



INTERNATIONAL CONFERENCE ON CONNECTED OBJECTS AND ARTIFICIAL INTELLIGENCE (COCIA'2023)



Laboratoire de Recherche en Réseaux,
Informatique, Télécommunication et Multimédia



Association Groupe Technique
Spécialisé en Intelligence Artificielle
جمعية المجموعة التقنية المتخصصة
في الذكاء الاصطناعي

Proceeding

2023 COCIA

MARCH 08 -09, 2023 – EST CASABLANCA – MOROCCO



Association Groupe Technique
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Preface

On behalf of the organizing committee, We are delighted to welcome you to the First International Conference on Connected Object and Artificial Intelligence (**COCIA'2023**), after the great success of the first edition of the International Symposium on Connected Objects and Systems (**COC'2019**) held at EST Casablanca, Morocco 2019. To broaden the disciplinary field in order to bring together scientists, researchers and professionals working on other themes (Intelligent Systems, Artificial Intelligence, Telecommunications, ...), the local committee of this edition has decided to launch the first edition of the International Conference on Connected Objects and Artificial Intelligence (**COCIA'2023**).

The **COCIA'2023** will be held as an onsite event from March 08-09, 2023 in Casablanca, Morocco.

The COCIA'2023 aims to create high-quality exchange channels to consolidate interactions between researchers and industrialists, strengthen their links with scientific and technological actors and thus allow better visibility in the field of objects, systems. connected, Telecommunications and Artificial Intelligence. and aims to exchange research ideas and future trends, and to explore potential collaboration opportunities.

At this event, four-renowned plenary speakers will provide outstanding insights and dealing with major scientific topics in the field of connected objects, telecommunications and artificial intelligence. In addition, several thematic sessions presenting research work in the form of lectures and posters.

The **COCIA'203** has succeeded to attract several participants from different universities, A very rich and attractive scientific program covering multiple aspects of various topics is designed to provide an excellent opportunity for networking, dissemination and, exchange of innovative research findings related to different issues and topics.

Finally, We wish pleasant reading and a fruitful impact of **COCIA'2023** proceedings on your future innovations and research. and we look forward to to welcoming you all in the next edition of the **COCIA** conference

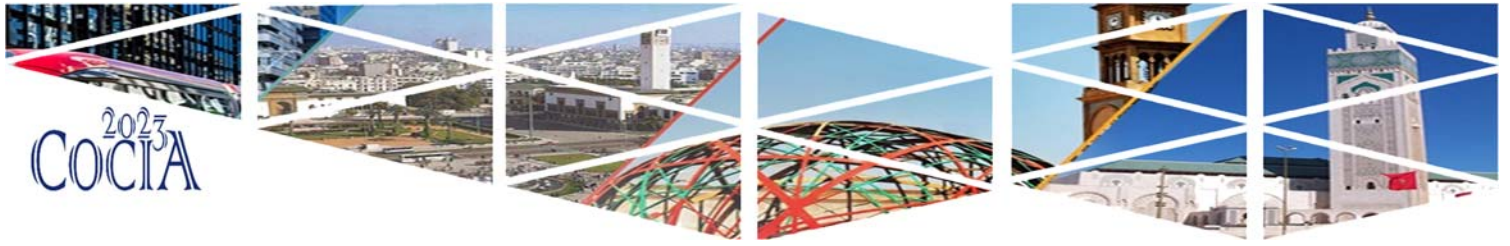
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Prof. Youssef MEJDOUB
(ESTC, UH2C, Casablanca, Morocco)



Prof. Abdelkebir ELAMRI
(ESTC, UH2C, Casablanca, Morocco)



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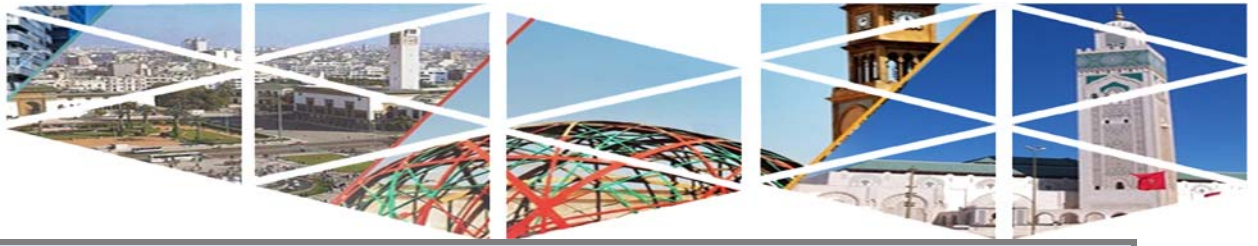
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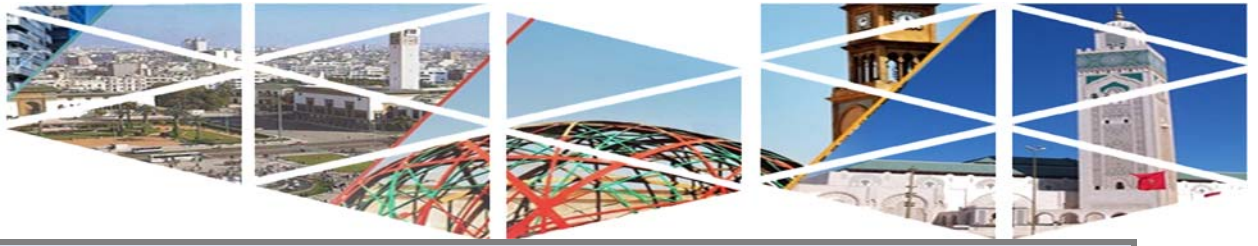




2023
COCIA

Main Program of the COCIA'2023 Conference

Wednesday, March 08, 2023			
8:00 – 9:15	Welcome and Registration of participants		
9:15 – 9:45	<p align="center">Official Opening of the Conference</p> <p>Prof. Houssine AZEDDOUG President of UH2C University, Casablanca, Morocco Prof. Abdelmajid BADRI Director of EST, UH2C University, Casablanca, Morocco Prof. Abdelkebir ELAMRI COCIA'23 Chair, UH2C University, Casablanca, Morocco</p>		
10:00 – 11:00	<p><i>Keynote speaker 1: Prof. Eddy BAJIC, University of Lorraine, France</i> <i>Title: Contributions of social relationship paradigm in industrial IoT: towards socialized industrial communicating objects</i> Moderator: Pof. Mohamed HAMRAOUI (UH2C University, Morocco)</p>		
11:00 – 11:45	Coffee break + Poster Session		
11:45 – 12:45	<p><i>Keynote speaker 2: Prof. Otman ABDOUN, Abdelmalek Essaadi University, Morocco</i> <i>Title: Artificial intelligence approaches to solving combinatorial optimization problems</i> Pof. Abderraouf ABOUDOU (UH2C University, Morocco)</p>		
12:45 – 14:15	break Lunch		
14:30 – 16:00	Session 1: Connected objects and Systems	Session 2: Artificial Intelligence and its Application	Session 3: Telecommunications
16:00 – 16:45	Coffee break + Poster Session		
16:45 – 18:00	Session 4: Connected objects and Systems	Session 5: Artificial Intelligence and its Application	
Thursday, March 09, 2023			
8:30 – 9:00	Welcome and Registration		
09:15 – 10:15	<p><i>Keynote speaker 3: Prof. Soufiane BOUCENNA, Cergy-Pontoise University, France</i> <i>Title: The robot as a simulation tool to better understand the brain</i> Moderator: Pof. Lahoucine IDKHAJINE (Cergy-Paris University, France)</p>		
10:15 – 11:00	Coffee break		
11:00 – 12:00	<p>Keynote speaker 4: Prof. Abdelati REHA, ISGA Marrakech, Morocco Title: Fractal antennas and their applications in multiband and broadband telecommunications Pof. Abdelkebir EL AMRI (UH2C University, Morocco)</p>		
12:00 – 13:30	Session 6: Connected objects and Artificial Intelligence	Session 7: Telecommunications	Session 8: Electrical Engineering
13:30 – 14:30	break Lunch		
15:00 – 15:30	Closing Ceremony		



Speakers



Pr. Eddy BAJIC is full Professor of Automation Control and Industrial Computer Sciences at University of Lorraine, Nancy, France, and Research Director at CRAN laboratory, (Research Center for Automatic Control), a CNRS research unit UMR 7039. He is leading research activities on Intelligent and Distributed Manufacturing Systems, Smart Communicating Objects and Internet of Things (IoT) concepts, models and architectures for Industry 4.0 and logistics. His current research projects are particularly concerned with Intelligent Interaction between Objects and Systems based on social human interaction theories and embedded Intelligence. Since 2006 he is a scientific expert appointed by European Commission DG CNECT for assessment and evaluation of FP6-FP7-H2020-HORIZON ICT research projects and program calls in the domains of smart factory, smart cities, swarm intelligence, and Internet of Things. Since 2016, he is expert and committee member appointed by HCERES (High Council for the Evaluation of Research and Higher Education in France), for the assessment of bachelor and master degrees Curricula and Universities. He led several R&D projects at national and european levels, with academics, SMEs and major industries. He gives lectures on Intelligent and networked Automation, on Internet of Things concepts and technologies in foreign universities. As a member of the French national standardization committee AFNOR on Internet of Things (CN IoT), he contributes to standardization activities for the development of IoT at national and international levels. He is author of more than a hundred of scientific publications (IEEE, IFAC, UbiComp, ...) and several participations in books and major journals (Elsevier, Springer, Techniques de l'ingénieur, PUF, ...).

Title: Contributions of social relationship paradigm in industrial IoT: towards socialized industrial communicating objects



Pr. Otman ABDOUN : Associate Professor at Faculty of Science Abdelmalek Essaadi University, Tetouan, Morocco. He received his PhD in Computer Science from the University of Ibn Tofail Kenitra in February 2012 and a Habilitation from ENSA-Tetouan, Abdelmalek Essaadi University, Morocco in December 2017. Research interests: Artificial intelligence, Machine Learning, Competitive Learning, Data Analytics, Big Data, Intelligent Tutoring Systems, Multi-Agents System, Evolutionary Computation, Computational intelligence, Genetic Algorithm, and Image processing, etc.

Titre de la Conférence N°2 : Artificial intelligence approaches to solving combinatorial optimization problems



Pr. Abdelati REHA: Professor, Head of Department at ISGA Marrakech Morocco (INSTITUT SUPERIEUR D'INGENIERIE ET DES AFFAIRES). He was born in Casablanca-Morocco in 1975, he received the degree of engineer in aeronautic from the Royal Air Academy of Marrakech-Morocco in 1999, the degree of engineer in telecommunication from the INPTRabat-Morocco in 2002, the PHD degree in telecommunication from Hassan II University-Casablanca-Morocco in 2016. He is an Ex-Major in Moroccan Royal Air Forces. He is the head of Electronic department in ISGA-Marrakech. His main research interests are in fractal antennas, UWB applications, array antennas.

Titre : Fractal antennas and their applications in multiband and broadband telecommunications



Pr. Sofiane BOUCENNA: is Associate professor at CY Cergy Paris University in France. He was postdoctorate at Pierre et Marie Curie University in the Institut des Systèmes Intelligents et de Robotique lab (ISIR) in France in 2012-2014. He obtained its PhD at the Cergy Pontoise University in 2011, where he worked with the Neurocybernetic team of the Image and Signal processing Lab (ETIS). His research interests are focused on the modeling of cognitive mechanisms and the development of interaction capabilities such as imitation, emotion and social referencing. Currently, he attempts to assess the effect of the type of partners (adults, typically developing children and children with autism spectrum disorder) on robot learning.

Titre: The robot as a simulation tool to better understand the brain