

Day 1 – Friday Dec 2, 2022	
Time	Activity
9:00 30 min	  Welcome
9:30 30 min	Keynote Speech The Battle of the Bands in the Era of 6G Prof. George K. Karagiannidis, <i>Electrical & Computer Engineering Department, Aristotle University of Thessaloniki</i>
10:00 30 min	Coffee Break
10:30 to 12:15	Technical Session 1-I: 5G Communication Systems and Networks Session Chair: Prof. Kostas Yiannopoulos Towards Securing Next-Generation Networks: Attacking 5G Core/RAN Testbed George Amponis, Panagiotis Radoglou Grammatikis, Thomas Lagkas, Savvas Ouzounidis, Maria Zevgara, Ioannis Moscholios, Sotirios Goudos and Panagiotis Sarigiannidis Performance Evaluation of the 5G LDPC and RS Codes in a Pre-Amplified PPM Receiver Konstantinos Yiannopoulos, Antonios Aspreas and Nikolaos Sagias Overview of SDR Platforms Based on Open Source Software: A 5G System Emulation with Open Air Interface Emmanouil-Zafeirios Bozis, Michael Batistatos and Nikos Sagias Estimating the Required Resources in a Vehicular Ad Hoc Network Using Queueing Theory Models Irene Keramidi, Ioannis Moscholios, Michael Logothetis and Panagiotis Sarigiannidis Supervisory Control for the AODV Routing Protocol Nikolaos Kouvakas, Fotis Koumboulis, Dimitrios Fragkoulis and Nikolaos Georgiou A Call Admission Control Mechanism based both on Queueing and the Probabilistic Bandwidth Reservation Policy in Mobile Hotspots Marinos Vlasakis, Irene Keramidi, Ioannis Moscholios, Panagiotis Sarigiannidis and Michael Logothetis
12:30 to 14:15	Technical Session 1-II: Analog/Mixed-Signal Circuits-I Session Chair: Prof. Costas Psychalinos Heart Rate Controller Design for Cardiac Pacemaker Julia Nako and Costas Psychalinos Home Healthcare Technologies & Services: Heart Rate Fetus Monitoring System Using a MCU ESP8266 Node Anastasios G. Skrivanos, Evangelia I. Kosma, Spyridon K. Chronopoulos, Ioannis Kouretas and Kostas Peppas

	A Hardware-Friendly Low-Power Area-Efficient GMM-Based Analog Classifier for Skin Detection Michail-Aggelos Gkaltemis, Georgios Lymperakis, Georgios Gennis, Vassilis Alimisis and Paul P. Sotiriadis Analyzing the Beehive's Sound to Monitor the Presence of the Queen Bee Dimitrios Kampelopoulos, Ioannis Sofianidis, Chrysoula Tananaki, Konstantina Tsiapali, Spyridon Nikolaidis and Kostas Siozios Simple Designs of Fractional-Order Shelving Filters for Acoustic Systems Alexandros Pagidas and Costas Psychalinos Designing a Lightweight Convolutional Neural Network for Bird Audio Detection Christos Tsompos, Vassilis Pavlidis and Kostas Siozios
14:15 45 min	Mid-day Break
15:00 to 16:15	Technical Session 1-III: Embedded Systems Session Chair: Prof. Ioannis Moscholios Simulated Partial Discharge Harmonic Data Generation for Neural Network Training in the Absence of Real Measurements: A First Approach Dimitris Barkas, Konstantinos Kalkanis, George Ioannidis, Stavros Kaminaris and Constantinos Psomopoulos CAS-HtBase: A New Database for the Study of HTs at the Pre-silicon Stage of ASICs Konstantinos G Liakos and Fotis Plessas Hardware Acceleration of Transformer Networks using FPGAs Christoforos Kachris, Georgios Tzanos and Dimitrios Soudris A high-performance FPGA architecture for Acceleration of SVM Machine Learning Training Christoforos Kachris, Charalampos Kardaris and Dimitrios Soudris
16:30 to 17:45	Technical Session 1-IV: Applications and Data Analysis Session Chair: Prof. Nikolaos Tselikas Arduino Rocket Flight Computer Philippos G. Moschidis and Petros S. Bithas Computational Thinking in Greek Educational System for K-12: Towards the Future Teaching Approach Ioannis Dimos, Chrysoula Velaora and Athanasios Kakarountas The Computer Vision Box & Block Test in Rehabilitation Assessment Orestis Zestas, Dimitrios Soumis, Kyriakos Kyriakou, Kyriaki Seklou and Nikolaos Tselikas Digital Version of the "Open/Close Zip" Subtest Included in the Sollerman Hand Function Test Dimitrios Soumis, Orestis Zestas, Kyriakos Kyriakou, Kyriaki Seklou and Nikolaos Tselikas
20:30	Gala Dinner https://www.google.com/maps/d/edit?mid=1MuynrVFpJlun_GSPq7kZOIYO2K_bxM&usp=sharing

Day 2 – Saturday Dec 3, 2022

Time	Activity
	Technical Session 2-I: Communication Circuits and Systems Session Chair: Prof. Spyros Blionas
9:00	A Ka-Band Quasi-F-1 Power Amplifier in a 130 nm SiGe BiCMOS Technology Vasileios Manouras and Ioannis Papananos A 40 GHz Low Phase Noise VCO in 40 nm CMOS Ioannis-Dimitrios Psycharis and Grigorios Kalivas
to	Design and Implementation of a D-Band I/Q Modulator in a 130 nm SiGe BiCMOS Technology Filippa Soumpasakou, Vasileios Manouras and Ioannis Papananos
11:15	Low Noise-Low Power Transimpedance Amplifier Design for Electric Field Sensing Aikaterini Lemonou, Zoi Agorastou, Thomas Noulis and Stylianos Siskos Nano-Watt Voltage References for High Supply Voltages Christos Lavrentiadis, Vasiliki Gogolou and Stylianos Siskos Chemically-Inspired Memristor-Based Neuron-Like Oscillating Circuit Theodoros Panagiotis Chatzinikolaou, Iosif-Angelos Fyrigos, Charalampos Tsioustas, Panagiotis Bousoulas, Michail-Antisthenis I. Tsompanas, Dimitris Tsoukalas and Georgios Ch. Sirakoulis 3D IC Design-for-Test with Implementation of the IEEE 1149.1-2013, the IEEE 1500-2005, and the IEEE 1838-2019 Standard Konstantinos Leventos and Chrysovalantis Kavousianos
11:15 30 min	Coffee Break
	Technical Session 2-II: Internet of Things Session Chair: Prof. Ioannis Moscholios
11:45	SENITY: An Emulator for Smart Energy Management of Households in a City Kyriaki Seklou, Panagiotis Kokkinos, Vassilis Pouloupoulos and Nikolaos D. Tselikas ATLAS: Internet of Things Platform for Precision Aquaculture Vasilis Papanikolaou, Sotiris Tegos, Pavlos Bouzinis, Dimitrios Tyrovolas, Panagiotis Diamantoulakis and George Karagiannidis
to	DECODE Cloud Platform: A New Cloud Platform to Combat the Burden of Peripheral Artery Disease Mohammed Aboarab, Vassiliki Potsika, Dimitrios Fotiadis and Nikola Petrović
14:00	A Technological Framework for Leveraging First Responders' Efficiency and Safety Michael Batistatos, Michail-Alexandros Kourtis, George Xilouris, Dimitris Santorinaios, Andreas Oikonomakis and Anastasios Kourtis An Augmented Reality Framework for First Responders: The RESPOND-A Project Approach Harbil Arregui, Eider Irigoyen, Iñaki Cejudo, Sebastian Simonsen, Drazen Ribar, Michail-Alexandros Kourtis, Yannis Spyridis, Natalia Stathakarou and Michael C. Batistatos Online Self-Distillation for Electric Load Demand Forecasting on Greek Energy Market Maria Tzelepi, Alkmini Sapountzaki, Nikitas Maragkos and Anastasios Tefas Short-Term Electric Load Demand Forecasting on Greek Energy Market using Deep Learning: A comparative study George Emmanouilidis, Maria Tzelepi and Anastasios Tefas

14:00 60 min	Mid-day Break
15:00 to 17:15	Technical Session 2-III: Analog/Mixed-Signal Circuits-II Session Chair: Prof. Costas Psychalinos Microcontroller Based Electric Field Mill Sensor Interface Alexandros Chatzis, Zoi Agorastou and Stylianos Siskos Metaheuristic Multivariable PI Controller Design for an Ethanol Production Continuous Fermenter Nikolaos Kouvakas, Fotis Koumboulis, Dimitrios Fragkoulis and Tatiana Chrysoula Drosou Comparison of Complementary Filters Implementations for Unmanned Aerial Vehicles Spyros Kontelis and Costas Psychalinos A Low-Cost IoT System for Indoor Positioning Targeting Assistive Environments Vasileios Serasidis, Ioannis Sofianidis, George Margaritis, Christos Sad, Vasileios Konstantakos and Kostas Siozios Buck-Boost Charge Pump based DC-DC Converter Evi Keramida, George Souliotis, Spyridon Vlassis and Fotis Plessas Charge-Based Time Registers for z-1 Implementation Konstantinos Panagiotis Pagkalos, Orfeas Panetas-Felouris and Spyridon Vlassis Power Analysis Methodology for Energy Harvesting System on Chip Christina Panagiotopoulou, Anastasios Michailidis, Vasiliki Gogolou, Thomas Noulis, Kostas Siozios and Stylianos Siskos
	Technical Session 2-IV (<i>Room B₁</i>): Optical and Wireless Communication Systems Session Chair: Prof. Tanya Politi Wi-Fi 6 Aerial Relay Node for Emergency Operations Michael Batistatos, Michail-Alexandros Kourtis, George Xilouris, Dimitris Santorinaios, Andreas Oikonomakis, Emmanouil-Zafeirios Bozis, Ioannis Moscholios, Nikos Sagias and Anastasios Kourtis Experimental Evaluation of a Euclidean Distances based 3-Color Shift Keying Scheme for Visible Light Communications Georgios Megas, Georgios Papatheodorou, Yiorgos Sfikas, Aristides Efthymiou and Yiorgos Tsiatouhas Hierarchical Energy Efficient Routing in Wireless Sensor Networks: A Comparative Study on LEACH Protocol and its Successors Dimitrios Rountos, Dionisis Kandris, Emmanouil Andreas Evangelakos and George Tselikis Bit Error Probability of an Optically Pre-amplified Pulse Position Modulation Receiver with Reed Solomon Error Correction Antonis Aspreas and Konstantinos Yiannopoulos Positioning Enhancement using Low Cost GNSS Receivers Data Exchange in Critical Intelligent Transport Systems Theodore T. Kapsis, Thanassis Mpimis, Athanasios D. Panagopoulos and Vassilis Gikas Path Loss Prediction Modelling for Next-generation Internet-of-Things Applications Using Different Boosting Machine Learning Methods Vasileios Panagiotis Rekkas, Sotirios Sotiroudis, Georgia Athanasiadou, Panagiotis Sarigiannidis, George Tsoulos and Sotirios Goudos Machine Learning Assisted Indoor Visible Light Communications Radio Environment Maps Helena Serpi and Christina Tanya Politi

17:15
30 min

Closing Ceremony and Student Paper Awards