

Seminar

Wednesday, 11 October 2023

16:30, D011

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Title: EDA tools for Secure and Reliable High Level Synthesis Implementations

Abstract: Data protection is not the only concern for cybersecurity; hardware attacks can have equally deleterious effects. Delayed or faulty trafficking of data within hardware components can have serious, even life-threatening consequences: for the Internet of Things, self-driving cars and remote medicine, reliability is one of the primary concerns. Hardware accelerators are increasingly used to meet the demands of cutting-edge technologies. They offload certain tasks onto specialised hardware elements to enhance efficiency compared to using a general-purpose CPU alone. High level synthesis (HLS), an electronic design automation (EDA) tool, takes high-level functional descriptions of a design and turns it into a register-transfer level (RTL) design. The EU-funded SecuReHLS project is developing EDA tools that will enable the rational and automated insertion of protections during an HLS flow to automatically obtain secure and reliable RTL descriptions.



Short bio: [Athanasios Papadimitriou](#) is currently an Assistant Professor at the University of the Peloponnese on the field of “Hardware Security of Embedded Systems” and a Marie Skłodowska-Curie Fellow (Individual Fellowship) at the Embedded Systems Laboratory of the University of Piraeus. Athanasios is a graduate of the School of Applied Mathematical and Physical Sciences of the National Technical University of Athens. He holds a PhD degree on the field of Hardware Security working at the LCIS and TIMA Laboratories of Grenoble Institute of Technology (Grenoble INP) and the Univ. Grenoble Alpes.