

14:00 -14:05 Welcome Note.

Chair Ali Sodhro

14:05-14:15 Keynote 1

Keynote 1:



Nuno M. Garcia holds a PhD in Computer Science Engineering from the *Universidade da Beira Interior* (UBI, Covilhã, Portugal) (2008) and is a 5-year BSc in Mathematics / Informatics (*Hons.*) also from UBI (1999-2004). He was an entrepreneur (1988-2004), member of the Research Team at Siemens SA (2004-2007) and Nokia Siemens SA (2007-2008), and Head of Research at PLUX SA (2008-2010).

Currently he is Full Professor of Biomedical Engineering at the Faculty of Sciences, University of Lisbon, and member of the research team of the Institute of Biophysics and Biomedical Engineering. He is also a Senior Researcher at the *Instituto de Telecomunicações* (Covilhã, Portugal).

He has co-authored several books, book chapters, scientific papers, and patents in the areas of Computer Science Engineering and Biomedical Engineering. He was Principal Investigator at several European and international projects, directly managing over 5.8 million Euros.

He is fluent in Portuguese (native language), English, Spanish, and French. He is member of ISOC and of the Non-Commercial Users Constituency, a group within GNSO in ICANN. His main interests include predictive algorithms for healthcare and well-being, distributed and cooperative algorithms, and the battle for a Free and Open Internet.

His full CV can be found at this location:

<https://webpages.ciencias.ulisboa.pt/~nmgsantos/cv/cvnunomgarcia.pdf>

14:20-14:35

Paper 1: 5G Integrated Access and Backhaul: Performance Analysis of Congestion Control in 3GPP

14:40-15:00

Paper 2: A Novel BIBO Automated Ticketing System Based on Blockchain Mobile Sensors for Public Transport Modes

15:30 -16:00 - Break

16:00-16:10 Keynote 2:

Chair: Ali Sodhro

Where We Are Now and Where We're Going with Cybersecurity for Industrial Internet of Things

Abstract

The Industrial Internet of Things (IIoT), also referred to as Industry 4.0, encompasses a range of IoT technologies such as sensors, smart objects, Cyber Physical Systems, information technology, and cloud/edge computing platforms. These ecosystems use data and machine learning algorithms to enhance industrial operations, such as predictive maintenance, for example. In addition, the fast-paced advancements in hardware and software, along with increased connectivity, in Industrial Control Systems and Operational Technology have brought about remarkable efficiencies. However, these advancements also come with their own set of challenges. In today's business environment, the importance of raising awareness regarding cybersecurity has become even more pressing, especially with the growing popularity of the IIoT. For example, there is a potential risk of compromising the integrity, confidentiality, and availability of the service and/or data. In addition, the utilization of advanced technologies like artificial intelligence and cloud/fog/edge computing has revealed the vulnerabilities of web interfaces to various cyber threats, including Man in The Middle attacks, Distributed Denial of Service attacks, and cloud malware injection attacks. In this study, we conduct a thorough literature review and comprehensive analysis to examine how the current state of the art addresses cybersecurity awareness in the context of IIoT. Our goal is to offer a comprehensive overview of potential solutions in this area. We will explore IIoT cybersecurity concerns at various levels, including device level components, underlying communication protocols, control systems, and IIoT applications.



Bio: Dr. Abdellah Chehri is an Associate Professor at the Royal Military College of Canada (RMC), Kingston, Ontario. Before joining the RMC, he was an associate professor at the University of Quebec (UQAC). He has an affiliate professor at the University of Quebec UQO and an adjunct professor at the University of Ottawa. Dr. Chehri completed his Ph.D. at University Laval (Canada) and his Master's studies at University Nice-Sophia Antipolis (France). He has served as guest/associate editor for several well-reputed journals. Dr. Chehri is a Senior Member of IEEE, a member of the IEEE Communication Society (ComSoc), IEEE Vehicular Technology Society (VTS), IEEE Photonics Society, IEEE Public Safety Transportation Committee Co-Chair, and IEEE Canadian Humanitarian Initiatives Committee.

16:15 - 16:30

Paper 3: Aol-based Temporal Graph Attention Network for Content Update

16:30-16:45

Paper 4: Blockchain and IoT Synergy in Healthcare: Bibliometric Analysis

16:45-17:00

Paper 5: Defense via Behavior Attestation against Attacks in Connected and Automated Vehicles based Federated Learning Systems

17:00-17:15

Paper 6: Edge Computing QoE Maximization in EV Parking Scenario

17:15-17:30

Paper 7: Hierarchical Deep Learning Framework for Enhanced UAV Classification Mitigating Bluetooth and WiFi Interference

17:30-17:45

Paper 8: Hybrid MI and RIS-Assisted Acoustic Communication for Channel Capacity Maximization in AUV-Based UWAC System

Workshop end note!

Sandeep Pirbhulal and Muhammad Muzammal