smart Devices", in Proc. of the 18th Panhellenic Conference on Informatics (PCI 2014), Athens, Greece, pp. - , October 2014.

D55. A.P. Kakarountas, "Disappearing Computing for Elderly Assisted Living", in Proc. of the 4th International Conference on Wireless Mobile Communication and Healthcare, Mobihealth 2014, Athens, Greece, pp. 36-38, November 2014.

D56. A.P. Kakarountas, "Safety and Security for Shared Storage Media", in Proc. of the 3rd Pan-Hellenic Conference on Electronics and Telecommunications, PACET 2015, Ioannina, Greece, pp. - , May 2015.

D57. F. Pirpilidis, P. Kitsos, A. Kakarountas, "A Compact Design of SEED Block Cipher", in Proc. of the 4th Mediterranean Conference on Embedded Computing (MECO 2015), Budva, Montenegro, pp. - , 14-18 June 2015.

D58. H.E. Michail, A.P. Kakarountas, A. Kotsiolis, G. Athanasiou, C. Goutis, "Hardware Implementation of the Totally Self-Checking SHA-256 Hash Core", in Proc. of the 16th International Conference on Computer as a Tool (EUROCON 2015), Salamanca, Spain, pp. - , 8-11 September 2015.

D59. D. Kotsidou, C. Angelis, S. Dragoumanos, A.P. Kakarountas, "Computer Assisted Gesture Recognition for the Greek Sign Language/Fingerspelling", in Proc. of the 19th Panhellenic Conference on Informatics (PCI 2015), Athens, Greece, pp. 241-242, 1-3 October 2015.

D60. C. Christakis, G. Theodoridis, A.P. Kakarountas, "High Speed Binary Counter based on 1D Cellular Automata", in Proc. of the 2016 International Conference on Modern Circuits and Systems Technologies (MOCAST), Thessaloniki, Greece, pp. - , 12-14 May 2016.

D61. T. Tsakoulis, G. Theodoridis, A.P. Kakarountas, "A Performance Enhancement Approach based on Tweak Process Scheduling for a P1619 core", in Proc. of the 2016 International Conference on Modern Circuits and Systems Technologies (MOCAST), Thessaloniki, Greece, pp. - , 12-14 May 2016.

D62. S. Dragoumanos, T. Fourou, A.P. Kakarountas, "Enhancing Young Technology Entrepreneurship by Exploiting an Altered Version of Project-based Learning", in Proc. of the 2017 IEEE Global Engineering Education Conference (EDUCON), Athens, Greece, pp. 351-358, 25-28 April 2017.

D63. V. Chioktour, A.P. Kakarountas, "A Time-Aware Code Execution Continuous Monitoring for Safety-Critical Applications", in Proc. of the 2017 International Conference on Modern Circuits and Systems Technologies (MOCAST), Thessaloniki, Greece, pp. - , 4-6 May 2017.

D64. V. Chioktour, A.P. Kakarountas, "Systolic Binary Counter using a Cellular Automaton-based Prescaler", in Proc. of the 21st Pan-Hellenic Conference on Informatics (PCI 2017), Larisa, Greece, pp. 15:1-15:4, 28-30 Sep. 2017.

D65. D. Myridakis, G. Spathoulas, A.P. Kakarountas, "Supply Current Monitoring for Anomaly Detection on IoT Devices", in Proc. of the 21st Pan-Hellenic Conference on Informatics (PCI 2017), Larisa, Greece, pp. 9:1-9:2, 28-30 Sep. 2017.

D66. E. Boumpa, I. Charalampou, A. Gkogkidis, A.P. Kakarountas, "Home Assistive System for Dementia", in Proc. of the 21st Pan-Hellenic Conference on Informatics (PCI 2017), Larisa, Greece, pp. 58:1-58:6, 28-30 Sep. 2017.

D67. M. Sapounaki, I. Polychronou, M. Gkonta, A. Vogiatzoglou, A.P. Kakarountas, "Wearable Panic Attack Detection System", in Proc. of the 21st Pan-Hellenic Conference on Informatics (PCI 2017), Larisa, Greece, pp. 18:1-18:2, 28-30 Sep. 2017.

D68. P. Oikonomou, A. Dadaliaris, T. Loukopoulos, A. Kakarountas and G. Stamoulis, "A Tetris-based Legalization Heuristic for Standard Cell Placement with Obstacles" to appear in Proc. of the 2017 International Conference on Modern Circuits and Systems Technologies (MOCAST), Thessaloniki, Greece, pp. - , 7-9 May 2018.

D69. E. Boumpa, I. Charalampou, A. Gkogkidis, A. Ntaliani, E. Kokkinou, and A. Kakarountas, "Assistive System for Elders Suffering of Dementia" in Proc. of the 8th International Conference on Consumer Electronics (ICCE-Berlin 2018), Berlin, Germany, pp. - , 2-5 Sep. 2018.

D70. A. Kakarountas, G. Spathoulas, D. Myridakis, D. Schoinianakis, and J. Lueken "Anomaly detection in IoT devices via monitoring of supply current", in Proc. of the 8th International Conference on Consumer Electronics (ICCE-Berlin 2018), Berlin, Germany, pp. - , 2-5 Sep. 2018.

D71. G. Spathoulas, A. Kakarountas, L. Negka, G. Gketsios, N.A. Anagnostopoulos and S. Katzenbeisser, "Employing Blockchain and Physical Unclonable Functions for Counterfeit IoT Devices Detection," to appear in Proc. of the International Conference on Omni-Layer Intelligent Systems (COINS 2019), Crete, Greece, pp. - , 5-7 May 2019.

D72. D. Myridakis, G. Spathoulas, A. Kakarountas, D. Schoinianakis, and J. Lueken "Monitoring Supply Current Thresholds for Smart Device's Security Enhancement", to appear in Proc. of the 1st International Workshop on Security and Reliability of IoT Systems (SecRIoT 2019), Santorini, Greece, pp. - , 29-31 May 2019.

D73. M. Sapounaki, A. Kakarountas, "A High-Performance Neuron for Artificial Neural Network based on Izhikevich model", to appear in Proc. of the 29th International Symposium on Power And Timing Modeling, Optimization and Simulation (PATMOS'19), Rhodes, Greece, pp. - , 1-3 July 2019.

D74. V. Tsoukas, K. Kolomvatsos, V. Chioktour, A. Kakarountas, "A Comparative Assessment of Machine Learning Algorithms for Events Detection", to appear in Proc. of the 4th South-East Europe Design Automation, Computer Engineering, Computer Networks and Social Media Conference (SEEDA-CECNSM 2019), Piraeus, Greece, pp. - , 20-22 September 2019.

D75. S. Papafotikas, A. Kakarountas, "A Machine-Learning Clustering Approach for Intrusion Detection to IoT Devices", to appear in Proc. of the 4th South-East Europe Design Automation, Computer Engineering, Computer Networks and Social Media Conference (SEEDA-CECNSM 2019), Piraeus, Greece, pp. - , 20-22 September 2019.

D76. C. Velaora, A. Kakarountas, "Logic Design as an Enabler to Python Programming Language Teaching", to appear in Proc. of the PAnhellenic Conference on Electronics & Telecommunications (PACET 2019), Volos, Greece, pp. - , 8-9 November 2019.

D77. A. Gkogkidis, A. Kakarountas, "Exploration Study on Configurable Instruction Set for Bioinformatics' Applications", to appear in Proc. of the PAnhellenic Conference on Electronics & Telecommunications (PACET 2019), Volos, Greece, pp. - , 8-9 November 2019.

D78. V. Tsoukas, A. Gkogkidis, A. Kakarountas and G. Giannakas, "Multi-Screen Lock: Visual Passwords from User's Social Data", to appear in Proc. of the 23rd Pan-Hellenic Conference on Informatics (PCI 2019), Nicosia, Cyprus, pp. - , 28-30 November 2019.

D79. E. Boumpa, A. Kakarountas, "Smart system for supporting the elderly in home environment", in Proc. of the 8th EAI International Conference on Wireless Mobile Communication and Healthcare, Mobihealth 2019, Dublin, Republic of Ireland, pp. , November 2019.

D80. V. Kokkinos and A. P. Kakarountas, "Design of Reconfigurable Fault-Tolerant Datapaths", to appear in Proc. of the 5th South-East Europe Design Automation, Computer Engineering, Computer Networks and Social Media Conference (SEEDA-CECNSM 2020), Corfu, Greece, pp. , 25-27 September 2020. https://doi.org/10.1109/SEEDA-CECNSM49515.2020.9221789

D81. A. Kakarountas, G. Spathoulas, P. Trivellas, P. Reklitis and G. Malindretos, "Survey on Routing Services for Smart Delivery in Urban Environments", to appear in Proc. of the 5th South-East Europe Design Automation, Computer Engineering, Computer Networks and Social Media Conference (SEEDA-CECNSM 2020), Corfu, Greece, pp. , 25-27 September 2020. https://doi.org/10.1109/SEEDA-CECNSM49515.2020.9221814

D82. V. Tsoukas, A. Gkogkidis, and A. Kakarountas, "A Survey on Mobile User Perceptions of Sensitive Data and Authentication Methods", in Proc. of the 23rd Pan-Hellenic Conference on Informatics (PCI 2020), Athens, Greece, pp. 346-349, 20-22 November 2020. doi.org/10.1145/3437120.3437337

D83. O. Petroulaki, A. Bicaku, and A. Kakarountas, "A Generalized Tonic-Clonic Seizure Detection Method in a Bathtub using a Natural Language Verification Step", in Proc. of the 23rd Pan-Hellenic Conference on Informatics (PCI 2020), Athens, Greece, pp. 407-410, 20-22 November 2020. doi.org/10.1145/3437120.3437351

D84. A. Tonacci, L. Billeci, and A. Kakarountas, "Success stories from consumer technology - helping and saving lives", in Proc. of 2021 Zooming Innovation in Consumer Technologies Conference (ZINC 2021), Novi Sad, Serbia, pp. -, 26-27 May 2021. doi.org/10.1145/3437120.3437337

D85. M. Sapounaki, A.P. Kakarountas, "A Novel Low-power Neuromorphic Circuit based on Izhikevich Model", in Proc. of the 2021 International Conference on Modern Circuits and Systems Technologies (MOCAST), Thessaloniki, Greece, pp. - , 5-7 July 2021.

D86. G. Spathoulas, S. Tsagiopoulou, and A. Kakarountas, "Secure aggregation of users' privacy preferences in shared IoT environments", accepted in Proc. of the 6th South-East Europe Design Automation, Computer Engineering, Computer Networks and Social Media Conference (SEEDA-CECNSM 2021), Preveza, Greece, pp. , 24-26 September 2021.

D87. G. Spathoulas, A. Kakarountas, A. Gkogkidis, V. Tsoukas, and A. Kampa, "Blockchain technology in food supply chain: A state of the art", accepted in Proc. of the 6th South-East

Europe Design Automation, Computer Engineering, Computer Networks and Social Media Conference (SEEDA-CECNSM 2021), Preveza, Greece, pp. , 24-26 September 2021.

D88. S. Zagori, A. Kakarountas, "Prototype Haptic Feedback Device for Robot-Assisted Minimally Invasive Surgery", accepted in Proc. of the 6th South-East Europe Design Automation, Computer Engineering, Computer Networks and Social Media Conference (SEEDA-CECNSM 2021), Preveza, Greece, pp. , 24-26 September 2021.

D89. M. Kalafati, A. Kakarountas, "A Smart Assistant Nightstand For Hospitals", accepted in Proc. of the 6th South-East Europe Design Automation, Computer Engineering, Computer Networks and Social Media Conference (SEEDA-CECNSM 2021), Preveza, Greece, pp. , 24-26 September 2021.

D90. A. Fragkou, A. Kakarountas, V. Kokkinos, "Low-Power Electroencephalographic Data Encoding System for Implantable Brain Stimulation Systems", accepted in Proc. of the 6th South-East Europe Design Automation, Computer Engineering, Computer Networks and Social Media Conference (SEEDA-CECNSM 2021), Preveza, Greece, pp. , 24-26 September 2021.

D91. C. Velaora, A. Kakarountas, "Game-Based Learning for Engineering Education", accepted in Proc. of the 6th South-East Europe Design Automation, Computer Engineering, Computer Networks and Social Media Conference (SEEDA-CECNSM 2021), Preveza, Greece, pp. , 24-26 September 2021.

D92. A. Bicaku, M. Sapounaki, A. Kakarountas, "A low-Complexity bit-Efficient Neuromorphic Astrocyte-Neuron Circuit", accepted in Proc. of the 28th IEEE International Conference on Electronics, Circuits & Systems, Dubai, UAE, pp. , November 28 - December 1, 2021.

D93. E. Boumpa, V. Tsoukas, A. Gkogkidis, G. Spathoulas, A. Kakarountas, "Security and privacy concerns for healthcare wearable devices and emerging alternative approaches", in Proc. of the 10th EAI International Conference on Wireless Mobile Communication and Healthcare, Mobihealth 2021, Chongqing, People's Republic of China, pp. -, 13-14 November 2021.

D94. C. Kompogiannis, M. Sapounaki, and A. Kakarountas, "Development of a Neuromorphic Circuit in Reconfigurable Technology for the Simulation of Synapses", in 25th Pan-Hellenic Conference on Informatics (PCI 2021), Volos, Greece, pp. -, 26-28 November 2021. https://doi.org/10.1145/3503823.3503918

D95. V. Tsoukas, E. Boumpa, G. Giannakas, and A. Kakarountas, "A Review of Machine Learning and TinyML in Healthcare", in 25th Pan-Hellenic Conference on Informatics (PCI 2021), Volos, Greece, pp. -, 26-28 November 2021. https://doi.org/10.1145/3503823.3503836

D96. E. Kokkinou, A. M. Koupparis, G. K. Kostopoulos, A. P. Kakarountas, V. Kokkinos, "Analysis of spectral behavior of individual sleep spindles", in American Clinical Neurophysiology Society (ACNS2022), Orlando, FL, U.S.A., poster, 26-30 January 2022.

D97. V. Tsoukas, A. Gkogkidis and A. P. Kakarountas, "Elements of TinyML on constrained recourse hardware", in 6th International Conference on Advances in Computing and Data Sciences (ICACDS)-2022, GPCET, Kurnool, India, pp. -, 22-23 April 2022.

D98. A. Gkogkidis, V. Tsoukas, S. Papafotikas, E. Boumpa and A.P. Kakarountas, "A TinyML-based system for gas leakage detection", accepted for inclusion in Proc. of the 2022 International Conference on Modern Circuits and Systems Technologies (MOCAST), Bremen, Germany, pp. - , 8-10 June 2022.

XI. REVIEWER

Peer reviewed journals:

i) IEEE Transactions on Computers, ii) IEEE Transactions on Parallel and Distributed Systems, iii) IEEE Transactions on Circuits and Systems-I, iv) IEEE Transactions on Circuits and Systems-II, v) IEEE Transactions on VLSI Systems, vi) IEEE Transactions on Dependable and Secure Computing, vii) IEEE Computer, viii) International Journal of Computational Intelligence (IJCI), ix) International Journal of Signal Processing (IJSP), x) Journal of Computers (JCP), xi) International Journal of Computer Aided Engineering and Technology (IJCAET), xii) International Journal of Sensor Networks (IJSNET), xiii) Information Security Journal: A Global Perspective (ISJ), xiv) Elsevier, Microprocessors and Microsystems (MICPRO), xv) Elsevier, Microelectronics Journal (MEJ), xvi) Elsevier, Integration, the VLSI Journal (VLSI), xvii) IEEE Consumer Electronics Magazine, xviii) SPIE, Journal of Applied Remote Sensing (JARS), xix) Springer, Journal of Real-Time Image Processing (JRTIP), xx) Elsevier, Scientia Iranica (SCIENTIA), xxi) IEEE, Access, xxi) IEEE, Systems Journal, xxii) IEEE, Transactions on Information Forensics & Security (TIFS), xxiii) SPIE, Journal of Electronic Imaging, xxiv) Springer, Studies in Computational Intelligence, xxv) Wiley, Security and Communications Network (SCN), xxvi) ACM Transactions on Reconfigurable Technology and Systems (TRETS), xxvi) IEEE Potentials, xxvii) MDPI Sensors, xxiix) MDPI Electronics, xxix) MDPI Energies, xxx) MDPI Technology, xxxi) IET Wireless Sensor Systems, xxxii) IET Image Processing, xxxiii) IET Computers & Digital Techniques, xxxiv) MDPI Journal of Low Power Electronics and Applications, xxxv) TELKOMNIKA, xxxvi) MDPI Information, xxxvii) Elsevier Technovation, xxxvii) MDPI Computers.

Conferences:

i) IEEE Int. Symp. on Circuits and Systems, (ISCAS), ii) IEEE International Workshop on Power and Timing Modeling, Optimization and Simulation (PATMOS), iii) IEEE Int. Conf. on Electronics, Circuits, and Systems (ICECS), iv) IEEE Mediterranean Electrotechnical Conference (MELECON 2004, 2010, 2012), v) IFIP/IEEE Conference on Very Large Scale Integration (VLSI-SOC 2008,2009,2010), vi) International Workshop on Systems, Architectures, Modeling, and Simulation, (SAMOS 2007, 2009), vii) IEEE International Conference on Computer as a Tool (EUROCON 2005,2010,2011), viii) ACM International Conference on Compilers, architecture and synthesis (CASES 2006,2007), ix) 6th International conference on Design & Technology of Integrated Systems

in nanoscale era (DTIS 2011), x) IEEE International Symposium on Wireless Communication Systems (ISWCS 2007), xi) IEEE International Conference on Digital Signal Processing (DSP 2009,2011), xii) IEEE International Conference on Emerging Technologies and Factory Automation (ETFA 2008), xiii) IEEE International Conference on Circuits and Systems for Communications (ICCSC 2008), xiv) IEEE 30th Annual Northeast Bioengineering, xv) IEEE International Symposium on Consumer Electronics (ISCE 2009, 2012, 2013), xvi) IEEE Wireless Communications and Networking Conference (WCNC 2009), xvii) International Conference on Computer Design (CDES 2005), xviii) IEEE Int. Conf. on Innovations in Information Technology (IIT 2007), xviii) International Conference on Network Computing and Information Security (NCIS 2011), xix) International Conference on Multimedia and Signal Processing (CMSP 2011), xx) IEEE Vehicular Technology Conference (VTC 2010, 2012), xxi) 7th International Conference on Embedded and Multimedia Computing (EMC 2012), xxii) IEEE International Symposium on Computers and Communications (ISCC 2011,2013,2014,2015), xxiii) IEEE Business, Engineering & Industrial Applications Colloquium (BEIAC 2013), xxiv) IEEE Colloquium on Humanities, Science and Engineering Research (CHUSER 2012, 2014), xxv) Design Automation Conference (DAC 2013, 2014), xxvi) International Conference Field Programmable Logic and Applications (FPL 2014), xxvii) IEEE/SAE International Conference on Connected Vehicles (ICCVE 2013), xxviii) IEEE Colloquium on Humanities, Science and Engineering Research (CHUSER 2012, 2014), xxix) IEEE International Symposium on VLSI (ISVLSI 2013), xxx) IEEE Symposium on Industrial Electronics and Applications (ISIEA 2013), xxxi) Pan-Hellenic Conference on Informatics (PCI 2012, 2014), xxxii) International Symposium on Reconfigurable Communication-centric Systems-on-Chip (ReCoSoC 2012,2013,2014), xxxiii) Jordanian International Electrical and Electronics Engineering Conference (JIEEEC 2013), xxxiv) ICST Conference on Wireless Mobile Communication and Healthcare (MobiHealth 2011), xxxv) IEEE Symposium on Humanities, Science and Engineering Research (SHUSER 2013), xxvi) IEEE International Conference on Microelectronics (ICM 2012, 2013, 2014), xxvii) IEEE International Workshop on Quality of Multimedia Experience (QoMEX 2015).

Projects as expert Evaluator

1. Expert for Horizon 2020 (2020), E.U.
2. Expert for CHIST-ERA (2020), E.U.
3. Expert for National research projects for Hellenic Foundation for Research and Innovation - H.F.R.I. (2020), Greece
4. Evaluator for National research projects for Hellenic Foundation for Research and Innovation - H.F.R.I. (2017, 2019- 2020), Greece
5. Expert for RESEARCH 2016-2020 (2018), Cyprus
6. Expert for COST EU (2017), E.U.

Book reviews:

1. William Stallings, "Computer Organization and Architecture", 10th edition, Pearson, 2014 (edition of 2015).

XII. SCIENTIFIC EVENTS ORGANIZER

Organizing Committee Chair (Co-Chair)

    i.   2nd International Workshop on Security and Reliability of IoT Systems, Corfu, Greece, 25-27 September 2020.

    ii.   1st International Workshop on Security and Reliability of IoT Systems, Santorini, Greece, 29-31 May 2019.

    iii.   2nd International Workshop on Security and Reliability of IoT Systems, Corfu, Greece, 25-27 Sep. 2020.

    iv.   3rd International Workshop on Security and Reliability of IoT Systems, Preveza, Greece, 24-26 Sep. 2021.

Organizing committee member

i) IEEE International Symposium on Circuits and Systems (ISCAS) 2006, ii) IEEE International Conference on Emerging Technologies and Factory Automation (ETFA) 2007, iii) IEEE International Symposium on Wireless Pervasive Computing (SWPC) 2008, iv) IEEE International Conference on Circuits, Electronics, and Systems (ICECS 2010), v) 2nd International ICST Conference on Wireless Mobile Communication and Healthcare (MobiHealth 2012), vi) IEEE MELECON 2012, vii) IEEE 18th International Conference on Digital Signal Processing (DSP 2013), viii) 2nd International ICST Conference on Wireless Mobile Communication and Healthcare (MobiHealth 2014), ix) 6th International Symposium on Communications, Control, and Signal Processing (ISCCSP 2014), x) Scientix Panhellenic Conference (Scientix 2018), xi) Panhellenic Open Technologies Robotics Contest (ELLAK Robotics 2018, 2019), xii) International Workshop on Security and Reliability of IoT Systems (SecRIoT 2019-2021), xiii) FOSSCOMM 2019, xiv) 30th IFIP/IEEE International Conference on Very Large Scale Integration (VLSI-SoC 2022), xv) 8th South-East Europe Design Automation, Computer Engineering, Computer Networks and Social Media Conference (SEEDA-CECNSM 2023)

TPC Chair

IEEE SEEDA-CECNSM 2019, Athens

TPC Member

i) International Conference on Computer Design (CDES-2005), ii) International Conference on Computational Intelligence (ICCI 2005), iii) International Conference on Information Security (ICIS 2005), iv) International Conference on Artificial Intelligence (ICAI 2005), v) International Conference on Image Analysis (ICIA 2005), vi) International Conference on Data Analysis (ICDA 2005), vii) International Conference on Machine Intelligence (ICMI 2005), viii) International Conference on Automation Technology (ICAT 2005), ix) International Conference on Communication Technology (ICCT 2006), x) International Conference on Pattern Analysis (ICPA

2006), ix) International Conference on Neural Networks (ICNN 2006), xi) IEEE International Conference on Wireless Communications, Networking and Information Security (WCNIS 2010,2011), xii) IEEE Mediterranean Electrotechnical Conference (MELECON 2010), xiii) International Workshop on Components and Services for IoT platforms (WCS-IOT 2015), xiv) 6th International conference on Design & Technology of Integrated Systems in nanoscale era (DTIS 2011), xv) International Conference on Network Computing and Information Security (NCIS 2011), xvi) International Conference on Microelectronics (ICM 2011,2013,2014), xvii) IEEE Symposium on Computers and Communications (ISCC 2011), xviii) AI in Education Workshop: Innovations and Applications (AIeIA 2012), xix) International Symposium on Consumer Electronics (ISCE 2012,2015,2016), xx) International Conference on Embedded and Multimedia Computing (EMC 2012), χχi) International Conference on Connected Vehicles & Expo (ICCVE 2014,2015,2019), xxii) IEEE Symposium on Computers and Communication (ISCC 2014,2015,2019), xxiii) International Conference on Field Programmable Logic and Applications (FPL2014), xxiv) International Workshop on Reconfigurable and Communication-centric Systems-on-Chip (ReCoSoC 2012-2019), xxv) International Symposium on Communications, Control, and Signal Processing (ISCCSP 2014), xxvi) Panhellenic Conference on Informatics (PCI 2010,2012,2014-2019), xxvii) 4th special session on Mobile Device & Web Software Development - Small Systems Development (in conjunction with PCI 2014), xxviii) International Conference on Modern Circuits and Systems Tecnologies (MOCAST 2016-2020), xxix) PAnhellenic Conference on Electronics and Telecommunications (PACET 2015-2019), xxx) South-East Europe Design Automation, Computer Engineering, Computer Networks and Social Media Conference (SEEDA-CECNSM 2018-2020), xxxi) International Symposium for ICS & SCADA Cyber Security Research (ICS-CSR 2019), xxxii) International Workshop on Security and Reliability of IoT Systems (SecRIoT 2019-2020), xxxiii) International Symposium on Power and Timing Modeling, Optimization and Simulation (PATMOS 2019), xxxiv) International Conference on Omni-Layer Intelligent Systems (COINS 2019), xxxv) National Scientix Conference for STEM Education (Scientix 2018), xxxvi) IEEE/IFIP International Conference on VLSI and System-On-Chip (VLSI-SoC 2010), xxxvii) Conference on Digital Signal Processing (DSP 2011), xxxviii) IEEE International Conference on Electronics Circuits and Systems (ICECS 2010), xxxix) IEEE Symposium Series on Computational Intelligence (SSCI 2016), XL) International Conference on Information, Intelligence, Systems and Applications (CIISA 2014,2019), XLI) International Conference on Consumer Electronics (ICCE 2021), XLII) International Conference on Cognitive Computing and Cyber Physical Systems (EAI IC4S 2020), XLIII) 2021 IEEE CSR Workshop on Maritime Cyber Security (MCS).

Session Chair
IEEE ICECS 2010, IEEE DSP 2011, IOLTS 2017

Special Session Organizer
IEEE ICECS 2010 "Tools, Techniques & Circuits for low-power consumer electronics"

Track co-chair

i. "Circuits and Systems for Signal Processing" in 16th International Conference on Computer as a Tool (IEEE EUROCON 2015)

ii. "Architectures and VLSI Systems" in International Conference on Microelectronics (ICM 2011)

XIII. EDITORIAL RECORD

Editorial Board member:

i) IEEE Potentials, Corresponding editor (2019 – today)

ii) IEEE Potentials, Associate editor (2015 – 2018)

iii) Journal of VLSI Design Tools and Technology (JoVDT)

iv) Journal of Applied Mathematics and Bioinformatics (JAMB)

Special Issue Guest Editorial Board:

i) Circuits, Systems, and Design Methodologies for Safety Critical Applications, VLSI Design, Hindawi (2016 – 2017)

ii) Security and Reliability of IoT---Selected Papers from SecRIoT 2019, Future Internet, MDPI (2019)

iii) The Internet of Things: Trends, Threats, and Applications, IEEE Potentials Magazine, IEEE (2019)

iv) Big Data and Data Science, IEEE Potentials Magazine, IEEE (2020)

v) Computer Architecture and Embedded Systems, Future Internet, MDPI (2021)

vi) VLSI Circuits & Systems Design, Electronics, MDPI (2021)

XIV. AWARDS AND RECOGNITION

- Mentor of DriveProTech, 2nd place in Re-startup Patras. (2019)

- Recipient of the "2018 ICCE Berlin Outstanding Paper Award" for the paper titled "Anomaly Detection in IoT devices via monitoring supply current", at the 2018 ICCE-Berlin 2018 Conference, 2-4 Sep., Berlin, Germany. (2018)

- Mentor of Smart Parking, 2nd place in innovation lab of the Municipality of Lamiafor National Crowd Hackathon. (2018)

- Mentor of Interseeing, 1st place in innovation lab of the Municipality of Lamiafor National Crowd Hackathon. (2018)

- Winner of the IEEE Region 8 Educational Activities Acceleration Program στην κατηγορία University program, με την πρόταση A. Kakarountas and S. Tsagiopoulou, "Piece of Game". (2017)

- Mentor of Audi-o-Mentia, 3rd place in National StartUp Pitch Contest, ΣΦΗΜΜΥ 10. (2017)

- International Grant €30.000 for «Research on IoT Security based on Bio-informatics», Nokia Corporation (Bell Labs). (2017)
- Mentor of Audi-o-Mentia, 1st place to Mind the Gap, IEEE Region 8 contest (prize of $750 and funding of $10.000). (2017)
- Mentor of Audi-o-Mentia, finalist at the national Imagine Cup, Microsoft. (2017)
- Mentor of Drone Aid, finalist (8th place) in NASA World Wind Europa Challenge. (2016)
- 3rd prize of Best Thesis in Greece from Greece IEEE EMBS Chapter, for Efthymia Arvaniti (supervisor). (2015)
- «IEEE Outstanding Branch Counselor and Advisor Award Recognition Program», University of Central Greece IEEE Student Branch Counselor. (2012)
- BrainArk (3rd place), «Development of a support device for people with speaking disabilities due to neurological causes », Hellenic Startup BioMed. (2012)
- Award from EUROPRACTICE for the research results of COSAFE #28593 "*Low Power Hardware-Software Co-Design for Safety-Critical Applications*", after a European Design Contest, which took place in the bounds of Design Automation and Testing in Europe (DATE) Conference, 4-8 March 2003, Paris, France.
- International Award in two categories from Mentor Graphics and SUN Microsystems for the research results of COSAFE #28593 "*Low Power Hardware-Software Co-Design for Safety-Critical Applications*".