

Short CV

Dr. Efstathios Kyriakis-Bitaros received his B.Sc. degree in Physics from the University of Patras, Patras, Greece in 1987 and the Ph.D. degree in Electrical Engineering from the University of Patras, in 1994. In 1996 he joined the Institute of Microelectronics, NCSR "Demokritos", Athens, Greece, as an associate researcher. From 2003 he is with the Department of Electrical and Electronics Engineering, University of West Attica (former Department of Electronics Engineering, Piraeus University of Applied Sciences) where now he is a professor. He is the author or co-author of more than 70 publications including book chapters, publications in scientific international journals and conference proceedings. He also serves as a reviewer of scientific journals and conferences.

He is/was scientific coordinator or member of the research team in over 20 research projects funded by the EU, ESA and Greek national authorities, such as "Safe Control of non Cooperative Vehicles Through Electromagnetic Means, SAVELEC", (FP7, 285202), "Remote RF powering and Passive Telemetry link for a Wireless Strain Sensor System" (ESA/ESTEC 21339/08/NL/GLC), "Multigigabit Optical Backplane Interconnections" (ESA/ESTEC Contract No: 17884/03/NL/HE), "Photonic Interconnect Layer on CMOS by Wafer-Scale Integration" PiCMOS (FP6-2002-IST-1-002131).

His current research interests include the development and implementation of FPGA sensor interfaces, systems and networks, reconfigurable digital system design using FPGAs, power harvesting techniques for low-power microcontroller applications and real-time DSP algorithms implementation.

Prof. Kyriakis-Bitaros joined in 2016 the Greek ATLAS Group (under NKUA) and now he is the Leader of the UNIWA team, which established as an ATLAS Technical Associate Institute in October 2019. He was actively involved in the design and implementation of the L1DDC testing hardware and firmware and the final testing of the production boards which will be installed on the NSW. His extensive experience in electronic systems design and testing using FPGAs for various applications including high-speed optical networks, is essential for the development of the DCT test bench within the context of the proposed project.

Administrative positions:

- Head of the Electrical and Electronics Engineering Department, Univ. of West Attica since 2018 and member of the Senate.
- Head of the Electronics Engineering Department, Piraeus Univ. of Applied Sciences 2016 – 2018.
- Director of the Division of Electronics and Computers, Electronics Engineering Department, Piraeus Univ. of Applied Sciences (2010 – 2015).

Selected publications:

M. Corradi, P. Gkoutoumis, E. Kyriakis Bitzaros, I. Longarini, I. Mesolongitis, F. Morodei, R. Vari, and K. Zachariadou, on behalf of the ATLAS Muon Collaboration, "The ATLAS Muon Trigger System for the High Luminosity LHC: Upgraded data readout and transmission electronics for the Resistive Plate Chambers", 2021 IEEE Nuclear Science Symposium and Medical Imaging Conference, Yokohama, Japan (online).

P. Gkoutoumis, D. Matakias, N. Kanellos, A. Vgenopoulos, I.D. Koulouris, T. Alexopoulos, I.P. Mesolongitis, E. Politis, K. Zachariadou, E.D. Kyriakis-Bitaros, V. Lefkovits, C. Kourkoumelis, "Validation of the Production-Phase Level-1 Data Driver Cards for the Readout and Trigger System of the ATLAS New Small Wheel Detector", 9th International Conference on Modern Circuits and Systems Technologies, MOCAST 2020, Bremen, Germany.

I. Zafeirakis, M. – K. Filippidou, S. Chatzandroulis, E. D. Kyriakis – Bitzaros, N. Stathopoulos, S. Vassiliadis, "Design and implementation of a re-configurable embedded system for capacitive sensor array interface", MOCAST 2018, May 2018, Thessaloniki, Hellas.

- I. P. Mesolongitis, A. Gkountis, E. D. Kyriakis – Bitzaros, K. Zachariadou, P. Gkountoumis, T. Alexopoulos, "Testing the Level-1 Data Driver Card for the New Small Wheel of the ATLAS Detector", MOCAS 2017, May 2017, Thessaloniki, Hellas.
- E. D. Kyriakis-Bitaros, N. A. Stathopoulos, S. Pavlos, D. Goustouridis, and S. Chatzandroulis "A Reconfigurable, Multi-Channel Capacitive Sensor Array Interface", IEEE Trans. on Instrumentation and Measurements, Vol. 60, No 9, Sep. 2011, pp. 3214 – 3221.
- E. Grivas, E.D. Kyriakis-Bitaros, G. Halkias, S. Katsafouros, G. Morthier, P. Dumon, R. Baets, T. Farrell, N. Ryan, I. McKenzie, and E. Armadillo, "Wavelength Division Multiplexing Based Optical Backplane with Arrayed Waveguide Grating Passive Router", Optical Engineering, SPIE, vol 47(2), Feb. 2008, (# 025401).
- K. Minoglou, E. D. Kyriakis-Bitaros, D. Syvridis and G. Halkias, "A compact non-linear equivalent circuit model and parameter extraction method for packaged high-speed VCSELs", IEEE Journal of Lightwave Technology, Vol. 22, No 12, Dec 2004, pp. 2823-2827.
- E.D. Kyriakis-Bitaros, N. Haralabidis, M. Lagadas, A. Georgakilas, Y. Moisiadis, and G. Halkias, "Realistic End-To-End Simulation of the Inter-Chip Optoelectronic Links and Comparison With the Electrical Interconnections for System-on-Chip Applications", IEEE Journal of Lightwave Technology, Vol. 19, No. 10, pp.1532-1542, Oct 2001.
- J.N. Mourjopoulos, E.D. Kyriakis-Bitaros, and C.E. Goutis, "Theory and Real-Time Implementation of Time Varying Digital Audio Filters", Journal of AES, Vol 38, No. 718, July-August 1990, pp. 523-536.