THE 2nd INTERNATIONAL CONFERENCE ON CONNECTED OBJECTS AND ARTIFICIAL INTELLIGENCE

Conference PROGRAM

May 8-9-10 2024
Casablanca, Morocco

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AMaCTI A: Moroccan Association of Researchers in Technology and Artificial Intelligence
GTS-IA: Association Technical group specialized in artificial intelligence

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TOPICS & SESSIONS COCIA'2024

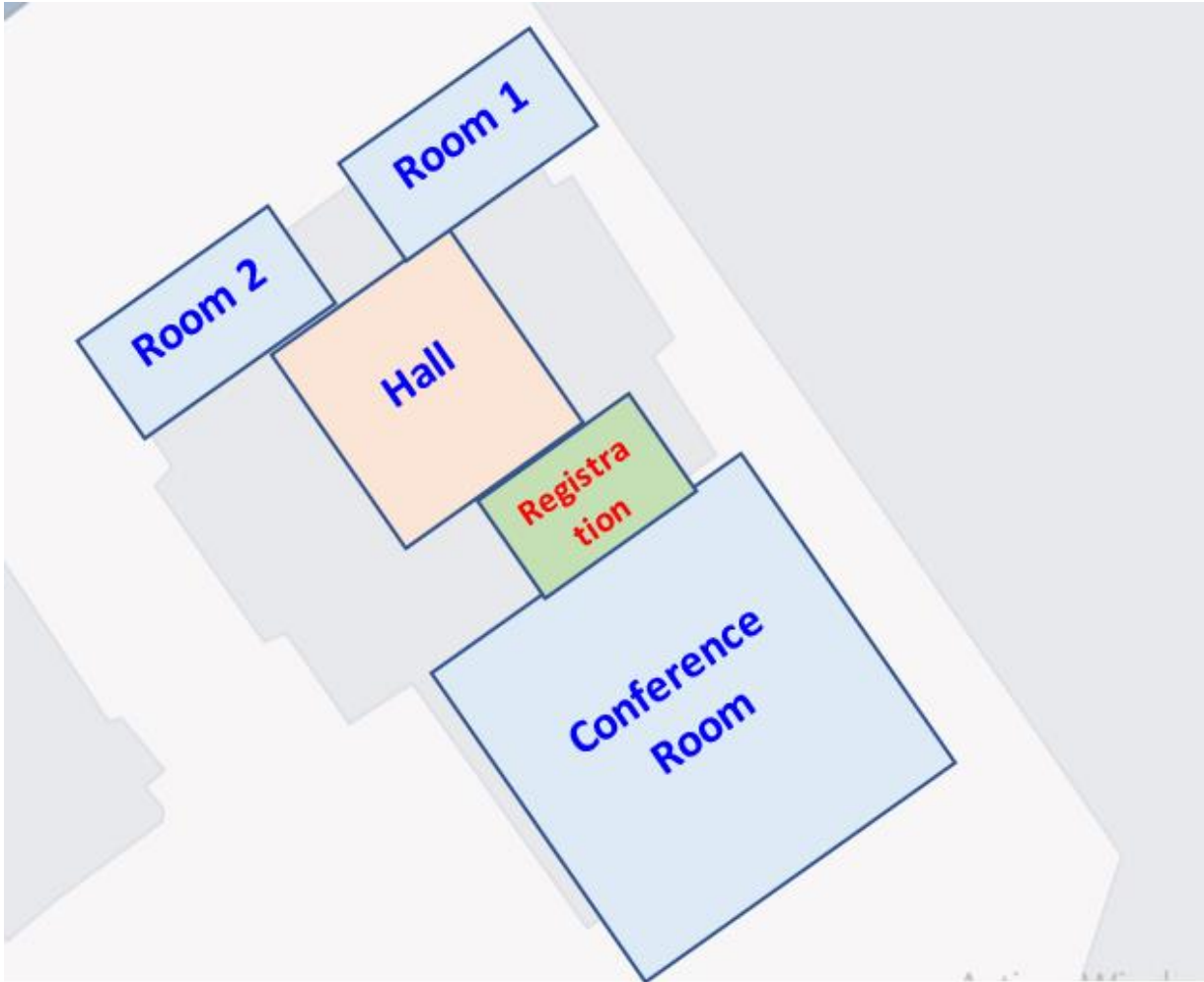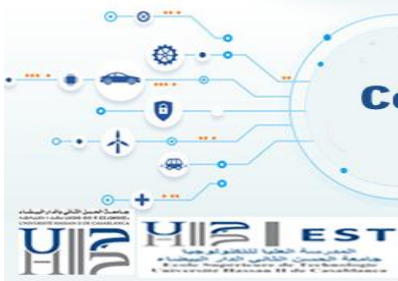| Session 1 : COCIA_1	Artificial Intelligence and its Application
Session 2 : COCIA_2	Connected objects and Systems
Session 3 : COCIA_3	Telecommunications
Session 4 : COCIA_4	Artificial Intelligence and its Application
Session 5 : COCIA_5	Connected objects and Systems
Session 6 : W3EIS_1	Electrical & Electronic Engineering
Session 7 : COCIA_6	Artificial Intelligence and its Application
Session 8 : COCIA_7	Connected objects and Telecommunications
Session 9 : W3EIS_2	Electrical Engineering & Energy
Session 10 : COCIA_8	Artificial Intelligence and its Application
Session 11 : COCIA_9	Connected objects and Industry 4.0
Session 12 : W3EIS_3	Electrical & Electronic Engineering
Session 13 : COCIA_10	Artificial Intelligence and its Application
Session 14 : W3EIS_4	Electrical Engineering and Systems
Session 15 : COCIA_11	Artificial Intelligence and Intelligent Systems (Online)
Session 16 : COCIA_12	Artificial Intelligence and its Application (Online)

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The First International Workshop On Electrical, Electronics,

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(3EIS'2024)

THE SECOND EDITION OF THE INTERNATIONAL CONFERENCE ON CONNECTED OBJECTS AND ARTIFICIAL INTELLIGENCE
(COCIA'2024)
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PRESENTATION GUIDELINES

- All presentations are in English.

- Each presentation is eight **(8-10) minutes** long with five (5) minutes for Q/As.

- Arrive 10 minutes before the session start time to upload your power point presentation. Please, start and end your presentation on time and keep the time schedule.

- For poster presentations, the posters should be displayed one hour before the beginning of the poster session and any explanation required should be provided to session chairs and visitors.

Main Program of the COCIA'2024 Conference

Wednesday May 8, 2024	
8:00 – 9:00	Registration and Welcome of Participants
9:00 – 9:45	**Official Opening of the Conference** **Prof. Houssine AZEDDOUG** President of UH2C University, Casablanca, Morocco **Prof. Rachid ESSAMOUD** Director of EST, UH2C University, Casablanca, Morocco **Prof. Mounir RIFI** Director of RITM Laboratory, UH2C University **Prof. Abdelkebir ELAMRI** COCIA'24 Chair, UH2C University, Casablanca, Morocco
9:45 – 10:45	*Keynote Speaker* 1 : Pr. Mohammed Ali JALLAL, *CEA, France* *Title:* "Advancing Smart Heating and Cooling Networks: Digital Twin and Deep Learning for Trustworthy Detection and Diagnosis of Substation Fouling Faults in Heating and Cooling Networks - A Case Study"
10:45 – 11:30	Coffee Break **& Poster Session**
11:30 – 12:30	*Keynote Speaker 2* : Pr Nasreddine BOUHAÏ, *Paris 8 University, France* Title: "Digital Convergence and Technocentrism in the Connected Era"
13:00 – 14:00	Lunch Break
14:45 – 15:45	Keynote Speaker 3 : Pr Moulay AKHLOUFI, Moncton University, Canada *Title: "Advancing Healthcare Through Deep Learning: Innovations in Medical Imaging and Future Perspectives"*

15:45 – 17:00	Oral Session 1 : COCIA_1	Oral Session 2 : COCIA_2	Oral Session 3 : COCIA_3
17:00 – 17:30	Coffee Break **& Poster Session**		
17:30 – 18:30	Oral Session 4 : COCIA_4	Oral Session 5 : COCIA_5	Oral Session 6 : W3EIS_1

Thursday May 9, 2024			
8:30 – 9:00	Registration		
09:00 –10:00	Keynote Speaker 4 : Pr Elmahdi DRIOUCH, Quebec Montreal University, Canada *Title: "Future Wireless Networks: A Vision to the Landscape of 6G Connectivity"*		
10:00 – 10:30	Coffee Break **& Poster Session**		
10:45 –11:45	Oral Session 7 : COCIA_6	Oral Session 8 : COCIA_7	Oral Session 9 : W3EIS_2
11:45 –12:45	Oral Session 10 : COCIA_8	Oral Session 11 :COCIA_9	Oral Session 12 : W3EIS_3
12:45 –14:15	Lunch Break		
14:30 – 15:30	Keynote Speaker 5 : Dr. Charif Mahmoudi, Siemens Technology USA *Title: "Intelligent Security Functions for Industrial Internet of Things "*		
15:30 –16:00	Coffee Break		
16:00 –17:30	Oral Session 13 : COCIA_10	Oral Session 14 :W3EIS_4	

Friday May 10, 2024		
09:00 –10:15	Session Orale 15 : COCIA_12	Session Orale 16 : COCIA_13
10:15 –10:45	Coffee Break	
10:45 –11:30	Table ronde	
11 :30 – 12:15	COCIA'24 Committee Meeting / AMaCTIA Association meeting - Collaboration and exchanges	
12:15 – 12h:45	Clôture Officielle	

Detailed Program of the COCIA'2024 Conference

Wednesday, May 08, 2024	
8:00 – 9:15	**Welcome and Registration of participants** **Installation of posters**
Official Opening of the Conference
9:15 – 9:45	Prof. Houssine AZEDDOUG President of UH2C University, Morocco Prof. Rachid ESSAMOUD Director of EST, UH2C University, Morocco Prof. Mounir RIFI Director of RITM Laboratory, UH2C University Prof. Abdelkebir ELAMRI COCIA'24 Chair
9:45 – 10:45	**Keynote Speaker 1 :** Pr. Mohammed Ali JALLAL, CEA, France **Title: "Advancing Smart Heating and Cooling Networks: Digital Twin and Deep Learning for Trustworthy Detection and Diagnosis of Substation Fouling Faults in Heating and Cooling Networks - A Case Study"** **Moderator:** **Prof. Mohammed HAMRAOUI (ESTC,UH2C University, Morocco)** **Room: Conference Room**
10:45 – 11:30	**Coffee Break & Poster Session**
11:30 – 12:30	**Keynote Speaker 2 :** Pr Nasreddine BOUHAÏ, Paris 8 University, France **Title: "Digital Convergence and Technocentrism in the Connected Era"** **Moderator:** **Prof. Ahmed LAGUIDI (ESTS,UM5 University, Morocco)** **Room: Conference Room**
12:30– 14:15	**break Lunch**
14:45 – 15:45 **(Online)**	**Keynote Speaker 3 :** Pr Moulay AKHLOUFI, Moncton University, Canada **Title: "Advancing Healthcare Through Deep Learning: Innovations in Medical Imaging and Future Perspectives"** **Moderator:** **Prof. Othmane EL MESLOUHI (ENSA, UCA University, Morocco)** **Room: Conference Room (Online)**

	Session 1 (COCIA_1): Artificial Intelligence and its Application
	Moderators:
	Prof. Mustapha KARDOUCHI (University of Moncton Canada)
	Prof. Othman EL MESLOUHI (ENSA Safi, UCA University,Morocco)
15:45 – 16:45	**Room: Conference Room**

	ID_518715	*Boujamza abdeltif, Boufakri zouhair, Lissane Elhaq saad, Loukili ahmed*; "Long-Term Vessel Arrival Forecasting at Port with Long Short-Term Memory: A Case Study"
	ID_522645	*Ait Mansour nassima, Sbai hanae, Baïna karim*; "Towards decomposing monolithic applications into microservices: Dynamic Analysis"
	ID_518701	*Boufakri zouhair, Abdeltif abdeltif, Lissane El Haq saad, Loukili ahmed*; "Forecasting delivered ship waste to petroleum ports using RNN models"
	ID_522941	*Laaroua imane, Ouzzif mohamed, Bouragba khalid*; "A Comprehensive Review of Machine Learning and Edge Computing Integration in the IoT Environments"

	Session 2 : Connected objects and Systems
	Moderators:
	Prof. Mounaim AQIL (EST Beni mellal, USMS University, Morocco)
	Prof. Abdelati Reha (EMSI Marrakech, Morocco)
15:45 – 16:45	**Room: Room 1**

	ID_518619	*Ait Ben Braim abdelghani, Raoufi mustapha, Skouri mohammed, Lahrouni khadija, Elgourari abdelali , Ezzini mustapha*; "Using IoT and Programming Technologies to Save Time on Administrative Management Tasks"
	ID_522860	*Hamza natek, Srai aziz, Guerouate fatima*; "Integrating Model Driven Architecture (MDA) with AI in IoT: Enhancing NoSQL Database Solutions for Smart Connected Environments"
	ID_518709	*Boubekri zineb, Berrami hind, Jallal manar, Serhier zineb, Bennani Othmani mohammed*; "Physicians' familiarity and attitudes towards the use of mHealth technology"
	ID_539439	*Karra rachid, Lasfar abdelali*; "Tree Species Inventory through Forest Segmentation and Deep Learning Techniques"

	Session 3 : Telecommunications
	Moderators:
	Prof. Abdelillah GHAMMAZ (FST Marrakech UCA University, Morocco)
	Prof. Youssef MEJDOUB (EST Casablanca UH2C University, Morocco)
15:45 – 16:45	**Room: Room 2**

	ID_538186	*Ourahou omar, Belahrach hassan, Ghammaz abdelilah*; "Novel hexagonal-shaped compact antenna for vehicular Communication"
	ID_518560	*Siraj younes, Foshi jaouad*; "Enhancement of a THz Patch Antenna Performance using Metamaterials for Biomedical Applications"

	ID_527857	*El Hardouzi faycal,* Lahsaini mohammed; "Design of a [2-3] GHz Broadband LNA with Distributed Filters for Various Wireless Applications"
	ID_523118	*Bhaij azize*, Haddad abderrahim, Aoutoul mohssin, Sabri khalid, El Moukhtafil fadwa, Jouali redouane; "Design of Dual UWB Patch Antenna with Notched Band for Wireless Communication and Medical Imaging Applications"
16:45 – 17:15	**Coffee break + Session Poster**	

	Session 4 : Artificial Intelligence and its Application	
17:15 – 18:15	**Moderators:** Prof. Ahmed LAGUIDI (EST Sale, UM5 University, Morocco) Prof. Mohammed ali JALLAL (CEA, France) **Room: Conference Room**	
	ID_522989	*El Khalfaoui yasmina*, Alibouch brahim, El Ouafdi ahmed Fouad ; "Gastro-CNN-VIT: Vision Transformer and Deep CNNs for detecting GI diseases in WCE images"
	ID_523108	*Nokairi wafia*, Bouayad Amine nabil, Elamine soukaina; "Application of machine Learning tools in bankruptcy prediction: A comparative study between extra trees classifier and logistic regression"
	ID_531697	*Elamrani Abouelassad dauha*, Elamrani Abou Elassad zouhair, El Meslouhi othmane, Ameksa mohammed, Kardouchi mustapha, Akhloufi moulay ; "Deep learning prediction of vehicle lane departure during night-times: A synthetic over-sampling framework with enhanced dimensionality reduction"
	ID_522939	*Tamtam samiya*, Laguidi ahmed, Elkalay abderafiaa; "Patent analysis of artificial intelligence: A Comprehensive Study (2013-2022)"

	Session 5 : Connected objects and Systems	
17:15 – 18:15	**Moderators:** Prof. Abdelkebir ELAMRI (EST Casablanca UH2C University, Morocco) Prof. Abdessalam EL YASSINI (EST Casablanca UH2C University, Morocco) **Room: Room 1**	
	ID_518712	*Dargaoui souhayla*, Azrour mourade, El Allaoui ahmed, Guezzaz azidine, Benkirane said, Alabdulatif abdulatif, Amounas fatima; "IoT-Driven Smart Agriculture: Security Issues & Authentication Schemes Classification"
	ID_527928	*Zila amine*, Ouchatti abderrahmane, Mouzouna youssef ; "Fairness Evaluation in Wireless Sensor Networks: A Comprehensive Simulation-Based Study"
	ID_528127	*Kamal Idrissi zineb*, Lachgar mohamed, Hrimech hamid; "Exploring Blockchain Architectures for Traceability and Convergence Towards a New Framework"

	ID_540451	*Souidi sara*, *Belkasmi mohammed Ghaouth*, *Saber mohammed*; "Systematic Mapping Study of planning and managing deadlines in case of global software development"

Session 6 : W3EIS_1: Electrical & Electronic Engineering
Moderators:

Prof. Said ZIANI (ENSAM Rabat, UM5 University, Morocco)

Prof. Maha AYACHE (EST Casablanca, UH2C University, Morocco)

Room: Room 2

17:15 – 18:15	ID_522547	*Laabab imad*, *Ziani said*, *Benami abdellah*; "Investigation of Buildings' Energy Efficiency"
	ID_523137	*Atillah mohamed Amine*, *Stitou hicham*, *Boudaoud abdelghani*, *Aqil mounaim*; "Power Flow Management for Off-Grid Photovoltaic-Battery System using ANN-FL Controller MPPT"
	ID_ 536209	*Ben Achour hafid*, *Ziani said*; "Numerical algorithm and backstepping control of Permanent Magnet Synchronous Motor (PMSM)"
	ID_ 539800	*Boukioud yasser*, *Senhaji Rhazi kaoutar*, *Mejdoub Youssef* ; "A new combination of insulation materials in the Atlantic, Continental, and Mediterranean climates"

Thursday, May 09, 2024

8:30 – 9:00	Accueil - Installation des posters, démos et stands

09:15 –10:15	**Keynote Speaker 4 : Pr Elmahdi DRIOUCH, Quebec Montreal University, Canada** **Title: "Future Wireless Networks: A Vision to the Landscape of 6G Connectivity"** **Moderator:** **Prof. Abdelkebir ELAMRI (EST Casablanca UH2C University, Morocco)** **Room: Conference Room**

10:15 – 10:45	**Coffee Break & Poster Session**

Session 7 : Artificial Intelligence and its Application
Moderators:

Prof. Abderrahim Maizate (EST Casablanca, UH2C University, Morocco)

Prof. Mohammed ali JALLAL (CEA, France)

Room: Conference Room

10:45 –11:45	ID_527735	*Mziguel nohaila*, *Choukri ali*, *Amnai mohamed*; "Formal verification and model checking"

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	ID_525264	*Bhih mouad, Elamrani Abou Elassad zouhair, El Boustani abdelhakim, El Meslouhi othmane*; "Smart Data Simplification: A Comprehensive Feature Selection Framework for High-Dimensional Datasets"
	ID_539796	*Mohamed Amine Nebri, Abdellatif Moussaid, Belaid Bouikhalene*; "Fertilizer Management with Machine Learning: A Farmer's Guide to Improved Yield"
	ID_528200	*Elboujddaini farida, Laguidi ahmed, Mejdoub Youssef*; "A Survey on Text-to-SQL Parsing: From Rule-Based Foundations to Large Language Models"
10:45 –11:45	**Session 8 : Connected objects and Telecommunications**	
	Moderators:	
	Prof. Youssef MEJDOUB (EST Casablanca, UH2C University, Morocco)	
	Prof. Mohamed SAIH (FST Benimellal, USMS University, Morocco)	
	Room: Room 1	
	ID_529121	*Kabil sanaa, Achki samira, Aziz layla, Ait Ouahman abdellah*; "Interference Mitigation and improvement of Energy Efficient in HetNet"
	ID_538928	*Laabadli abdel-Ali, Mejdoub youssef, El Amri abdelkebir, Tarbouch mohamed*; "A miniaturized patch antenna for IOT, WLAN and WIMAX applications"
	ID_523153	*El Mahjoub jaber, Aouayej haitam, Abdellaoui abderrahim*; "Cybersecurity Challenges in the Global Aviation Network"
	ID_555532	*Aicha Saadi*, Noureddine Abghour, Zouhair Chiba, Khalid Moussaid, Ali Saadi ; *"Intelligent Traffic Light Control Using Reinforcement And Deep Learning: A Survey And Comparison"*
10:45 –11:45	**Session 9 : W3EIS_2: Electrical Engineering & Energy**	
	Moderators:	
	Prof. Abderraouf ABOUDOU (EST Casablanca, UH2C University, Morocco)	
	Prof. Jawad LAMTERKATI (EST Casablanca, UH2C University, Morocco)	
	Room: Room 2	
	ID_ 541819	*Ziani said, Achmad rizal, Ziani lokmane*; "Refining Fetal Electrocardiogram Classification: A Hybrid Approach with Multimodal Data Fusion and Advanced Deep Learning."
	ID_ 518191	*Mssassi souhail, Abou Elkalam anas, Jabrane younes;* "On FPGA Security and Bitstream Reverse Engineering"
	ID_ 541821	*Ziani said, Manikandan suchetha;* "Using Time-Scale Image Analysis to Detect Fetal Electrocardiograms"
	ID_ 526693	*Ali Ait Salih*, M'barki zakaria, Mejdoub Youssef, Senhaji Rhazi Kaoutar; "Electromagnetic Modeling in 'Black Box' Mode of a DC-DC Power Converter (BUCK)"

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	Session 10 : Artificial Intelligence and its Application
11:45 –12:45	**Moderators:**
	Prof. Abderrafiaa EL KALAY (EST Casablanca, UH2C University, Morocco)
	Prof. Ghizlane MOUKHLISS (ENS Casablanca UH2C University, Morocco)
	Room: Conference Room

ID_518402	*Aloui hamza*, *Zennou hmad*, *Baslam mohamed*, *Ouhda mohamed*; "Sentiment Detection on Social Media Using Deep Learning"
ID_528123	*Elmejgari chaima*, *Nadir younes*, *Qbadou mohamme*; "Applications of neural networks in brain tumors detection and classification: a review"
ID_523161	*Adbi said*, *Mouncif hicham*; "A Multi-Agent System-Based Parallel Model for Particle Swarm Meta-Heuristic Optimization Methods"
ID_503178	*Mellouli hala*, *Meddaoui anwar*, *Zaki abdelhamid*; "Enhanced industrial decision-making: leveraging artificial intelligence for an optimized decision model"

	Session 11 : Connected objects and Industry 4.0
11:45 –12:45	**Moderators:**
	Prof. Mohammed HAMRAOUI (EST Casablanca UH2C University, Morocco)
	Prof. Mohammed BENALI (EST Casablanca UH2C University, Morocco)
	Room: Room 1

ID_523093	*Karroumi bilal*, *Dakhli imane*, *Sedqui abdelfettah*; "The contribution of frugal innovation to the deployment of Industry 4.0 and the challenges involved in its application
ID_528126	*Sassi abdellah*, *Ben Ali mohamed*, *Oullada oumaima*, *Ifassiouen hassan*, *Adri ahmed*, *Elkazini rajae*, *Rifai said*; "Model for assessing the impact of Internet of Things on Supply Chain 4.0: Moroccan case"
ID_528102	*Sif-Eddine mouna*, *Maizate abderrahim*, *Aouad siham*; " Safeguarding Sensitive Healthcare Data in Cloud-Integrated IoT Systems: A comprehensive review"
ID_547685	*Harmach Fatimazahraa*, *Wahbi Azeddine*, *Fakhri Youssef*; "Recent Trends in Internet of Things and Cloud Computing : A Detailed comprehensive Review"

	Session 12 : W3EIS_3: Electrical & Electronic Engineering
11:45 –12:45	**Moderators:**
	Prof. Jawad LAMTERKATI (EST Casablanca, UH2C University, Morocco)
	Prof. Aicha WAHABI (EST Casablanca, UH2C University, Morocco)
	Room: Room 2

ID_ 519347	*Soundouss halima*, *Msaaf mohammed*, *Belmajdoub fouad*; "Vehicle trajectory control using neural networks: Overview of the latest work"

	ID_543099	**El Ghammat Ahmed**, *Youssef Mejdoub, Senhaji Rhazi Kaoutar*; "Biogas production potential at a wastewater treatment plant, the case of the Tamuda-Bay WWTP"
	ID_537965	**Fathi zineb**, *Wahabi aicha, Lalouli abderrezzak*; "Review and comparative study of classical, innovate MPPT techniques and state feedback controller for photovoltaic system"
	ID_526695	**M'barki zakaria**, *Ali Ait Salih, Mejdoub Youssef, Senhaji Rhazi Kaoutar*; "Assessing the Effectiveness of ANN-Based MPPT in Enhancing Energy Efficiency in Floating Photovoltaic Pumping Systems"
12:45 –14:15	*break Lunch*	
14:30 – 15:30	**Keynote Speaker 5 :** **Dr. Charif Mahmoudi, Siemens Technology USA** **Title: "Intelligent Security Functions for Industrial Internet of Things "** **Moderator: Prof. Abderrahim Maizate (ESTC, UH2C University, Morocco)** **Room: Conference Room (Online)**	
15:30 –16:00	**Coffee Break**	
16:00 –17:15	**Session 13 : Artificial Intelligence and its Application** **Moderators:** **Pof. Abderrafiaa EL KALAY (EST Casablanca, UH2C University, Morocco)** **Pof. Ahmed LAGUIDI (FSJES Casablanca, UH2C University, Morocco)** **Room: Conference Room**	
	ID_518600	**Ghizlane moukhliss**, Khalid lahyani, Diab ghizlane; "Revolutionizing Academic Inquiry: Artificial Intelligence's Influence on Higher Education in Morocco"
	ID_541647	**Mohammed el Kaim Billah**, Ahmed abatal, Abdelfettah mabrouk; "Comparative study between Deep Learning and Rein-forcement learning in Multiple Interactions and large"
	ID_552664	**Asmae hasnaoui**, Ettaoufik Abdelaziz , Maizate Abderrahim; "SDN-based edge computing security: State of the art and challenges"
	ID_551525	**EL ASLANI Malika**, OMARI Lhaj El Hachemi and EL MESLOUHI Othmane; "Brain Tumor Detection Using Deep Learning (CNNs)"
	ID_555622	**Jihad DAZINE**, Abderrahim Maizate, larbi hassouni ; ''RPL attacks simulation and intrusion detection based on machine learning''
16:00 – 17:15	**Session 14 : W3EIS_4: Electrical Engineering and Systems** **Moderators:** **Pof. Kaoutar SENHAJI RHAZI (EST Casablanca UH2C University, Morocco)** **Pro. Adil BARRA (FS Casablanca UH2C University, Morocco)** **Room: Room 1**	

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	ID_540735	*Ayache maha*, *Hamraoui Mohamed;* "Delamination Detection by Thermal contact resistance identification"
	ID_ 528825	*Benzazah chirine*, *Mrabet najoua*, *El Akkary ahmed*, *Rerhrhaye fathallah;* "Laboratory Power Conversion System for Controlling and Managing Renewable Energy Chains: Design and Hardware Implementation"
	ID_ 537906	*Lalouli abderrezzak,* *Aicha wahabi, Fathi zineb;* "Optimal sizing of a hybrid microgrid based on a hydro-gen storage system in a desert climate: case of Moroccan Sahara"
	ID_ 541098	*Taki oumaima,, Senhaji Rhazi kaoutar, Mejdoub Youssef;* "Fault Detection and Diagnosis in Stirling Engines: A Computational Approach"

Friday, May 10, 2024

	Session 15 : Artificial Intelligence and Intelligent Systems **Moderators:** Prof. Maha AYACHE (EST Casablanca UH2C University, Morocco) Prof. Abdel-Ali LAABADLI (EST Casablanca UH2C University, Morocco) **Room: Conference Room (Online)**	
9:00 –10:15	ID_522791	**Aftatah mohammed**, Zebbara khalid; "A Comprehensive Survey on Secure Navigation for Intelligent Systems: Artificial Intelligence Approaches to GPS Jamming and Spoofing Detection"
	ID_525694	**Awotunde joseph Bamidele**, Olanloye odunayo Dauda, Adeniyi abidemi Emmanuel, Aworinde halleluyah Oluwatobi, Imoize agbotiname Lucky, Mejdoub youssef ; "Breast Cancer Detection and Classification from Mammogram images Using Improved Convolutional Neural Network Model
	ID_526481	Awotunde joseph Bamidele, **Adeniyi abidemi Emmanuel**, Imoize agbotiname Lucky, Youssef mejdoub, Abdualazizu zakariyya; "A Mobile Visitor Management System using QR Code and Pin for Access Control"
	ID_531054	*Awotunde joseph Bamidele*, Adeniyi abidemi Emmanuel, Edogbo lauretta Nkonyeasua, Imoize agbotiname Lucky, Mejdoub youssef; "An Enhanced Hybrid Cryptography Model for Online Banking Authentication and Security"
9:00 – 10:15	**Session 16 : Artificial Intelligence and its Application** **Moderators:** Prof. Abdessalam EL YASSINI (EST Casablanca UH2C University, Morocco) Prof. Zakaria M'BARKI (EST Casablanca UH2C University, Morocco) **Room: Room 1 (Online)**	

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	ID_518596	*Mohamed Elghayyaty*, Azeddine Wahbi, Anas El Habti El Idrissi, Omar Mouhib and Abdelkader Hadjoudja; "Improving Reed Solomon (RS) decoder using two simultaneously modified blocks of chien search and syndrome"
	ID_528060	*Ben Rebah hassen*; "Implementation of a smart System for Monitoring Suspicious Individuals in Airports using the SSD Method"
	ID_522604	Charef ayoub, Jarir zahi, Quafafou mohamed; "Examination of the impact of motorcycles on the efficiency of signalized intersections"
	ID_528117	*Elkazini rajae*, Ben Ali mohamed, Sassi abdellah, Rifai said, Adri ahmed; "Assessing Moroccan Firms' Readiness for Industry 4.0 Adoption: Opportunities and Challenges"
	ID_528002	*Nabhan nour Al-Deen*; "Logical Description of the Nature of Machine Intelligence with Consideration for the Future Role of the Development of Artificial Intelligence in Privacy, Stability, and Automation"
10:15 –10:45	**Coffee Break**	
10:45 –11:30	**Table ronde**	
11 :30 – 12:15	▪ **COCIA'24 Committee Meeting** ▪ **AMaCTIA Association meeting** ▪ **Collaboration and exchanges**	
12:15 – 12:45	**Clôture Officielle**	

Session Poster

- RAGHIYA MOHAMED EL GHAWTH; "Palm trees detection and counting based on deep learning applications"

- AMAL BARKOUK; "Decision support systems in clinical practice"

- ZINEB BOUBEKRI; "Deep Learning for Early Diabetic Retinopathy Diagnosis"

- HIND BERRAMI; "Virtual Reality and Augmented Reality in medicine"

- HIND BERRAMI; "Overview of Decision Tree Modeling in Healthcare"

- KAWTAR ELFAOUTI.; "management of connected objects based on the concepts of multi-agent systems"

- OMAR EL KHOUNDAFI; "Study of the performance of an individual solar water heater"

Mohammed Ali JALLAL

Chercheurs, CEA France

Mohammed Ali JALLAL is a dynamic researcher with a Ph.D. in Artificial Intelligence, Renewables Energies, and Electrical Engineering from the Faculty of Sciences Semlalia, Cadi Ayyad University, Marrakesh, Morocco (2021). His academic journey includes a research internship at the Faculty of Computer Science, University of Murcia, Spain, where he focused on consumption energy forecasting in smart buildings using hybrid machine-learning algorithms. Currently a postdoctoral researcher at the French Alternative Energies and Atomic Energy Commission (CEA), Mohammed Ali is deeply involved in cutting-edge research at the intersection of artificial intelligence and the energy sector. His expertise extends to uncertainty quantification and machine learning applications in multi-vector energy systems, as demonstrated through his participation in the TRILOGY project. Mohammed Ali is also contributing his expertise in digitalization and energy systems to drive impactful research outcomes within the International Energy Agency (IEA) District Heating and Cooling (DHC) project. With a passion for innovation, Mohammed Ali's research interests span artificial intelligence, renewable energies, and electrical engineering, focusing on developing hybrid algorithms to solve complex real-world problems across various domains. He has a proven track record of collaboration with industrial partners and mentoring Ph.D. students, underscoring his commitment to advancing research and nurturing future talent.

Title: "Advancing Smart Heating and Cooling Networks: Digital Twin and Deep Learning for Trustworthy Detection and Diagnosis of Substation Fouling Faults in Heating and Cooling Networks - A Case Study"

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Pr Nasreddine BOUHAÏ

Maitre de conférences, Université de Paris 8, France

Universitaire et chercheur au sein du laboratoire Paragraphe, en sciences de l'information et de la communication à l'Université Paris 8. Son parcours académique est essentiellement ancré dans le domaine du numérique et de la communication. En tant que membre actif du laboratoire Paragraphe, et coanimateur de l'axe de recherche « Innovation numérique et Intelligence Artificielle », il s'intéresse particulièrement aux dynamiques de développement et l'influence profonde des technologies informatiques et de l'information sur les structures sociales et culturelles, et les implications des avancées technologiques dans les différents domaines de la société. À travers ses enseignements, il inspire à encourager la pensée critique et l'innovation, tout en soulignant l'importance de la responsabilité éthique dans l'utilisation des technologies de l'information. Ses travaux s'inscrivent dans une démarche de recherche théorique et d'application pratique.

Title: "Digital Convergence and Technocentrism in the Connected Era"

Abstract: As 5G deployment continues Hyperconnectivity and the Internet of Things (IoT) are redefining "Digital Convergence" by creating an ecosystem where technologies, industries, and services not only converge but also interact dynamically through digitization and interconnection of devices. In this context, previously separate media and technologies such as television, radio, internet, and telecommunications are intertwined within a smart network of connected objects. This advanced integration leads to increased interdependence, where devices communicate and respond in real time, enhancing the user experience through extensive personalization and seamless access to digital content, while paving the way for new possibilities of interaction and innovation in our daily lives.

Over the past few years, technology has been recognized as a pivotal element for solving contemporary challenges and advancing society. This perspective highlights the critical importance of technical innovations in the development and improvement of human conditions. In this context, the Internet of Things (IoT) and Artificial Intelligence (AI) are seen as catalysts for transformation, offering innovative and interconnected solutions. This vision is characterized by a sometimes blind faith in the potential of technological solutions, which, thanks to IoT and AI, promise to revolutionize our daily

lives by making the objects in our environment smarter and more autonomous. However, this approach can sometimes overshadow crucial considerations such as social, cultural, ethical, and environmental impacts. In the era of ubiquitous connectivity, technocentrism tends to promote an increasing dependence on digital technologies, placing AI and IoT at the heart of strategies to address societal challenges.

Digital convergence and technocentrism are shaping our experience of the connected era by influencing how we interact with technology, consume digital content, and approach contemporary challenges. This dynamic raises important questions about how we use and perceive technology in our daily lives and in society at large.

Pr. Moulay Akhloufi

Professor in Computer Science at Université de Moncton, Canada
Leads the Perception, Robotics, and Intelligent Machines (PRIME) research lab,& Director at the Center for Artificial Intelligence NB Power

Professor **Moulay Akhloufi** holds a Bachelor of Science in Physics from the University Abdelmalek Essaadi (Morocco) and a Bachelor of Engineering from Telecom Saint-Etienne (France). He has a Master's and Ph.D. in Electrical Engineering from Ecole Polytechnique of Montreal and Laval University (Canada), respectively. Additionally, he holds an MBA from Laval University.

Presently, Professor Akhloufi serves as Professor in Computer Science at Université de Moncton, where he leads the Perception, Robotics, and Intelligent Machines (PRIME) research lab, and holds the position of Director at the Center for Artificial Intelligence NB Power. Prior to joining Université de Moncton in 2016, he gained valuable experience in the industry and in technology transfer within the fields of machine vision and robotics.

Professor Akhloufi's research expertise spans across the domains of artificial intelligence, computer vision, and intelligent robotic systems, where he has contributed to over two hundred publications. Additionally, he holds the distinguished status of being a Senior Member of the Institute of Electrical and Electronics Engineers (IEEE). He is also an active member of both the Association for Computing Machinery (ACM) and the Society of Photo-Optical Instrumentation Engineers (SPIE).

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Title: Advancing Healthcare Through Deep Learning: Innovations in Medical Imaging and Future Perspectives

Abstract: In recent years, there have been significant advancements in AI for medical imaging, largely attributed to the impressive progress in the field of deep learning. Various medical disciplines, including ophthalmology and radiology, have experienced the positive impacts of these advancements. This presentation will explore recent developments in deep learning for medical imaging, encompassing the use of Convolutional Neural Networks (CNNs) and deep Transformers. Additionally, it will showcase how incorporating deep ensemble learning improves the performance of specific tasks in this domain. Furthermore, the presentation will highlight the role of deep learning and transformers in radiology and oncology for identifying and diagnosing a diverse range of diseases. Practical cases in oncology, specifically in breast cancer and skin cancer detection, will be presented. Given the importance of understanding the decisions made by these algorithms, examples of the use of explainability techniques will be provided. The significance of federated learning in enhancing the training performance of deep models while ensuring privacy will be emphasized. Finally, the presentation will touch upon potential research avenues in the future of this field.

Pr. Elmahdi Driouch

University of Quebec Montreal, Canada

Elmahdi Driouch received the B.E. degree from the National School of Applied Sciences, Marrakech, Morocco, in 2006, and the M.Sc. and Ph.D. degrees in computer science from the Université du Québec à Montréal (UQAM) in 2009 and 2013, respectively. He was a Post-Doctoral Fellow with Concordia University from 2014 to 2015, and with UQAM from 2016 to 2017. He was an Assistant Professor with the Department of Computer Science, Université de Moncton from 2017 to 2019. He is currently an Associate Professor with the Department of Computer Science, UQAM. His research interests include wireless communications and networks, resource allocation, and algorithm design. He is the author or co-author of many journal papers and conferences papers in these areas.

Title: "Future Wireless Networks: A Vision to the Landscape of 6G Connectivity"

Abstract: As 5G deployment continues to reshape the global telecommunications landscape, the anticipation for the next frontier, 6G, is already gaining momentum. With 6G initial standard projected to emerge between 2028 and 2030, the groundwork for this revolutionary technology is being laid today. This presentation offers a forward-looking

perspective on the potential capabilities of 6G, drawing inspiration from research and development initiatives in both industries and academy. This presentation will delve into the multifaceted dimensions of next-generation connectivity. We will explore key domains that are poised to shape the foundation of 6G.

Artificial intelligence (AI) applied to wireless communication emerges as a central theme, unlocking new possibilities for intelligent network management and resource optimization. Integrated sensing communication and computation, a key enabling technology for 6G, will be highlighted for its role in creating adaptive and context-aware networks. Our journey into the landscape of 6G will illuminate the role of reflective intelligent surfaces (RIS), a transformative technology that creates adaptive communication environments, pushing the boundaries of connectivity. Additionally, the

discussion will spotlight the integration of unmanned aerial vehicle (UAV) communications as a critical aspect of 6G, enabling seamless connectivity in dynamic and challenging environments. Another dimension of our exploration will be the concept of integrated ground-air-space wireless Networks, a paradigm that extends beyond traditional terrestrial communication boundaries. Addressing the crucial demand for ultra-reliable and low-latency communica-ons (URLLC) will be a focal point of the presentation, recognizing its significance as a cornerstone application of 6G. Emphasizing the importance of energy efficiency in the development of 6G, the presentation aims to weave together the threads of AI, RIS, UAV communications, integrated ground-air-space wireless networks, and integrated sensing, communication, and computation. Thanks to the synergetic combination of these technologies, 6G is not only expected to transcend the limits of current telecommunications capabilities but also to ensure sustainable and energy-efficient future networks.

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Dr. Charif Mahmoudi

Senior Security Architect at Siemens Technology USA

Dr. Charif Mahmoudi is a renowned expert in the field of Internet of Things (IoT) technologies and distributed systems, with a notable academic and professional background that bridges advanced research and real-world application. He holds a Ph.D. in Formal Verification of Distributed Systems from Paris-Est Créteil University in France, where his dissertation focused on orchestrating mobile agents within community settings—a fundamental work that set the stage for his future innovations in IoT.

Currently serving as the Senior Security Architect at Siemens Technology in Princeton, New Jersey, Dr. Mahmoudi spearheads projects that integrate IoT solutions into industrial and security-sensitive environments. His work includes the development of Titanium, a Siemens-funded project that applies Artificial Intelligence to certify safety-critical operations, and Micro-SOC, a solution designed to protect commercial buildings through advanced IoT and building automation systems.

Dr. Mahmoudi has significantly contributed to IoT security with his development of a secure network architecture for Independent Power Producers (IPP) that adheres to stringent North American standards. He has also developed frameworks for real-time monitoring and dynamic resource management, essential for the efficient operation of IoT networks.

His commitment to advancing IoT education is evident from his role as a guest lecturer, where he has designed and taught courses focusing on IoT applications at universities such as the Alioune DIOP University in Senegal. His publications and speaking engagements further highlight his ongoing contributions to the field, including papers on secure resilient 5G operations and service-oriented architectures for IoT. Dr. Mahmoudi's work has earned him numerous accolades, including the Siemens Excellence Award, recognizing his contributions to technology and security in IoT environments. His pioneering research and dedication to teaching continue to influence the development of IoT technologies globally.

Title: Intelligent Security Functions for Industrial Internet of Things

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