



**I2COMSAPP International Conference on Artificial Intelligence and its Applications  
in the Age of Digital Transformation  
23-25 April 2024  
Convention Center (Palais des Congrès), Nouakchott, Mauritania**

**Program**

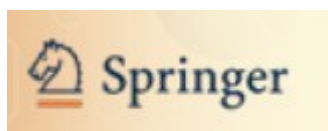
Time	Tuesday, 23 April 2024		
8h30-9h00	Reception and registration of participants		
9h00-10h00	Opening & Welcome		
10h00-10h10	Coffee Break		
10h10-10h55	<p><b>Plenary Session</b> <b>Prof. Mohamed Jemni</b> Director of ICT at The Arab League Educational, Cultural and Scientific Organization</p> <p><b>Title of Talk: Using AI, Metaverse and NFT in Education to promote Innovation and Entrepreneurship for Youth</b></p>		
11h00-12h30	<p><b>Oral Session 1: Smart Cities and Building</b> Paper ID: 23,47,65,55,59</p>	<p><b>Oral Session 2: Natural Language Applications</b> Paper ID: 32,70,42,33,76</p>	<p><b>Oral Session 3: Generative AI and Applications</b> Paper ID: 10,20,50,80,1,27</p>
	Salle 1	Salle 2	Salle 3
12h30-13h30	Lunch		
13h30-14h15	<p><b>Plenary Session</b> <b>Prof. Muhammad ABDUL-MAGEED</b> Canada Research Chair in Natural Language Processing and Machine Learning, University of British Columbia &amp; Mohamed bin Zayed University of Artificial Intelligence</p> <p><b>Title of Talk: Pathways to the Future: Toward Arabic- and Afro-Centric Generative AI</b></p>		
14h20-15h50	<p><b>Oral Session 4: AI Applications in Health and Cancer Detection</b> Paper ID: 12,57,81,82,31,41</p>	<p><b>Workshop 4</b> From Machine Learning to Tiny Machine Learning with Edge Impulse</p>	<p><b>Workshop 1</b> Unlocking Educational Potential: A Practical Guide to Integrating Generative Artificial Intelligence in the classroom</p>
	Salle 1	Salle 2	Salle 3
15h50-16h00	Coffee Break		
16h00-17h30	<p><b>Oral Session 5: Applications in Health and Disease Detection</b> Paper ID : 63,51,60,38,56,35</p>	<p><b>Workshop 4 (Continuation)</b> Presenters: Dr. Eng. Mohamed Ould- Elhassen Aoueileyine from Innov'COM Lab, SUPCOM, University of Carthage, Tunisia</p>	<p><b>Workshop 1 (Continuation)</b> Presenters: Prof. Cheikh Ould Moulaye (Senior Instructor) and Mariem Moulaye from Manitoba University, Canada.</p>
	Salle 1	Salle 2	Salle 3



Time	Wednesday, 24 April 2024		
8h30-9h00	Reception and registration of participants		
9h00-9h45	<p align="center"><b>Plenary Session</b> <b>Prof. Farid MEZIANE</b> Head of the Data Science Research Centre, College of Science and Engineering, University of Derby, United Kingdom</p> <p align="center"><b>Title of Talk: Exploiting Web Resources to Support Automatic Course Design</b></p>		
9h45-10h00	Coffee Break		
10h00-11h30	<p align="center"><b>Oral Session 6:</b> <b>AI applications in Business and Tourism</b> Paper ID : 58,69,21,43,26,68</p>	<p align="center"><b>Oral Session 7:</b> <b>AI Applications in Security</b> Paper ID: 85,36,39,84,74</p>	<p align="center"><b>Oral Session 8:</b> <b>AI Applications in Industry and Manufacturing</b> Paper ID: 9,22,30,4,78,83</p>
	Salle 1	Salle 2	Salle 3
11h30-13h00	<p align="center"><b>Oral Session 9:</b> <b>AI applications for Smart and Green Energies</b> Paper ID: 8,71,13,25,86</p>	<p align="center"><b>Oral Session 10:</b> <b>AI Applications in Education and Learning</b> Paper ID: 72,11,24,29</p>	<p align="center"><b>Workshop 2</b> Generative AI in the Era of Large Language Models (LLMs)</p>
	Salle1	Salle 2	Salle 3
13h00-14h00	Lunch		
14h00-14h45	<p align="center"><b>Plenary Session</b> <b>Prof. Mohamed DERICHE</b> Artificial Intelligence Research Center (AIRC),College of Engineering and Information Technology, Ajman University, United Arab Emirates</p> <p align="center"><b>Title of Talk: Evaluating Multimedia Content Quality in the Age of Generative AI</b></p>		
14h50-16h20	<p align="center"><b>Workshop 5 – Faculty of medicine</b> Medical Image Segmentation and Surgical Guidance</p>	<p align="center"><b>Workshop 3</b> Presentation of the AlKhalil Platform for Arabic Language Processing</p>	<p align="center"><b>Workshop 2(Continuation)</b> Generative AI in the Era of Large Language Models (LLMs)</p>
		Salle 2	Salle 3
16h20-16h30	Coffee Break		
16h30-18h00	<p align="center"><b>Workshop 5 – Faculty of medicine</b> Presenters: Javier Pascau &amp; Mónica García-Sevilla Universidad Carlos III de Madrid, Madrid, Spain</p>	<p align="center"><b>Workshop 3 (Continuation)</b> Presenters: Prof. Azzeddine Mazroui and Prof. Abdelhak Lakhouaja, from Oujda-NLP team, Mohammad Ist University, Morocco.</p>	<p align="center"><b>Workshop 2 (Continuation)</b> Presenters: Group of expert scientists and professionals from different Universities, MBZUAI and others.</p>
		Salle 2	Salle 3



Time	Thursday, 25 April 2024	
8h30-9h00	Reception and registration of participants	
9h00-9h45	<p style="text-align: center;"><b>Plenary Session</b> <b>Prof. Anis KOUBAA</b> Aide to the President of Research Governance Director of Research and Initiatives Center Leader of the Robotics and Internet-of-Things Lab</p> <p style="text-align: center;"><b>Title of Talk: Generative AI's Surge: Is it the Countdown to Human Expertise's Expiry ?</b></p>	
9h45-10h00	<b>Coffee Break</b>	
10h00-10h10	<b>Online presentation from Arab Scientific Community Organization(ARSCO)</b>	
10h10-10h20	<b>AI research projects in Mauritania</b> <b>El Benany Mohamed Mahmoud</b>	
10h20-11h00	<p style="text-align: center;"><b>Discussion Panel: « Ethics in AI »</b></p> <ul style="list-style-type: none"><li>Open dialogue with experts : 40 minutes</li></ul>	Moderator:
11h00-11h50	<p style="text-align: center;"><b>Discussion Panel: « Mauritania AI Strategic plan »</b></p> <ul style="list-style-type: none"><li>Discussion about Mauritania AI Strategic plan by MTNIMA : 40 minutes</li><li>Discussion: 10 minutes</li></ul>	Moderator: Dr. Meina Amar
11h50-12h40	<p style="text-align: center;"><b>Discussion Panel: « AI Future »</b></p> <ul style="list-style-type: none"><li>Online presentation from ESCWA : 10 minutes</li><li>Open dialogue with experts : 40 minutes</li></ul>	Moderator:
12h40-13h40	<b>Lunch</b>	
13h40-14h10	<b>Recommandations and Conference Closing</b>	Moderator:



### Details of Papers:

Paper#	Authors	Title
58	Marwa Ben Salah, Yengui Ameni and Mahmoud Neji	Initial Steps Required for Archaeological Image Processing
69	Haifa Degachi , Ameni Yengui and Mahmoud Neji	Hybrid approach to define axioms of the multimedia ontology of the archaeological field
21	Charaf Ouaddi, Lamya Benaddi, Abdeslam Jakimi, Brahim Ouchao and Abdelmounaim Abdali	Artificial Intelligence in Tourism Sector: Analysis Study
43	Lamya Benaddi, Charaf Ouaddi, Abdeslam Jakimi, Brahim Ouchao and Abdelmounaim Abdali	Chatbots in Tourism Over the Past 10 Years: Analysis Study
26	Haddemine Sidi Yahya, Mohamedou Cheikh Tourad, Outfarouin Ahmad and Mohamedade Farouk Nanne	Empowering Wallet Transactions: Advancing Finance Chatbot Technology in Mauritania
68	M'Hamed Beibou	Digital transformation based on cutting-edge technologies. Case study: Mauritania 4.0
72	Fateh Benkhalfallah, Mohamed Ridda Laouar and Mohamed Salah Benkhalfallah	Empowering Education: Harnessing Artificial Intelligence for Adaptive e-Learning Excellence
11	Safa Boukhari, Mounir Sadiq, Mohamed Radid, Aziz Naciri and Ghizlane Chemsî	Enhancing Active Comprehension of Redox Concept in Moroccan Secondary Education through the Digital Mind Map
24	Ahmed Salem Mohamedhen, Nouha Arfaoui, Ridha Ejbali and Mohamedade Farouk Nanne	Personalized E-learning Recommender System Using Machine Learning
29	Wasfi Al-Khatib, Mohammad Amro, Abdulkareem Alzahrani, Taha Faroush and Moustafa Elshafei	Arabic Pronunciation Assessment for Saudi Arabian Students- Corpus Development and System Architecture
12	Mounir Idelcadi, Walid Bouarifi and Zouhair Elamrani Abou El Assad	Machine Learning-Based Prediction of Breast Cancer: A comparative study
57	Ahmed Abougarair, Fursan Thabit and M. Tabet	Breast Cancer Histopathology Images Detection
81	Amira Bouamrane, Makhlof Derdour and Abdellah Kouzou	Features Engineering-Driven Deep Learning Approach for Improved Pulmonary nodules diagnosis
82	Asma Merabet, Asma Saighi, Makhlof Derdour and Abdellah Kouzou	Innovative Approaches to Colon Cancer Imaging: Leveraging One-Shot Learning with MobileNetV2 Feature Extraction
31	Youssef Touama, Zouhair Abou El Assad Elamrani, Othmane El Meslouhi and Saad Lamjadli	A Comparative Study of Skin Cancer Prediction Using Deep Learning Techniques



41	Rachida Hachache, Mohammed El Adoui, Ali Yahyaouy, Hamid Tairi, Jamal Riffi, Soukayna Abibou and Mohammed Benjelloun	Predictive Modeling of Neoadjuvant Breast Cancer Treatment Responses: A Comparative Analysis of CNN, Vision Transformer and Machine Learning Models
63	Safa Boughougal, Mohammed Ridida Laouar, Abderrahim Siam and Ahmed Mohamed Salem	Comparative Analysis of Machine Learning Classifiers for Early Prediction and Diagnosis of Renal Disease
51	El Mahdi Ayou, Abdelouahed Sabri and Aarab Abdellah	3D segmentation of abdominal organ images using deep learning
60	Chapouki Makhlouf, Mohamed Ridida Laouar, Salima Bourougaa and Ahmed Mohamed Salem	Using artificial intelligence for screening and grading Diabetic Retinopathy disease: an Overview
38	Aboulmira Amina, Oussama Fikri, Brahom Gouali, Hamza Boukhrisse, Hamid Himech, Mohamed Lachgar, Hafsa Benzzi and Mohamedou Cheikh Tourad	Advancing Dermatological Diagnostics: A Comparative Analysis of CNN Models in Skin Disease Classification
56	Hakim Bendjema, Ridida Laouar, Abdallah Meraoumia and Diallo Yaccoub	Ensemble Classifier for Enhancing Osteoporosis Diagnosis Accuracy
35	Fatima Ezzahra Labriki, Zouhair Elamrani Abou El Assad and Othmane El Meslouhi	Cassava Leaf Diseases Detection: Integration of Deep Learning and Data Augmentation Techniques
9	Zakarya Belimane, Ahmed Hadjadj and ABERHAMANE BERBIK	Modeling viscoplastic fluid flows through partially-blocked annulus using surrogate model
22	Mansour Mayouf and Ahmed Hadjadj	Real-Time Torque and Drag Prediction in Oilwell Drilling: A Comparative Study of Machine Learning Models
30	Eslenthoum Moustapha Hachimi, Mohamedou Cheikh Tourad, Med Yahya Medsalem, Ahmedou Haouba, Simon Thevenin and Alexandre Dolgui	Maximizing total net revenue for the Identical Parallel Machines Order Acceptance and Scheduling Problem with Sequence-Dependent Setup Times
4	Sana Chakri, Naoual Mouhni, Mohamedou Cheikh Tourad and Abdeslam Jakimi	Benchmarking Outlier Detection: Integrating Classical Methods and Deep Learning Techniques for Advanced Fault Analysis
78	Mohammed Taqiyeddine Mahdi, Mohamed Nadour, Lakhmissi Cherroun and Abdallah Kouzou	Robust and Intelligent Fuzzy Logic Controllers for a Differential Mobile Robot Trajectory Tracking
83	Ahmed Abougarair and Ahmed Al-Shareef	Modelling and Control of Sphere and Cylinder System
85	Djaber Guassmi, Dehimi Nour El Houda, Mekhlouf Derdour and Kouzou Abdellah	Towards using Machine Learning Techniques for MultiAgent Systems Testing
36	Sabri Abdelouahed, Asmae Ennaji, Assia Ennoui and Aarab Abdellah	Face detection based on deep learning approaches: A comparative study



39	Fatimetou Abdou Vadhil, Mohamedade Farouk Nanne and Mohamed Lemine Salih	A Novel Artificial Intelligence-based Intrusion Detection System - NAI2DS
84	Zakaria Tolba, Nour El Houda Dehimi, Makhlof Derdour and Abdellah Kouzou	Deep and Wide Neural Networks for Distinguisher attacks
74	Mohammed A. Al-Gunaid, Maxim V. Shcherbakov, Vladimir O. Artyushin, Mohammed Al-Sarem, Sergey V. Belov and Dmitry V. Shkolny	Detecting Anomalies in Multidimensional Time Series Using the Three-Sigma Method
8	Khalil Tidri, Abdelmounaim Abdali and Abdeslam Jakimi	A Weather based machine learning approach to predict electricity output from photovoltaic panels
71	Mohamed Salah Benkhalfallah, Sofia Kouah and Fateh Benkhalfallah	Enhancing Advanced Time-Series Forecasting of Electric Energy Consumption based on RNN augmented with LSTM Techniques
13	Soukeyna Mohamed, Vatma Elvally and Abdel Kader Mahmoud	the prediction of the wind speed and the solar irradiation in the Sahel using the Artificial neural networks(case study: site of Nouakchott)
25	Ibtissam Amalou, Naoual Mouhni, Abdelmounaim Abdali, Abdeslam Jakimi and Mohamedou Cheikh Tourad	Deep learning for smart grid application: addressing data scarcity challenges and enhancing load forecasting efficiency
86	Ahmed Siabdeldhadi, Abdelkader Ouared and Hadda Cherroun	Collective Intelligence for Model Transformation by Example
10	Sundarapandian Chellakkannu	Embracing Generative AI in Design: Practical Implementations
20	Lale El Mouna, Mohamedou Cheikh Tourad, Mohamedade Farouk Nanne, Hassan Silkan and Youssef Haryf	AI-Generated Fake Image Detection using Pre-trained CNN Models
50	Fatimetou Abdou Vadhil, Mohamedade Farouk Nanne and Mohamed Lemine Salih	The Powerful AI: An Exploration of Generative Artificial Intelligence Taxonomy and Applications
80	Zineb Touati Hamad, Mohamed Ridda Laouar and M.H. Diallo Yaccoub	A Comparative Analysis of ChatGPT and AI-Powered Research Tools for Scientific Writing and Research
1	Pritish Sinha, Khushi and Arvind Dagur	Improved framework model to train and evaluate difficulty of interview question using generative AI