Maria K. Michael

CONTACT INFORMATION

Maria K. Michael, PhD
Associate Professor
Department of Electrical and Computer Engineering
KIOS Research and Innovation Center of Excellence
University of Cyprus

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EDUCATION

2002 **Doctor of Philosophy in Engineering Sciences (concentration in Computer Engineering)**
Southern Illinois University at Carbondale (SIU-C), USA
Department of Electrical and Computer Engineering
Dissertation: Test-based Timing Verification using Functional Techniques
Best Dissertation of the Year Nomination in College of Engineering at SIU-C

1998 **Master of Science in Computer Science**
Southern Illinois University at Carbondale (SIU-C), USA
Department of Computer Science
Thesis: Test Pattern Generation for Delay Faults at the Functional Level
Academic Honors with Distinction (4.0/4.0)

1996 **Bachelor of Science in Computer Science with minor in Mathematics**
Southern Illinois University at Carbondale (SIU-C), USA
Department of Computer Science
Academic Honors with Distinction (Magna Cum Laude, 3.83/4.00)

RESEARCH EXPERTISE AND INTERESTS

- Dependability and security in embedded and cyber-physical systems, with emphasis on Critical Infrastructure Systems
- Test, diagnosis, reliability and safety of integrated circuits and (safety-critical) embedded systems
- Hardware-enabled security and cyber-security in intelligent embedded systems and cyber-physical systems
- Performance optimization and dependability/security of AI/ML edge intelligence
- Reliability and security of resource-constrained edge-based accelerators
- Graph theory and (parallel) algorithms for CAD tools; decision diagrams and SAT

EMPLOYMENT

CURRENT APOINTMENTS

Dec. 2015 — present
University of Cyprus (UCY)
Associate Professor
Department of Electrical and Computer Engineering

Sept. 2018 — present
University of Cyprus (UCY)
Director, MSc program in Intelligent Critical Infrastructure Systems

Mar. 2017 — present
University of Cyprus (UCY)
Academic Faculty and Director of Education and Training
KIOS Research and Innovation Center of Excellence (KIOS CoE)

PAST APOINTMENTS

Sept. 2018 — Sept. 2020	**University of Cyprus (UCY)** **Vice-Chair** **Department of Electrical and Computer Engineering**
Jan. 2008 — Feb. 2017	**University of Cyprus (UCY)** **Academic Faculty** **KIOS Center for Intelligent Systems and Networks**
May 2007 — Nov. 2015	**University of Cyprus (UCY)** **Assistant Professor** **Department of Electrical and Computer Engineering** Teaching electrical and computer engineering courses, performing scholarly research, and supervising graduate and undergraduate students with their PhD/MSc theses and undergraduate academic projects respectively. Founding member of the KIOS Research Center for Intelligent Systems and Networks, and member of the Center's Executive Committee.
Sept. 2003 — May 2007	**University of Cyprus** **Lecturer** **Department of Electrical and Computer Engineering** Taught electrical and computer engineering courses, performed scholarly research, and supervised graduate and undergraduate students with their academic projects and doctoral theses. Established a research laboratory in the area of computer aided-design and test of digital electronic circuits and systems. Assisted in the development of the newly created department of Electrical and Computer Engineering at the University of Cyprus, and the establishment of its various academic programs with leading role in the development of the Computer Engineering programs currently offered by the Department.
Aug. 2002 — Aug. 2003	**University of Notre Dame (UND), USA** **Assistant Professor** **Department of Computer Science and Engineering** Had regular teaching (undergraduate and graduate level), research, and service duties as a member of the department faculty. Contributed in the Architecture and Hardware faculty research group by conducting research and advising doctoral-level students in the area of ULSI/VLSI test automation.
Jan. 2002 — May 2002	**Southern Illinois University at Carbondale (SIU-C), USA** **Visiting Instructor** **Electrical and Computer Engineering Department** Independently developed and taught a cross-listed senior/graduate level course on the topic of Computer Aided Design for VLSI, during the final semester of PhD studies at SIU-C. The course was attended by around 20 senior-level and 20 graduate-level students.
Aug. 2001 — Dec. 2001	**Southern Illinois University at Carbondale, USA** **Graduate Student Instructor** **Electrical and Computer Engineering Department** Worked under the supervision of Prof. T. Haniotakis to develop and partially teach a senior/graduate level course on the topic of VLSI Design. Duties included individual

advising during office hours, partial development of lecture notes and laboratory exercises as well as frequent lecturing.

Aug. 1999 — Dec. 2001	**Southern Illinois University at Carbondale, USA**
	Research Assistant
	Electrical and Computer Engineering Department

Conducted research in the area of test-based timing verification of modern digital VLSI circuits, under the supervision of Prof. S. Tragoudas. The project was supported by a National Science Foundation grant and it examined the problem of developing efficient automatic test pattern generation methods, using established delay fault models, that can provide with test vectors used to verify the temporal correctness of VLSI circuits.

Aug. 1998 — Aug. 1999	**University of Arizona, USA**
	Research Assistant
	Electrical and Computer Engineering Department

Worked, under the supervision of Prof. S. Tragoudas, on the development of testing methodologies for path-delay faults based on function-based formulations. The work was supported by a National Science Foundation grant and it investigated the application of the developed techniques in embedded cores in System-on-Chips environments.

Jan. 1997 — May 1998	**Southern Illinois University at Carbondale, USA**
	Teaching Assistant
	Computer Science Department

Assisted for various courses, such as Introduction to Computer Science, Introduction to Programming using C, Computer Architecture and Computer Networks. Duties included preparation and/or administration of tutorials, laboratory sessions, preparation of homework solutions, homework grading, and individual advising during office hours.

Jan. 1995 — Dec. 1996	**Southern Illinois University at Carbondale, USA**
	Tutor

Assisted students with learning disabilities, such as dyslexia, to overcome their academic difficulties by private tutoring and note taking during their course lectures, for various Science courses (Linear Algebra, Probability Theory, Calculus I, II, III, Physics, Biology, Propositional Logic, etc).

GRANTS AND FUNDED RESEARCH PROJECTS

EXTERNAL RESEARCH FUNDING

1. "ACTING": Advanced European platform and network of Cybersecurity training and exercises centers, EU European Defence Fund (EDF), UCY Principal Investigator (PI), € 17,784,582 (€ 549,375 to UCY), Dec. 2022 — Nov. 2026 (48 months).

2. "SESAME: Secure and Safe Multi-Robot Systems", European Commission, H2020-ICT-2020-2 RIA, UCY Principal Investigator (PI), € 6,999,786 (€ 252,035 to UCY), Jan. 2021 — Dec. 2023 (36 months).

3. "ELECTRON: Resilient and self-healed electrical power nanogrid", European Commission, H2020-SU-DS04-2020, Co-Investigator, € 8,000,000 (€ 280,000 to UCY), 2021 — 2024 (36 months).

4. "ARTION: Disaster Management Artificial Intelligence Knowledge Network", European Commission, DG ECHO, Co-Investigator, € 352,857 (€ 115,025 to UCY), 2021 — 2023 (18 months).

5. "CERCIRAS: Connecting Education and Research Communities for an Innovative Resource Aware Society", European Science Foundation, EU COST Action IC19135, ICT Domain, UCY Principal Investigator (PI) and Cyprus MC Member, ~ € 400,000, 2020 — 2024 (48 months).

6. "THISEAS: Έξυπνο Σύστημα ΜΕΟ για Επίγνωση Κατάστασης και Υποστήριξη Πολλαπλών Αποστολών της Εθνικής Φρουράς", Ministry of Defense, Cyprus, Co-Investigator, € 450,000 (€ 150,000 to UCY), 2020 — 2022.

7. "MALLOC - Preventing unattended data recording and leakage in smart devices", Cyprus Research and Innovation Foundation, RESTART 2016-2020, PRE-SEED/0719/0201, UCY Co-Principal Investigator (co-PI), € 100,000 (€ 20,000 to UCY), 2020 — 2021.

8. "KIOS Research and Innovation Center of Excellence for Intelligent Systems and Networks (KIOS CoE)", European Commission H2020 WIDESPREAD-01-2016-2017 — Teaming (2nd stage), Co-Principal Investigator (co-PI), € 40,000,000 (€ 37,000,000 to UCY), 2017 — 2024.

9. "Cypriot information sharing environment towards an integrated national maritime surveillance awareness and enhancement of cross-sector and cross-border exchange of information (CY-CISE)", EASME/EMFF/2015/1.2.1.5, Co-Investigator, 2017 — 2019.

10. "Hardware Accelerator Research Program v2", Intel Corporation, Co-Investigator, 2016 —

11. "KIOS Research Center of Excellence for Intelligent Systems and Networks (KIOS)", European Commission H2020 WIDESPREAD-2014-1 — Teaming (1st stage), Co-Principal Investigator (co-PI), € 417,000, 2015 – 2016.

12. "MEDIAN: Manufacturable and Dependable Multi-core Architectures at Nanoscale", European Science Foundation, EU COST Action IC1103, ICT Domain, Co-Principal Investigator (co-PI), ~ € 450,000, 2011 — 2015.

13. "RUNNER: Reconfigurable Ultra-Autonomous Novel Robots", EUROSTARS - EUREKA, EU 7th Framework Programme, Co-Investigator, € 150,000 (€ 63,000 to UCY), 2011 — 2013.

14. "SAFEMETAL: Increasing EU Citizen security by utilizing innovative intelligent signal processing systems for Euro-coin validation and metal quality testing", Research for the benefit of SMEs, EU 7th Framework Program, Co-Investigator, € 1,252,484 (~ € 260,000 to UCY), 2011 — 2013.

15. "Mnemosyne: An Intelligent On-Chip Network for the Cache/Memory Sub-System of Chip Multi-Processors", Cyprus Research Promotion Foundation, Co-Investigator, € 148,060, 2011 — 2013.

16. "KIOS Research Center for Intelligent Systems and Networks", Cyprus Research Promotion Foundation, € 1,100,000, Co-Principal Investigator (co-PI), 2010 — 2015.

17. "Intelligent Monitoring, Control and Security of Critical Infrastructure Systems (IntelliCIS)", European Science Foundation, EU COST Action IC0806, ICT Domain, Co-Principal Investigator (co-PI), ~ € 400,000, 2009 — 2013.

18. "Intelligent Collaboration for Reliable Next-Generation Manycore Chips", Cyprus Research Promotion Foundation, Principal Investigator (PI), € 128,962, 2008 — 2010.

19. "Energy-Efficient Embedded and Mobile Multiprocessor System-on-Chip Architectures", Cyprus Research Promotion Foundation, Co-Investigator, € 129,820, 2008 — 2010.

20. "A Simulation and Evaluation Framework for Manycore Architectures", Cyprus Research Promotion Foundation, Co-Investigator, € 90,000, 2008 — 2010.

21. "Validation of Distributed Collaboration for CMPs", Intel Corporation, (Microprocessor Technology Labs, CA-USA), Co-Principal Investigator (co-PI), $ 25,000 (€ 19,938), 2007.

22. "Test Automation for Timing Defects in VLSI circuits using Non-Enumerative methods", Cyprus Research Promotion Foundation, sole Principal Investigator (PI), 13,200 CYP (€ 22,965), 2004 — 2005.

EXTERNAL EDUCATIONAL FUNDING/GRANTS

1. "IRES: Sensors and Machine Learning for Solar Power Monitoring and Control – SenSIP International Research Experience for Students", USA NSF Award 1854273, UCY Co-Principal Investigator, 2019 — 2021.

2. "DiMPAH: Digital Methods Platform for Arts and Humanities", European Commission, Erasmus+ Program, UCY co-Principal Investigator (co-PI), € 341,767 (€ 44,015 to UCY), 2020 — 2023.

3. "ESTIA-Net: Opening up Electrical Engineering, Computer Technologies and Applied Sciences to Successful Women Careers", EC Socrates/Erasmus 3 Thematic Network, Project Participator for UCY, 224,700 CYP (€ 390,964), 2003 — 2006.

4. "ECOPLACE: Electrical and Computer Engineering Student Placements in Europe", EU Leonardo da Vinci, Community Vocational Training Action Programme, 2005– 2006, Project Proposer and Coordinator, 11,513 CYP (€ 20,030).

INTERNAL RESEARCH FUNDING

1. "Test and Diagnosis of delay-related defects in nanometer technologies", University of Cyprus Internal Research Funds, Start-up Fund, Principal Investigator (PI), 27,500 CYP (€ 47,839), 2004 – 2005.

2. New Faculty Research Capitalization Fund (graduate student support, summer research support and travel), University of Notre Dame, $ 189,333 (€ 149,707) (only part of it was utilized due to the move to the University of Cyprus), 2002 – 2003.

TEACHING ACTIVITIES – CURRICULUM/PROGRAM DEVELOPMENT

COURSES TAUGHT (* denotes newly developed course)

CSE221/ECE210* — Digital Logic Design, **University of Notre Dame (Spring 2003) / University of Cyprus (Spring 2005, Fall 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013)**
Sophomore level course providing knowledge and understanding of Boolean algebra and digital concepts, with concentration on the analysis and design of combinational and sequential logic networks. Provides a foundation for subsequent study in computer architecture and VLSI design.
http://www.eng.ucy.ac.cy/mmichael/courses/ECE210/

ECE211* — Digital Systems Laboratory, University of Cyprus (Spring 2005, Fall 2006, Fall 2007, Fall 2021, Fall 2022)
Sophomore level course for hands-on experience in designing, simulating and implementing digital/logic circuits using Computer-Aided Design tools for electronic design, hardware description languages, discrete components, and programmable devices (FPGAs/CPLDs).
http://www.eng.ucy.ac.cy/mmichael/courses/ECE211/

ECE212* — Computer Organization and Design, University of Cyprus (Fall 2005, Spring 2006)

Sophomore level course providing students with a fundamental understanding of the design and organization of modern digital computers, by showing the relationship between hardware and software and focusing on the concepts that are the basis of modern computers such as microprocessors.
http://www.eng.ucy.ac.cy/mmichael/courses/ECE212/

ECE213* — Computer Organization and Design Laboratory, University of Cyprus (Fall 2005, Spring 2006, Spring 2011)

Sophomore level course for in-depth understanding of the underlying organization of modern computer systems and microprocessors via hands-on experience in design and implementation. Laboratory experiments include symbolic programming and simple microprocessor design using CAD tools and implementation using programmable devices.
http://www.eng.ucy.ac.cy/mmichael/courses/ECE213/

ECE312 — Computer Architecture I, University of Cyprus (Fall 2013 – Fall 2023)

Junior level course for computer engineering students to provide introductory concepts in computer architecture. Topics examined include memory hierarchy design, I/O, interconnects, datapath design, computer arithmetic, static and dynamic instruction-level parallelism and performance evaluation.
http://www.eng.ucy.ac.cy/mmichael/courses/ECE312/

ECE314* — Computer Architecture Laboratory, University of Cyprus (Fall 2013 – Fall 2023)

Junior level course for computer engineering students to provide hands-on experience with basic design and evaluation concepts in computer architecture. VHDL and Xilinx ISE are used for modeling and simulation. Laboratory exercises include design of ISA, memory hierarchy, 5-stage and superscalar pipelining and hardware accelerators.
http://www.eng.ucy.ac.cy/mmichael/courses/ECE314/

ECE423 — CMOS VLSI Design, **Southern Illinois University at Carbondale (Fall 2001)**

Cross-listed senior/graduate level course providing students with an introduction to the design, analysis and layout of digital VLSI circuits. Includes laboratory part which uses state-of-the-art design tools (Cadence).

ECE425*/ECE407*— Computer Aided Design for VLSI, **Southern Illinois University at Carbondale (Spring 2002) / University of Cyprus (Spring 2007—2009, 2011, 2013, 2015, 2017, 2019—2020, 2023)**

Cross-listed senior/graduate level course to introduce students to the fundamentals of Computer-Aided Design (CAD) tools for the design, analysis, test, and verification of digital VLSI systems. Laboratory part includes using state-of-the-art design tools (Cadence), Hardware Description Languages (VHDL/Verilog), as well as tool development.
http://www.eng.ucy.ac.cy/mmichael/courses/ECE407/

CSE498*/ECE660*— Digital Systems Test, University of Notre Dame (Fall 2002) / University of Cyprus (Fall 2004, 2009, Spring 2016, 2019)

Senior/Graduate level course, providing a comprehensive and detailed treatment of digital systems testing and testable design. Considers both fundamental concepts as well as the latest advances, including fault modeling and simulation, combinational and sequential circuit test generation, memory and delay test, design-for-testability methods such as scan and built-in self-test, and testing of embedded cores in systems-on-chip environments.

ECE701/704/705 — Graduate Series Seminar (PhD and MSc students), University of Cyprus (Fall 2012, Spring 2013, 2014, 2017)

Seminar lectures for MSc, MEng and PhD students in various topics of Electrical and Computer Engineering. Course coordination includes speaker invitation, scheduling and chairing of seminar lectures.

http://www.eng.ucy.ac.cy/mmichael/courses/ECE701/

CURRICULUM/NEW PROGRAM DEVELOPMENT

Director, MSc Program in Intelligent Critical Infrastructure Systems

Directed the development, national board accreditation, and delivery of the MSc Program in Intelligent Critical Infrastructure Systems. The program teaches highly innovative intelligent system methods and tools from emerging Information and Communication Technologies (ICT). The main purpose is to tackle challenging problems in modern Cyber-Physical Systems, with emphasis on monitoring, control, management and security in critical infrastructure systems. These systems include electric power and energy systems, water distribution networks, telecommunication networks, transportation systems, and emergency response systems. The program is a collaboration between the ECE Department and KIOS CoE at UCY, and Imperial College London.

https://www.msccis.ucy.ac.cy/

BSc and MSc Programs in Computer Engineering

Had a leading role in the development of the Computer Engineering program of studies at the newly established Electrical and Computer Engineering Department at UCY and collaborated with numerous visiting instructors at UCY for the joint development of various courses offered to the Computer Engineering students of the Department (beyond the newly developed courses listed above). Such courses include, (i) Programming Principles, Data Structures and Algorithms, Computer Architecture, Engineering of Computing, Introduction to Operating Systems, Iterative Methods and Distributed Systems at the undergraduate level and, (ii) Advanced Computer Architecture, Logic Synthesis and Optimization, Physical Design Automation, Distributed Systems and Advanced Computer Algorithms and Complexity at the graduate level.

INDEPENDENT STUDY COURSES

Individual study at the graduate level (primarily at the PhD level) of special topics not covered or not offered often by the Department. Topics covered include high-level and logic synthesis, physical design automation, circuit and system verification, dependable hardware systems, parallel algorithms and parallel programming. More than 15 such courses offered at UCY.

ACADEMIC SUPERVISION

POST-DOCTORAL RESEARCHER SUPERVISION

1. Panayiota Nicolaou, Research Associate, Sole Advisor, KIOS Center of Excellence, June 2020 – Jan. 2024.
2. George Stavrinides, Post-doctoral Researcher, Co-Advisor with T. Theocharides, KIOS Center of Excellence, Sept. 2022 – present.

PhD-LEVEL STUDENT SUPERVISION

1. Stelios Neophytou, PhD, "High Quality Test Pattern Generation Techniques for VLSI Circuits", University of Cyprus, 2009, Sole Advisor (1st to successfully defend his PhD thesis in UCY Engineering School) – Currently Associate Professor at the University of Nicosia, Cyprus.
2. Rajsekhar Adapa, PhD, "Techniques for Improved Diagnosis", Southern Illinois University at Carbondale, 2008, Co-Advisor with S. Tragoudas (Main Advisor) – Currently DFT Engineer with NVIDIA, San Francisco, USA.

3. Kyriakos Christou, PhD, "Path Delay Fault Testing using Advanced Decision Diagrams", University of Cyprus, 2012, Sole Advisor – Currently with Hellenic Bank, Cyprus.
4. Michael Skitsas, PhD, "O/S-enabled on-line Software-Based Self-Test and Recovery for Resilient Shared-Memory Multicore Systems", University of Cyprus, 2018, Co-Advisor with C. Nicopoulos – Currently with Advanced Integrated Technology Solutions & Services (Aditess), Cyprus.
5. Stavros Hadjitheophanous, PhD, "Parallel Fault Simulation and Test Generation Automation Processes for Chip Multiprocessors", University of Cyprus, 2018, Co-Advisor with S. Neophytou – Currently with SignalGenerix Ltd, Cyprus.
6. Solon Falas, PhD, "Hardware-enable Security in Industrial IoT", Sole Advisor, University of Cyprus, 2017 – present.
7. Andreas Kouloumpris, PhD, "Optimization in Reliable Intelligent Edge-computing of IoT", Co-Advisor with T. Theocharides, University of Cyprus, 2018 – present.
8. George Tertytsny, PhD, "Fault Detection vs Security Attacks using Machine Learning", Sole Advisor, University of Cyprus, 2018 – present.
9. Subham Datta, PhD, "Dependable and Secure Autonomous Vehicles", University of Cyprus, Sole-Advisor, 2019 – present.
10. Corneliou Panyiotis, PhD, "Reliability Evaluation and Mitigation Techniques for Intelligent Embedded Systems", Co-Advisor with T. Theocharides, University of Cyprus, 2019 – present.
11. Mohamed Faisal Elrawy, PhD, "Machine-Learning based Intrusion Detection System in the PAN of Smart Grid", Co-Advisor with L. Hatzigeorgiou and C. Laoudias, University of Cyprus, 2019 – present.
12. Leonidas Stylianou, PhD, "Security for Digital Substations in Smart Grids", Co-Advisor with L. Hatzigeorgiou and M. Asprou, University of Cyprus, 2019 – present.
13. George Konstantinides, PhD, "Dependability of Hardware Accelerators", Co-Advisor with T. Theocharides, University of Cyprus, 2022 – present.

MASTER-LEVEL STUDENT SUPERVISION
1. Theocharis Karathymios, MSc, "Cyber Physical Attach Graphs", Co-Advisor with C. Hankin and M. Barrere, 2019 – 2020.
2. Stavros Viktoros, MSc, "Compact Fault Dictionaries for Efficient and Scalable Sensor Fault Isolation in Cyber-Physical Systems", Sole Advisor, University of Cyprus, 2017 – 2020.
3. George Tertytsny, MSc, "Distinguishing faults and attacks in smart environments using machine learning", Co Advisor with A. Pitsillides, University of Cyprus, 2017 – 2018.

UNDERGRADUATE-LEVEL STUDENT SUPERVISION
1. Voskaris Christoforos, "Digital VLSI Grading and Diagnosis Tools using Logic Simulation Concepts", University of Cyprus, BSc Thesis, Sole Advisor, 2008-2009.
2. Ttofis Christos, "FPGA-based Emulation Framework for NoC-based Systems-on-Chip", University of Cyprus, BSc Thesis, Co-Advisor with T. Theocharides, 2008-2009, *Best Senior Design Project in Computer Engineering Award.*
3. Eyripidou Marios, "Multiprocessor System-on-Chip Simulator", University of Cyprus, BSc Thesis, Co-Advisor with T. Theocharides, 2008-2009.
4. Hadjioannou Miltiades, "Using Boolean-SAT to Generate Relaxed Test Sets", University of Cyprus, BSc Thesis, Sole Advisor, 2009-2010, *Best Senior Design Project in Computer Engineering Award.*
5. Touloupos George, "Runtime Resource Allocation in Large-Scale on-chip Multicore Systems", University of Cyprus, BSc Thesis, Co-Advisor with T. Theocharides, 2009-2010.
6. Chimona Vasos, "Serial vs Parallel Fault Simulation in Digital VLSI Circuits", University of Cyprus, BSc Thesis, Sole Advisor, 2012-2013.
7. Kounnapis Loucas, "Determining Application Specific Fault Rate Tolerance in Multimedia Embedded Systems", University of Cyprus, BSc Thesis, Sole Advisor, 2013-2014.

8. Hajdiminas Ioannis, "FPGA Emulation based Fault Injection and Evaluation in Space Applications", University of Cyprus, BSc Thesis, Co-Advisor with T. Theocharides, 2014-2015, *Best Senior Design Project in Computer Engineering Award.*

9. Chrysanthous Marilena, "Visualizing Decision Diagrams in Path-Related Algorithms", University of Cyprus, BSc Thesis, Sole Advisor, 2014-2015.

10. Minas Fiakkou, "Hardware-Accelerated System for Microcalcification Classification in Digital Mammograms", University of Cyprus, BSc Thesis, Co-Advisor with T. Theocharides, 2015-2016 .

11. Paraskeva Revekka, "A Fusion based Data System for Prioritization of Cervical/Breast Cancer Risk Calculation based on Image and Personal History Data", University of Cyprus, BSc Thesis, Co-Advisor with T. Theocharides, 2015-2016.

12. Kyriakos Petrou, "Message Passing Vs on-chip Shared Memory Architectures for Accelerating Fault Simulation: Implementation, Analysis and Comparison", University of Cyprus, BSc Thesis, Sole Advisor, 2015-2016.

13. Kyriakos Kyprianou, "Dependability analysis of computer vision algorithms for robotics including drones", University of Cyprus, BSc Thesis, Co-Advisor with T. Theocharides, 2016-2017.

14. Rafael Makrygiorgis, "Development of Mobile Conference Event and Evaluation Android App", University of Cyprus, BSc Thesis, Sole Advisor, 2016-2017.

15. Christos Katomoniatis, "Development of Database System for Publications and Thesis Depository", University of Cyprus, BSc Thesis, Sole Advisor, 2016-2017.

16. Yiannis Soteriou, "Drones as Mixed Criticality Systems", University of Cyprus, BSc Thesis, Co-Advisor with T. Theocharides, 2016-2017.

17. Christos Xenofontos, "Security Attacks in PLC Hardware in the Loop Environments", University of Cyprus, BSc Thesis, 2018-2019, *Best Senior Design Project in Computer Engineering Award.*

18. Dimitris Christodoulou, "Location Services in Supermarkets using Android APP", University of Cyprus, BSc Thesis, 2018-2019.

19. Christos Lazarou, "Intelligent Anomaly Detection for an Indoor Smart Wireless Sensor Network", University of Cyprus, BSc Thesis, 2021-2022.

20. Katerina Christodoulou, "Cybersecurity of smart IoT-based Surveillance Systems", University of Cyprus, BSc Thesis, 2022-2023.

UNDERGRADUATE-LEVEL RESEARCH INTERNS

1. Hadjioannou Miltiades, ECE Department, University of Cyprus, June-July 2008, June-July 2009.
2. Ioannou Aristides, ECE Department, University of Cyprus, June-July 2010.
3. Abdi Ehsan, ECE Department, University of Nicosia, June-July 2010.
4. Eracleous George, Imperial College London, June-July 2010.
5. Hajdiminas Ioannis, ECE Department, University of Cyprus, June-July 2013, June-July 2014, June-July 2015.
6. Savva Ioannis, ECE Department, University of Cyprus, June-July 2015.
7. Avraam Antigoni, University of Cambridge, June-July 2017.
8. Skottis Demetris, University of Cambridge, June-July 2018.
9. Emmanouil Theofilou, CS Department, University of Cyprus, June-July 2021.
10. Katerina Chrystodoulou, University of Cyprus, June-July 2022.
11. Bodgan Reshetnikov, University of Cyprus, January-March 2024.

OTHER RESEARCHERS SUPERVISION
1. Stavros Stavrou, Research Engineer, KIOS Center of Excellence, Co-Advisor with G. Ellinas and P. Kolios, January 2021 – September 2021.
2. Ramakrishna Samurdala, Research Engineer, Co-Advisor with C. Laoudias and L. Hatzidemetriou, KIOS Center of Excellence, September 2019 – February 2021.

3. Assikalis Savvas, Research Engineer, KIOS Center of Excellence, October 2018 – August 2019.

PhD/MSc COMMITTEES

- PhD Thesis Defense Committee (18 PhD candidates, UCY/UND/SIU-C).
- PhD Thesis Proposal Committee (19 PhD candidates, UCY).
- PhD Thesis External Examiner (7 PhD candidates, Politecnico di Milano, Tallinn University of Technology, KU-Leuven, EPFL, UCY-CS).
- MSc Thesis Committee (26 MSc candidates, UCY/UND).
- PhD Qualifying Examination Committee (27 PhD candidates, UCY).

UNIVERSITY SERVICE ACTIVITIES

University of Cyprus (UCY) University/School/Departmental Committees

- University ad-hoc Committee for Cybersecurity, Member (March 2023 – present)
- University Equality, Inclusion and Diversity Senate Committee, Member (March 2023 – present)
- University Information Technology Senate Committee, Member (2005–2007, 2011, 2015–2017, 2023 – present).
- University Ad-Hoc E-Learning Committee, Member (2006 – 2007).
- University International Relations Senate Committee, Member (2003 – 2004).
- Represented UCY at EU Information Society Technologies (IST) Conference, The Hague – Netherlands (2004).
- Represented UCY at 16th Conference of the European Association for International Education, Turin – Italy (2004).
- University Committee on IT Technical Specifications for the purchase of Equipment and Services for the University Network System, Member (2017).
- University Tender Evaluation Committee for the purchase of University Security and Safety System, Member (2012 – 2013).

- School of Engineering Council, Member (2014 – 2015).
- School of Engineering Information Technology Committee, Member (2003 – 2005).

- Department Outreach and Dissemination Committee (2020 – present).
- Department Vice-Chair (2017 –2020).
- Department Coordinator for MSc Program on Intelligent Critical Infrastructures (2017 – present).
- Department Erasmus Coordinator (2017 – present) and YUFE Coordinator (2021 – present).
- Department Information Technology Committee, Chair (2017 – 2022).
- Departmental Graduate Studies Committee, Chair (2009 – 2010).
- Departmental Graduate Studies Committee, Member (2003 – 2008, 2011 – 2014).
- Departmental Undergraduate Studies Committee, Chair, (2016 – 2017).
- Departmental Undergraduate Studies Committee, Member, (2003 – 2008, 2018 – 2020).
- Departmental Webpage Committee, Chair (2004 – 2008).
- Departmental Information Technology/Webpage Committee, Member (2008 – 2010, 2014 – 2016).
- Responsible for Departmental Library Affairs (2003 – 2005).
- Organizer of Departmental Seminar Series (Fall 2012, Spring 2013, Spring 2014, Spring 2017).
- Ad-Hoc Awards Committee for undergraduate thesis projects, Member (2007, 2008).
- Co-organizer of ECE Department "Open Day" events (2003, 2004, 2005, 2007).
- Co-organizer of 1st National Annual Robotics Competitions for high-school students "Texnopleysi" (2006).

- Co-organizer of 1st and 2nd National ECE/CS Summer Schools on Computing for high-school students (2008, 2009).
- High-School Informational Visits, Department Representative and Speaker (2004, 2005, 2007).
- Responsible for Student Summer Vocational Placements Abroad (EU Leonardo da Vinci Mobility Programme 2006 – 2007 and EU Erasmus Programme 2008).

University of Notre Dame (UND) Departmental Committees

- Departmental Doctoral Qualification Examination Committee (written exanimation), Member (2003 – 2004).

PROFESSIONAL SERVICE ACTIVITIES

EDITORIAL

2020—2021   Guest Editor for the *ACM Journal on Emerging Technologies in Computing Systems (JETC),* Special Issue on "Hardware-Assisted Security for Emerging Internet of Things", scheduled to appear in 2022, in *ACM Journal on Emerging Technologies in Computing Systems*, vol. 18, no. 1, January 2022.

2017—2018   Guest Editor for the *IEEE Transaction on Emerging Topics in Computing (TETC)*, Special Issue/Section on "Reliability-aware Design and Analysis Methods for Digital Systems: from Gate to System Level", in *IEEE Transactions on Emerging Topics in Computing*, vol. 8, no. 3, 1 July-Sept. 2020, doi: 10.1109/TETC.2020.2998932.

2016—2017   Guest Editor for the *IEEE Transaction on Emerging Topics in Computing (TETC)*, Special Issue on "Defect and Fault Tolerance in VLSI and Nanotechnology Systems", in *IEEE Transactions on Emerging Topics in Computing*, vol. 6, no. 4, Oct.-Dec. 2018, doi: 10.1109/TETC.2018.2874560.

CONFERENCE ORGANIZATION

2025   Workshops Chair, *IEEE/ACM Design Automation and Test in Europe (DATE)*, March 2025.

2024   Program Chair, *IEEE European Test Symposium (ETS)*, The Netherlands, May 2024.

2023   Program Vice-Chair, *IEEE European Test Symposium (ETS)*, Venice-Italy, May 2023.

2023   Student Activities Chair, *IEEE European Test Symposium (ETS)*, Venice-Italy, May 2023.

2022   Program co-Chair, *IEEE Computer Society Annual Symposium on VLSI (ISVLSI)*, Pafos, Cyprus, July 2022.

2022   Best Paper Award Committee Member (Track T), *IEEE/ACM Design Automation and Test in Europe (DATE).*

2022-2023   Topic Chair (T2-Test Generation, Test Architectures, Design for Test, and Diagnosis), *IEEE/ACM Design Automation and Test in Europe (DATE).*

2022   Awards co-Chair, *IEEE European Test Symposium (ETS),* Barcelona, Spain, May 2022.

2021   Best Paper Award Committee Member (Track A), *IEEE/ACM Design Automation and Test in Europe (DATE).*

2020—2021   Best Paper Award Committee Member, *IEEE European Test Symposium.*

2020   Publications Chair, *IEEE International On-line Testing Symposium (IOLTS)*, Naples, Italy, July 2020.

2020   Finance Chair, *IEEE Computer Society Annual Symposium on VLSI (ISVLSI)*, Limassol, Cyprus, July 2020.

2019—2022   Track Chair (IoT-From Device, to Fog, and Cloud), *IEEE Conference on Omni-Layer Intelligent Systems (COINS).*

2019—2020   Topic Chair, *24th and 25th IEEE European Test Symposium (ETS).*

2019   Best Paper Award Committee Member, *37th IEEE VLSI Test Symposium (VTS)*, Monterrey-CA, USA.

2019—2020   Special Sessions Chair, *37th and 38th IEEE VLSI Test Symposium (VTS)*, USA.

2019—2020   Topic Chair (T4-System Level Dependability), *IEEE/ACM Design Automation and Test in Europe (DATE).*

2016, 2018—2019   McCluskey Doctoral Thesis Award Committee (Academic Judge), *IEEE European Test Symposium (ETS).*

2018   Tutorials Chair, *23rd IEEE European Test Symposium (ETS)*, Bremen, Germany, May 2018.

2018   Topic co-Chair (T4-System-Level Reliability Design, Analysis and On-line Test), *IEEE/ACM Design Automation and Test in Europe (DATE)*, Dresden, Germany, March 2018.

2017   General Chair, *22nd IEEE European Test Symposium (ETS)*, Limassol, Cyprus, May 2017.

2016   General Chair, *29th IEEE Annual International Symposium on Defect and Fault Tolerance in VLSI and Nanotechnology Systems (DFTS)*, Connecticut, USA, October 2016.

2016   General Vice-Chair, *21st IEEE European Test Symposium (ETS)*, Amsterdam, NL, May 2016.

2015   Technical Program Chair, *28th IEEE Annual International Symposium on Defect and Fault Tolerance in VLSI and Nanotechnology Systems (DFTS)*, Amherst, MA, USA, October 2015.

2015   Special Sessions Chair, *20th IEEE European Test Symposium (ETS)*, Cluj-Napoca, Romania, May 2015.

2014   Special Session Co-organizer, "Design and Test Methods for Emerging Technologies", *9th IEEE Conference on Design and Technology of Integrated Systems in Nanoscale Era (IDTS)*, Santorini, Greece, May 2014.

2014   Technical Program Co-Chair, *3rd Workshop on Manufacturable and Dependable Multicore Architectures at Nanoscale (MEDIAN)*, held in conjunction with 2014 *DATE Conference*, Dresden, Germany, March 2014.

2013   Technical Program Co-Chair and Co-organizer, *5th Workshop on Design for Reliability (DFR)*, held in conjunction with *8th HiPEAC Conference*, Berlin, Germany, January 2013.

2012   Co-organizer of thematic session "The intertwining challenges of reliability, testing and verification", *HiPEAC Computing Systems Week*, Ghent, Belgium, October 2012.

2012   Technical Program Co-Chair and Co-organizer, *4th Workshop on Design for Reliability (DFR)*, held in conjunction with *7th HiPEAC Conference*, Paris, France, January 2012.

2011	Technical Program Co-Chair and Co-organizer, *3rd Workshop on Design for Reliability (DFR)*, held in conjunction with *6th HiPEAC Conference,* Heraklion, Greece, January 2011.
2010	Co-organizer, *2nd Workshop on Design for Reliability (DFR)*, held in conjunction with *5th HiPEAC Conference*, Pisa, Italy, January 2010.
2009	Co-founder and Co-organizer, *1st Workshop on Design for Reliability (DFR)*, held in conjunction with *4th HiPEAC Conference*, Paphos, Cyprus, January 2009.
2009	Finance Chair, *19th International Conference on Artificial Neural Networks (ICCAN)*, Limassol, Cyprus, September 2009.
2005	Co-organizer of pre-conference Workshop, "Engineering and Applied Sciences for Women*", IEEE-CSS/MED ISIC/MED joint Conferences*, Cyprus, June 2005.
2008 – present	Chaired or Co-Chaired numerous technical sessions and panel discussions (more than 60) in various Conferences, Symposia and Workshops.

CONFERENCE TECHNICAL PROGRAM COMMITTEE MEMBERSHIP

2023	IEEE/ACM 28th Asia and South Pacific Design Automation Conference (ASP-DAC)
2015—2020, 2022—	IEEE/ACM Conference on Design, Automation and Test in Europe (DATE); scientific paper sessions (2015—2020, 2022—), European Projects session (2020)
2014—	IEEE European Test Symposium (ETS)
2018—	IEEE VLSI Test Symposium (VTS)
2011—	IEEE International On-Line Testing Symposium (IOLTS)
2014—	IEEE Annual International Symposium on Defect and Fault Tolerance in VLSI and Nanotechnology Systems (DFTS)
2019—2022	IEEE International Conference on Omni-Layer Intelligent Systems (COINS)
2014	Joint Euro-TM/MEDIAN Workshop on Dependable Multicore and Transactional Memory Systems (DMTM), in conjunction with 9th HiPEAC Conference
2013—2016	IEEE International Design & Test Symposium (IDT)
2013, 2018	IFIP/IEEE International Conference on Very Large Scale Integration (VLSI-SoC)
2012—2015	Annual Workshop on Manufacturable and Dependable Multicore Architectures at Nanoscale (MEDIAN)
2011—2016	IARIA International Conference on Advances in System Testing and Validation Lifecycle (VALID)
2011—2012	Euromicro Symposium on Digital System Design (DSD)
2010—2016	IEEE/ACM Symposium on Integrated Circuits and System Design (SBCCI)
2009—2013	Workshop on Design for Reliability (DFR), in conjunction with HiPEAC Conference
2007	24th IEEE/ACM International Conference on Computer Design

PAPER REVIEWING ACTIVITES

Journals

2002 – present	Reviewed for: Proceedings of the IEEE, IEEE Transactions on Dependable and Secure Computing (TDSC); IEEE Internet of Things Journal (IoT); IEEE Transactions on Computers (TCOMP); IEEE Transactions on Emerging Topics in Computing (TETC); IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems (TCAD); IEEE Embedded Systems Letters (ESL); IEEE Transactions on Reliability; IEEE Transactions on Very Large Scale Integration (TVLSI); IEEE Transactions on Circuits and Systems II (TCAS-II); IEEE on Device and Materials Reliability (TDMR); ACM Transactions on Electronic Design Automation (TODAES); ACM Journal on Emerging Technologies in Computing Systems (JETCS); IEEE Design & Test Magazine (D&T); Springer Journal of Electronic Testing: Theory and Applications (JETTA); Elsevier Journal of System Architectures (JSA); Elsevier Microprocessors and Microsystems (MICPRO); Elsevier Microelectronics Journal (MEJ); Elsevier Integration, the VLSI Journal; IEICE Electronics Express; IET Computer & Digital Techniques (CDT).

Conferences/Symposia/Workshops (with proceedings)

1998 – present	Reviewed for: IEEE/ACM Design Automation and Test in Europe Conference (DATE); IEEE International Test Conference (ITC); IEEE VLSI Test Symposium (VTS); IEEE European Test Symposium (ETS); ACM/EDAC/IEEE Design Automation Conference (DAC); IEEE/ACM International Conference on Computer-Aided Design (ICCAD); IEEE International Conference on Omni-layer Intelligent Systems (COINS); IEEE International Symposium on Defect and Fault Tolerance in VLSI and Nanotechnology Systems (DFTS); IEEE International On-Line Testing Symposium (IOLTS); ACM/IEEE International Conference on HW/SW Codesign and System Synthesis (CODES+ISSS); IEEE International Conference on ASIC (ASICON); IEEE/ACM International Conference on Computer Design (ICCD); IEEE/ACM Symposium on Integrated Circuits and System Design (SBCCI); IEEE Euromicro Symposium on Digital System Design (DSD); IARIA International Conference on Advances in System Testing and Validation Lifecycle (VALID); IFIP/IEEE International Conference on Very Large Scale Integration (VLSI-SoC); IEEE International Design & Test Symposium (IDT); IEEE International Conference on Embedded Computer Systems: Architectures, Modeling and Simulation (SAMOS); HiPEAC Workshop on Design for Reliability (DFR); Workshop on Manufacturable and Dependable Multicore Architectures at Nanoscale (MEDIAN).

OTHER PROFESSIONAL COMMITTEES & MEMBERSHIPS

2023 –	Member of the Advisory Board, National Cybersecurity Coordination Center, Cyprus (NCCC-CY)
2020 –	Member and KIOS CoE point of contact, UNIMED SubNetwork on Safety and Security of Critical Infrastructures
2020 – 2024	Member of the Management Committee of the EU COST Action I IC19135, ICT Domain, on Connecting Education and Research Communities for an Innovative Resource Aware Society (CERCIRAS).
2019 – 2022	Chair of Distinguished Service Award Selection Committee for European Test Symposium.
2019 – 2022	Elected Vice-Chair of European Test Symposium Steering Committee.
2017	Member of the *FameLab* National Selection Committee.

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2011 – 2015	Member of the Management Committee of the ICT COST Action IC1103 on Manufacturable and Dependable Multicore Architectures at Nanoscale (MEDIAN).
2011 – 2015	Vice-Chair of MEDIAN COST Action WG3: Dependability evaluation & validation/debug methodologies.
2010 – 2015	Member of Executive Committee of IEEE Cyprus Section.
2010 – 2015	Membership Development Officer of IEEE Cyprus Section.
2004 – present	Member of IEEE Cyprus Section.
2004 – 2006	International Steering Committee Member, ESTIA-Net: Opening up Electrical Engineering, Computer Technologies and Applied Sciences to Successful Women Careers.
2002 – present	Member of Association of Computing Machinery (ACM); Member of ACM Special Interest Group on Design Automation (SIGDA).
2002 – present	Member of IEEE; Member of IEEE Computer Society; Member of the IEEE Reliability Society; Member of IEEE Circuits and Systems Society (CAS); Member of IEEE Test Technology Technical Council (TTTC); Member of IEEE Council on Electronic Design Automation (CEDA); Member of IEEE Women In Engineering (WIE).
1998 – 2002	Student Member of the Institute of Electrical and Electronic Engineers (IEEE).

HONOS & AWARDS

2020	Best Student Poster Award (PhD student P. Corneliou), *SERESSA 2020 – 16th International School on the Effects of Radiation on Embedded Systems for Space Applications,* Porto Alegre, RS – Brazil.
2019	Best Paper Award Nomination, *IFIP/IEEE International Conference on Very Large Scale Integration (VLSISoC)*, October 2019, Cusco, Perou.
2009	Best Paper Award, *IEEE Microelectronics Systems in Education Conference (MSE)*, California, USA.
2005	Best Paper Award Nomination*, IEEE International Symposium on Quality Electronic Design*, California, USA.
2002	Best Dissertation of the Year Nomination at SIU-C by the College of Engineering.
2000 – 2001	Dissertation Research Award, Graduate School, SIU-C.
1996	Gamma Beta Phi Society – USA National Honor Society.
1996	Outstanding International Student Award, SIU-C.
1995 – 1996	SIU-C Dean's List.
1994 – 1996	Fulbright/CASP Fellowship for undergraduate studies at USA.
1993	Higher Technical Institute (HTI) Presidential Award for Best Scientific Project for the fulfillment of Computer Studies Diploma.

PUBLICATIONS

[Names of graduate student co-authors advised or co-advised by M. K. Michael indicated in *italic* type.]
[Conference/Symposia/Workshop acceptance rates are provided where available.]

BOOK CHAPTERS

1. *S. Falas*, C. Konstantinou, and **M. K. Michael** (2020), "Hardware-Enabled Secure Firmware Updates in Embedded Systems". In Metzler C., Gaillardon PE., De Micheli G., Silva-Cardenas C., Reis R. (eds) VLSI-SoC: New Technology Enabler (pp 165-185). VLSI-SoC 2019. IFIP Advances in Information and Communication Technology, vol 586. Springer, Cham. https://doi.org/10.1007/978-3-030-53273-4_8

2. *M. Skitsas*, Marco Restifo, **M. K. Michael**, C. Nicopoulos, P. Bernardi, E. Sanchez (2018), "Self Testing of Multicore Processors", in Bashir Al-Hashimi and Geoff Merrett (Ed.), *Many Core Computing: Hardware and Software* (pp. 1-30), June 2019, The Institution of Engineering and Technology (IET), e-ISBN: 9781785615832, Chapter DOI: 10.1049/PBPC022E_ch.

3. C. Bolchini, **M. K. Michael**, A. Miele, S. Neophytou (2017) "Dependability Threats", in M. Ottavi, S. Pontarelli, D. Gizopoulos (Ed.), *Dependable Multicore Architectures at Nanoscale* (pp. 1-35), 1st Ed., July 2017, Springer, ISBN-13**:** 9783319544212.

REFEREED JOURNAL PAPERS

1. *A. Kouloumpris,* G. L. Stavrinides, **M. K. Michael**, T. Theocharides, "An optimization framework for task allocation in the edge/hub/cloud paradigm", *Journal in Future Generation Computer Systems (FGCS)*, Feb 2024, pp. 1-13.

2. *M. F. Elrawy*, C. Fioravanti, G. Oliva, **M. K. Michael**, R. Setola, "A Geometrical Approach to Enhance Security Against Cyber Attacks in Digital Substations", *IEEE Access*, Jan 2024, pp. 1-15.

3. *M. F. Elrawy*, L. Hadjidemetriou, C. Laoudias and **M. K. Michael**, "Detecting and Classifying Man-in-the-middle Attacks in the Private Area Network of Smart Grids", *Journal of Sustainable Energy, Grids and Networks (SEGAN)*, Vol. 36, Dec 2023, pp. 1-14.

4. *S. Falas*, C. Konstantinou, and **M. K. Michael**, "A Modular End-to-End Framework for Secure Firmware Updates on Embedded Systems", *ACM Journal on Emerging Technologies in Computing Systems (JETC),* Vol. 18, No. 1, Jan 2022, pp. 1-19.

5. *G. Tertytchny*, N. Nicolaou, **M. K. Michael**, "Classifying network abnormalities into faults and attacks in IoT-based cyber physical systems using machine learning", *Journal of Microprocessors and Microsystems (MICPRO)*, Elsevier, Vol. 77, Sept 2020, pp. 1-15.

6. *S. Hadjitheophanous*, S. Neophytou, **M. K. Michael**, "Maintaining Scalability of Test Generation using Multicore Shared Memory System", *IEEE Transactions on VLSI*, Vol. 28, No. 2, February 2020, pp. 553-564.

7. *S. Hadjitheophanous*, S. Neophytou, **M. K. Michael**, "Exploiting Shared-Memory to Steer Scalability of Fault Simulation using Multicore Systems", *IEEE Transactions on Computer Aided Design*, Vol. 38, No. 8, August 2019, pp. 1466-1479.

8. S. Neophytou, **M. K. Michael**, "Path Representation in Circuit Netlists Using Linear-Sized ZDDs with Optimal Variable Ordering", *Journal of Electronic Testing: Theory and Applications (JETTA)*, Vol. 34, No. 6, December 2018, pp. 667-683.

9. *M. Skitsas*, C. Nicopoulos, **M. K. Michael,** "Exploring System Availability during Software-Based Self-Testing of Multi-core CPUs", *Journal of Electronic Testing: Theory and Applications (JETTA)*, Vol. 34, No. 1, February 2018, pp. 67-81.

10. *M. Skitsas*, C. Nicopoulos and **M. K. Michael**, "DaemonGuard: Enabling O/S-Orchestrated Fine-Grained Software-Based Selective-Testing in Multi-/Many-Core Microprocessors", *IEEE Transactions on Computers,* Vol. 65, No. 5, September 2016, pp. 1453-1466.

11. M. Maniatakos, **M. K. Michael** and Y. Makris, "Multiple-Bit Upset Protection in Microprocessor Memory Arrays using Vulnerability-based Parity Optimization and Interleaving", *IEEE Transactions on Very Large Scale Integration*, Vol. 23, No. 11, November 2015, pp. 2447-2460.

12. H. Kim, S. B. Boga, A. Vitkovskiy, *S. Hadjitheophanous*, P. V. Gratz, V. Soteriou and **M. K. Michael**, "Use it or Lose it: Proactive, Deterministic Longevity in Future Chip Multiprocessors"**,** *ACM Transactions on Design Automation of Electronic Systems*, Vol. 20, No. 4, September 2015, pp. 1-26.

13. M. Maniatakos, **M. K. Michael,** C. Tirumurti and Y. Makris, "Revisiting Vulnerability Analysis in Modern Microprocessors", *IEEE Transactions on Computers,* Vol. 64, No. 9, September 2015, pp. 2664-2674.

14. M. Ottavi, S. Pontarelli, D. Gizopoulos, C. Bolchini, **M. K. Michael**, L. Anghel, M. Tahoori, A. Paschalis, P. Reviriego, O. Bringmann, V. Izosimov, H. Manhaeve, C. Strydis, S. Hamdioui, "Dependable Multicore Architectures at Nanoscale: the view from Europe", *IEEE Design & Test,* Vol. 32, Issue 2, April 2015, pp. 17-28.

15. *S. Neophytou* and **M. K. Michael**, "Multiple detection test generation with diversified fault partitioning paths", *Microprocessors and Microsystems - Embedded Hardware Design (MICPRO),* Vol. 38, No. 6, August 2014, pp. 585-597.

16. *S. Neophytou, C. Christou*, and **M. K. Michael**, "A Non-Enumerative Technique for Measuring Path Correlation in Digital Circuits", *Journal of Electronic Testing: Theory and Applications (JETTA),* Vol. 28, No. 6, October 2012, pp. 843-856.

17. *C. Ttofis*, T. Theocharides, and **M. K. Michael**, "FPGA-based Laboratory Assignments for NoC-based Manycore Systems**",** *IEEE Transactions on Education,* Vol. 55, No. 3, May 2012, pp. 180-189.

18. *S. Neophytou* and **M. K. Michael, "**Test Pattern Generation for Relaxed n-detect Test Sets", *IEEE Transactions on Very Large Scale Integration (VLSI),* Vol. 20, No. 3, March 2012, pp. 410-423.

19. *R. Adapa*, S. Tragoudas, and **M. K. Michael**, "Improved Diagnosis Using Enhanced Fault Dominance Relations", *Integration, the VLSI Journal*, Vol. 44, No. 3, June 2011, pp. 217-228.

20. C. Tofis, A. Papadopoulos, T. Theocharides, **M. K. Michael**, and D. Doumenis, "An MPSoC-based QAM Modulation Architecture with Run-Time Load-Balancing", *EURASIP Journal of Embedded Systems,* Vol. 2011 (2011), Article ID 790265, 15 pages.

21. T. Theocharides, **M. K. Michael**, M. Polycarpou, and A. Dingankar, "Hardware-Enabled Dynamic Resource Allocation for Manycore Systems using Bidding-based System Feedback", *EURASIP Journal on Embedded Systems,* Vol. 2010 (2010), Article ID 261434, 21 pages.

22. *S. Neophytou* and **M. K. Michael**, "Test Set Generation with a Large Number of Unspecified Bits Using Static and Dynamic Techniques", *IEEE Transactions on Computer,* Vol. 59, No. 3, March 2010, pp. 301-316.

23. *K. Christou*, **M. K. Michael** and S. Tragoudas, "On the use of ZBDDs for Implicit and Compact Critical Path Delay Fault Test Generation", *Journal of Electronic Testing: Theory and Applications (JETTA),* Vol. 24, No. 1 – 3, June 2008, pp. 203-222.

24. *S. Neophytou*, **M. K. Michael**, and S. Tragoudas, "Functions for Quality Transition Fault Tests and their Applications in Test Set Enhancement", *IEEE Transactions on Computer-Aided Design (CAD) of Integrated Circuits and Systems,* Vol. 25, No. 12, December 2006, pp. 3026-2035.

25. **M. K. Michael** and S. Tragoudas, "Function-based Compact Test Pattern Generation for Path Delay Faults", *IEEE Transactions on Very Large Scale Integration (VLSI)*, Vol. 13, No. 8, August 2005, pp. 996-1001.

26. **M. K. Michael**, T. Haniotakis, and S. Tragoudas, "A Unified Framework for Generating Propagation Functions for Logic Errors and Events", *IEEE Transactions on Computer-Aided Design (CAD) of Integrated Circuits and Systems,* Vol. 23, No. 6, June 2004, pp. 980-986.

27. S. Padmanaban, **M. K. Michael**, and S. Tragoudas, "Exact Path Delay Fault Coverage with Fundamental Zero-Suppressed BDD Operations", *IEEE Transactions on Computer-Aided Design (CAD) of Integrated Circuits and Systems,* Vol. 22, No. 3, March 2003, pp. 305-316.

28. **M. K. Michael** and S. Tragoudas, "ATPG Tools for Delay Faults at the Functional level", *ACM Transactions On Design Automation of Electronic Systems (TODAES),* Vol. 7, Issue 1, January 2002, pp. 33-57.

REFEREED CONFERENCES, SYMPOSIA & WORKSHOPS WITH PROCEEDINGS

1. *A. Kouloumpris,* G. L. Stavrinides, **M. K. Michael**, T. Theocharides, "Optimal Multi-Constrained Workflow Scheduling in the Edge-Cloud Continuum", *48th IEEE International Conference on Computers, Software, and Applications*, July 2024, Osaka, Japan, pp. 1-10.

2. *S. Falas,* M. Asprou, C. Konstantinou and **M. K. Michael**, "Physics-Informed Neural Networks for Accelerating Power System State Estimation", *IEEE PES Innovative Smart Grid Technologies Europe (ISGT-Europe)*, October 2023, Grenoble, France, pp. 1-5.

3. *M. F. Elrawy*, L. Hadjidemetriou, C. Laoudias and **M. K. Michael**, "Modelling and Analysing Security Threats Targeting Protective Relay Operations in Digital Substations", *IEEE Cyber Security and Resilience Conference (CSR)*, July 2023, Venice, Italy, pp. 1-7.

4. *S. Datta*, P. Nicolaou and **M. K. Michael**, "Reputation-based User Vehicle Assignment in Intelligent and Connected Vehicle Platoons", *IEEE International Conference on Omni-layer Intelligent Systems (COINS)*, August 2023, Berlin, Germany, pp. 1-7.

5. N. Piperigkos, C. Anagnostopoulos, A. Lalos, *S. Z. Zukhraf*, Christos Laoudias, **M. K. Michael**, "Robust Cooperative Sparse Representation Solutions for Detecting and Mitigating Spoofing Attacks in Autonomous Vehicles"*, IEEE Mediterranean Conference on Control and Automation (MED2023),* June 2023, Limassol, Cyprus, pp. 1-6.

6. S. Filippou, A. Achilleos, *S. Z. Zukhraf*, C. Laoudias, K. Malialis, **M. K. Michael** and G. Ellinas, "Machine Learning Approach for Detecting GPS Location Spoofing Attacks in Autonomous Vehicles", *IEEE Vehicular Technology Conference (VTC2023-Spring),* June 2023, Florance, Italy, pp. 1-7.

7. *M. F. Elrawy*, E. Tekki, L. Hadjidemetriou, C. Laoudias and **M. K. Michael**, "Protection and Communication Model of Intelligent Electronic Devices to Investigate Security Threats", *IEEE PES Innovative Smart Grid Technologies NA (ISGT-NA)*, January 2023, Washington-DC, USA, pp. 1-5.

8. P. Nicolaou, Y. Sazeides and **M. K. Michael**, "INTERPLAY: An Intelligent Model for Predicting Performance Degradation due to Multi-cache Way-disabling", *IEEE International Symposium on Defect and Fault Tolerance in VLSI and Nanotechnology Systems (DFTS2022)*, October 2022, Austin-Texas, USA, pp. 1-6.

9. A. Kritikakou, P. Nikolaou, I. Rodriguez-Ferrandez, J. Paturel, L. Kosmidis, **M. K. Michael**, O. Sentieys and D. Steenari, "Functional and Timing Implications of Transient Faults in Critical Systems", *IEEE 28th International Symposium on On-Line Testing and Robust System Design (IOLTS)*, September 2022, Turin, Italy, pp. 1-10.

10. K. Aslansefat, P. Nikolaou, M. Walker, M. N. Akram, I. Sorokos, J. Reich, P. Kolios, **M. K. Michael**, T. Theocharides, G. Ellinas, D. Schneider and Y. Papadopoulos, "SafeDrones: Real-Time Reliability Evaluation of UAVs using Executable Digital Dependable Identities", *International Symposium on Model-Based Safety and Assessment (IMBSA2022)*, September 2022, Munich, Germany, pp. 1-15.

11. *G. Tertytchny* and **M. K. Michael**, "Two-dimensional Dataset Reduction in Data-Driven Fault Detection for IoT-based Cyber Physical Systems", *IEEE International Conference on Omni-layer Intelligent Systems (COINS)*, August 2022, Barcelona, Spain, pp. 1-6.

12. *M. F. Elrawy*, L. Hadjidemetriou, C. Laoudias and **M. K. Michael**, "Light-weight and Robust Network Intrusion Detection for Cyber-attacks in Digital Substations", *IEEE PES Innovative Smart Grid Technologies Asia (ISGT-Asia)*, December 2021, Brisbane, Australia, pp. 1-5.

13. *P. Corneliou*, P. Nikolaou, **M. K Michael**, T. Theocharides, "Fine-Grained Vulnerability Analysis of Resource Constrained Neural Inference Accelerators", *IEEE International Symposium on Defect and Fault Tolerance in VLSI and Nanotechnology Systems (DFTS2021)*, October 2021, Athens, Greece, pp. 1-6.

14. *L. Stylianou,* L. Hadjidemetriou, M. Asprou, L. Zacharia and **M. K. Michael**, "A behavioral model to detect data manipulation attacks of synchrophasor measurements", *IEEE PES Innovative Smart Grid Technologies Europe (ISGT Europe)*, October 2021, Espoo, Finland, pp. 1-6.

15. *S. Datta*, P. Nicolaou and **M. K. Michael**, "TrustPH: Trustworthy Platoon Head Selection considering Cognitive Biases to enhance Secure Platooning in Intelligent and Connected Vehicles", *IEEE International Conference on Intelligent Transportation (ITSC),* September 2021, Indianapolis, USA, pp. 1-8.

16. R. Solomou, G. Savva, M. Mavrovouniotis, G. Ellinas, M. Michael, G. Spyrou and C. Pitris, "Exploring a disease network using random walks with bibliometric assessment to reveal potential disease-related pathways*", IEEE-EMBS International Conference on Biomedical and Health Informatics (BHI'21)*, July 2021, (extended abstract).

17. *S. Falas*, C. Konstantinou and **M. K. Michael**, "Physics-Informed Neural Networks for Securing Water Distribution Systems", *38ᵗʰ IEEE International Conference on Computer Design (ICCD)*, October 2020, Hartford, CT, USA, pp. 37-40 *[invited referred paper]*.

18. L. Hadjidemetriou, *G. Tertytchny*, H. Karbouj, C. Charalambous, **M. K. Michael**, M. Sazos and M. Maniatakos, "Demonstration of Man in the Middle Attack on a Feeder Power Factor Correction Unit", *IEEE PES Innovative Smart Grid Technologies Europe (iSGT-Europe),* October 2020, Hague, Belgium, pp. 126-130.

19. *G. Tertytchny*, H. Karbouj, L. Hadjidemetriou, C. Charalambous, **M. K. Michael**, M. Sazos and M. Maniatakos, "Demonstration of Man in the Middle Attack on a Commercial Photovoltaic Inverter Providing Ancillary Services", *IEEE Cybersecurity of Power Electronics Systems* (*CyberPELS*), co-located with *IEEE Energy Conversion Congress & Expo (ECCE)*, October 2020, Miami, FL, USA, pp. 1-7, doi: 10.1109/CyberPELS49534.2020.9311531.

20. *S. Viktoros*, **M. K. Michael**, M. Polycarpou, "Compact Fault Dictionaries for Efficient Sensor Fault Diagnosis in IoT-enabled CPSs", *IEEE SmartIoT Conference*, August 2020, Beijing, China, pp. 236-243.

21. *G. Tertytchny* and **M. K. Michael,** "Dataset Reduction Framework For Intelligent Fault Detection In IoT-based Cyber-Physical Systems Using Machine Learning Techniques", *IEEE International Conference on Omni-layer Intelligent Systems (COINS)*, August 2020, Barcelona, Spain, pp. 1-6.

22. K. Jaskie, S. Rao, W. Barnard, E. Kyriakides, I. Tofis, L. Hadjidemetriou, **M. K. Michael**, and A. Spanias, "IRES Program in Sensors and Machine Learning for Energy Systems", *IEEE International Conference on Information, Intelligence, Systems and Applications (IISA)*, July 2020, Athens, Greece, pp. 1-5 *[recipient of Best Student Paper Award].*

23. *A. Kouloumpris*, T. Theocharides and **M. K. Michael**, "Cost-Effective Time-Redundancy based Optimal Task Allocation for the Edge-Hub-Cloud Systems", *IEEE International Symposium on VLSI* July 2020 *(ISVLSI)*, Limassol, Cyprus, pp. 368-373.

24. *S. Falas*, C. Konstantinou, **M. K. Michael**, "A Hardware-based Framework for Secure Firmware Updates on Embedded Systems", *IFIP/IEEE International Conference on Very Large Scale Integration (VLSISoC)*, October 2019, Cusco, Perou, pp. 1-6.

25. *A. Kouloumpris*, **M. K. Michael**, T. Theocharides, "Reliability-Aware Task Allocation Latency Optimization in Edge Computing", *IEEE International Symposium on On-Line Testing and Robust System Design (IOLTS)*, July 2019, Rhodes, Greece, pp. 1-4.

26. *A. Kouloumpris*, T. Theocharides, **M. K. Michael**, "Metis: Optimal Task Allocation Framework for the Edge/Hub/Cloud Paradigm", *IEEE International Conference on Omni-Layer Intelligent Systems (COINS)*, May 2019, Crete, Greece, pp. 128-133.

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THESES AND DISSERTATIONS

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