

**ABSTRACTS OF THE FIRST INTERNATIONAL CONFERENCE ON
ADVANCES IN ELECTRICAL AND COMPUTER ENGINEERING 2023**



Editor

Amel BOUCHEMHA

Organized By

**Faculty of Science and Technology, Department of Electrical Engineering
University of Echahid Cheikh Larbi Tebessi, Tebessa-ALGERIA**



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Amel BOUCHEMHA
(Editor)

*Abstracts of the First International Conference on
Advances in Electrical and Computer Engineering 2023
ICAECE'2023 (15-16 May 2023)*

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Faculty of Science and Technology, Department of Electrical Engineering
University of Echahid Cheikh Larbi Tebessi, Tebessa-Algeria

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Abstracts of the First International Conference on Advances in Electrical and Computer Engineering 2023
ICAEECE'2023 (15-16 May 2023)

Editor

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ICAECE'2023

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About the Conference

The First International Conference on Advances in Electrical and Computer Engineering (ICAECE'2023) was held on May 15-16, 2023 at the University of Echahid Cheikh Larbi Tebessi, Tebessa - Algeria. ICAECE'2023 was delivered in-person and virtually, and was open for researchers, engineers, academics and industrial professionals from around the world interested in new trends and advances in current topics of Electrical and Computer Engineering. Particularly, the scope of ICAECE'2023 was planned to include development of theory, methods, systems, and applications in the following topics of interest:

- Track I: Electrical Engineering.
- Track II: Signal and Image Processing
- Track III: Advanced & Intelligent Control
- Track IV: Communications and Networks.

The ICAECE'2023 conference allowed bringing together renowned speakers, researchers, companies' consultants and students to share their findings and experiences in the planned research scope.

About the Editor



Dr. Amel Bouchemha received her Engineer degree in Electrical Engineering and Magister degrees in signal processing from the University of Constantine, Algeria. In 2016, she received her PhD from Annaba University, Algeria and received his "Habilitation à Diriger des Recherches" (HDR) from the University of Tebessa, Algeria in 2020. Since 2001, she has been working as a researcher and an associate Professor at the University of Tebessa Algeria. She has made contributions as author and co-author for international communications and publications and serving as an author of two book chapters in the fields of biometrics, with publications by ISTE-Wiley, and Hermes. Her principal research interests include biometrics, signal and image processing, modelling, advanced & Intelligent Control.

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Keynote Speakers

Prof. Abbas CHEDDAD

Blekinge Institute of Technology, Sweden (Ph.D. United Kingdom, Senior Member IEEE/ACM)



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Prof. Abbas Cheddad is currently working as an Associate Professor at the department of computer science and engineering, the Blekinge Institute of Technology in Sweden. Prior to this, he was a researcher at the Umeå University (Umeå Centre for Molecular Medicine, Sweden) and the Karolinska Institute (Department of Medical Epidemiology and Biostatistics, Stockholm). He obtained his PhD with a distinction award from the Intelligent Systems Research Centre at the University of Ulster, United Kingdom, in 2010. Dr. Cheddad's research interests fall into the following interlinked topics: Computer vision, 3D reconstruction and Optical projection tomography, Steganography, Medical image analysis, Quantitative imaging biomarkers, Pattern localisation and recognition, Characterization and validation of imaging bio-markers, Evaluation of the association between image-based phenotypes and genomic biomarkers, algorithms for the computer-guided analysis of multi-dimensional microscopy-data sets, Computational support for tissue-related target/ biomarker discovery, development and analysis, and machine learning applications. Dr. Cheddad is the co-founder and one of the shareholders of *Actionsense LTD. (Company number NI612943)*, a university spin-out company based in the UK. This initiative is trying to exploit our patented technology and encryption methods which enable the encryption and embedding of secret information (text or images) inside other multimedia files using Steganography techniques. Our award-winning Steganography-based hiding solution plays a vital role in securing digital media content. *Actionsense* won the Hi-Tech category at the Belfast 25K Investment awards, 2009. As for professional memberships, Dr. Cheddad is a member of IEEE Society and IEEE Communication Society, the Swedish Society for Automated Image Analysis, the Swedish Bioimaging and the Swedish e.Science Research Centre (SERC). He is a frequent reviewer for major journals in the field such as: IEEE Transactions on Image Processing, IEEE Transactions on Information Forensics and Security, Signal Processing and Signal Processing: Image Communication, to name a few. He has 3850 citations in total distributed unevenly among 33 Journal papers, 42 conference papers, a Book, a book chapter (invited) and 3 patents.

Prof. Ahmed CHEMORI

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Ahmed Chemori received his M.Sc. and Ph.D. degrees, both in automatic control from Polytechnic Institute of Grenoble, France, in 2001 and 2005 respectively. During the year 2004/2005 he has been a Research and Teaching assistant at Laboratoire de Signaux et Systèmes (LSS - Centrale Supélec) and University Paris 11. Then he joined Gipsa-Lab (Former LAG) as a CNRS postdoctoral researcher. He is currently a senior researcher in Automatic control and Robotics for the French National Center for Scientific Research (CNRS), at the Montpellier Laboratory of Computer Science, Robotics and Microelectronics (LIRMM). His research interests include nonlinear (robust, adaptive, and predictive) control and their real-time applications in different fields of robotics (underactuated robotics, parallel robotics, underwater robotics, humanoid robotics and wearable robotics). He is the author of more than 150 scientific publications, including international journals, patents, books, book chapters and international conferences. He served as Associate editor for various journals. He has been a TPC/IPC member and associate editor for different international conferences. He organized different scientific events, including summer schools, workshops and international conferences. He has also delivered various plenary/keynote lectures at international conferences.

Professor Halim Yanikomeroglu

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Dr. Halim Yanikomeroglu is a Professor at Carleton University, Canada. He received his Ph.D. from the University of Toronto in 1998. He contributed to 4G/5G technologies and standards; his research focus in recent years include 6G/B6G, non-terrestrial networks (NTN), and future wireless infrastructure. His extensive collaboration with industry resulted in 39 granted patents. He supervised or hosted in his lab around 170 postgraduate researchers. He co-authored IEEE papers with faculty members in 80+ universities in 25 countries. He is a Fellow of IEEE, Engineering Institute of Canada (EIC), and Canadian Academy of Engineering (CAE), and an IEEE Distinguished Speaker for ComSoc and VTS. Dr. Yanikomeroglu is serving as the Chair of IEEE WCNC Steering Committee, Member of IEEE ComSoc Conference Council, Member of IEEE PIMRC Steering Committee, and Member of ComSoc Emerging Technologies Committee. He served as the General Chair of two VTCs and Technical Program Chair/Co-Chair of three WCNCs. He chaired ComSoc Technical Committee on Personal Communications. He received several awards for his research, teaching, and service, including IEEE ComSoc Fred W. Ellersick Prize (2021), IEEE VTS Stuart Meyer Memorial Award (2020), IEEE ComSoc Wireless Communications Technical Committee Recognition Award (2018), and a number of best paper awards.

Workshop Speakers

Professor Kais Bouallegue

Higher Institute of applied Sciences and Technology of Sousse



Title : Artificial Intelligence and Chaotic for Engineering

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