

IEEE CS-DeCAIR Workshop

Part 2 of 2

Oct 19, 2022 (Amman, Jordan)

Date and Time	Wednesday 19/10/2022, 5:30 – 8:30 pm
Place	Amman and Zoom meeting
Objective	The main purpose of the event is to raise the awareness of AI and Robotics related research and applications among the IEEE Computer Society members and the academic community. In addition to its informative nature, the proposed workshop would be a great opportunity for the CS members to interact, connect and cooperate.
Organizers	<ul style="list-style-type: none"> • Jordan Joint Chapter of the IEEE Computer Society and Computational Intelligence Society • IEEE – Jordan Section • DeCAIR Project: Developing Curricula for Artificial Intelligence and Robotics
Registration	<ul style="list-style-type: none"> • There is a limited number of seats. • Participation mode: in-person or through Zoom meeting • Accepted registrations will receive email confirmation message specifying the mode of participation (In-person, or virtual)

Schedule

5:30 – 6:00 pm	Registration and Welcome Coffee
6:00 – 6:10 pm	Welcome Note Dr. Anas Al Majali (Secretary, Jordan Joint Chapter of the IEEE CS and CIS)
6:10 – 6:20 pm	IEEE CS Chapter and DeCAIR Project Prof. Gheith Abandah (Chapter Chair and DeCAIR General Coordinator)
6:20 – 7:25 pm	Breaking the Laws of Robotics: Attacking Industrial Robots Dr. Stefano Zanero (Keynote Speaker)
7:30 – 8:30 pm	Dinner

Dr. Stefano Zanero



Stefano Zanero received a PhD in Computer Engineering from Politecnico di Milano, where he is currently an associate professor with the Dipartimento di Elettronica, Informazione e Bioingegneria. His research focuses on malware analysis, cyberphysical security, and cybersecurity in general. Besides teaching “Computer Security” and “Digital Forensics and Cybercrime” at Politecnico, he has an extensive speaking and training experience in Italy and abroad. He co-authored over 90 scientific papers and books. He is a Senior Member of the IEEE and sits in the Board

of Governors of the IEEE Computer Society; he is a lifetime senior member of the ACM, which has named him a Distinguished Speaker; and has been named a Fellow of the ISSA (Information System Security Association). Stefano is also a co-founder and chairman of Secure Network, a leading cybersecurity assessment firm, and a co-founder of BankSealer, a startup in the FinTech sector that addresses fraud detection through machine learning techniques.

Talk Title: Breaking the Laws of Robotics: Attacking Industrial Robots

Industrial robots are complex cyber-physical systems used for manufacturing, and a critical component of any modern factory. These robots aren't just electromechanical devices but include complex embedded controllers, which are often interconnected with other computers in the factory network, safety systems, and to the Internet for remote monitoring and maintenance. In this scenario, industrial routers also play a key role, because they directly expose the robot's controller. Therefore, the impact of a single, simple vulnerability can grant attackers an easy entry point. The talk will discuss how remote attackers are able to attack such robots up to the point where they can alter the manufactured product, physically damage the robot, steal industry secrets, or injure humans.