TIM'24: 7th International Conference on Information Technology and Modeling

November 26-27,2024
Faculty of Sciences Ben M'Sick, Casablanca

Main Theme:
«Innovation and Trends in Computer Science and Modeling: Bridging Theory, Practice, and the Power of AI»

Conference program
November 26, 2024

Time	Event	Location
8:30 - 9:00	Registration and Participant Check-in	
9:00 - 9:50	Opening ceremony	**Amphitheater 8**
09:50 - 10:00	Tribute to Professors	**Amphitheater 8**
10:00 - 10:45	**Keynote 1:** "*AI and the Knowledge Paradox: Can We Model the Unknown? A Dialectical Reading Attempt*" *Prof. EL Habib BENLAHMAR* *Hassan II University of Casablanca - Morocco* Moderator: Prof. Faouzia BENABBOU	**Amphitheater 8**
10:45 - 11:10	Coffee Break	
11:15 - 12:00	**Keynote 2:** "*Exploring an Extension of the Congolese Air Transport Network: A Multi-Criteria Decision Aided Model*" *Prof. Kikomba Kahunugu Michael* *ISP-Gombie-Kinshasa – Democratic Republic of Congo* Moderator: Prof. Hassan SILKAN	**Amphitheater 8**
12:00 - 12:45	Posters Session	**Hall**
12:45 - 13:45	Lunch Break	
13:50 - 14:50	Paper Presentations	**Amphitheater 8**
15:00 - 16:00	**Keynote 3:** "*From Analog Roots to AI Vision: The Cutting-Edge Evolution of Health Solutions*' *Prof. Angel Ruiz Zafra* *University of Granada - Spain* Moderator: Prof. Jaouad DABOUNOU	**Amphitheater 8**
16:00 - 16:15	Coffee Break	

Communication Sessions

16:15 - 18:00	Session 1 :	Session 2:	Session 3:	Session 4:	Session 5 (Online):
	Sentiments Analysis Based Approaches	Computational Complexity, Cost Estimation, and System Integration	AI in E-Commerce and Tourism: Recommendations and Engagement	AI in Recruitment and User Profiling	Innovations in Security, Agriculture, and Environmental Monitoring with AI

Conference program
November 27, 2024

Time	Program	Location
9:00 - 10:00	**Keynote 4:** **"AI and LLMs: Evolution, Challenges, and Impact on Research"** *Prof. Sanaa EL FILALI* *Hassan II University of Casablanca – Morocco* Moderator: Prof. Abdelaziz MARZAK	**Amphitheater 8**
10:00 - 10:15	**Coffee Break**	
10:15 - 13:00	Communication Sessions	

	Session 6 : AI Applications in Agriculture	**Session 7:** AI for Healthcare and Medicine	**Session 8:** Advancements in Natural Language Processing and AI-driven Systems	**Session 9:** Enhancing Learning Outcomes and Transformation	**Session 10 (online) :** AI in Agriculture, Fraud Detection, and Environmental Monitoring

Time	Program	Location
13:00 -14:00	**Lunch Break**	
14:15 - 15:00	**Keynote 5:** **"The Artificial Intelligence Point of No Return"** *Prof. Anderson Rocha* *University of Campinas – Brazil* Moderator: Prof. Abdessamad BELANGOUR	**Amphitheater 8**
15:15 - 16:15	Communication Sessions	

	Session 11 : AI and Sustainable Solutions: Logistics, Security, and Electric Vehicles	**Session 12:** AI for Safety: Road, Fall, and Anomaly Detection	**Session 13:** Cybersecurity and Cloud Computing	**Session 14:** Blockchain and Smart Contracts: Security, Identity, and Financial Integration

Time	Program	Location
16:15 - 16:30	**Coffee Break**	**Amphitheater 8**
16:30 - 18:00	Closing Meeting and Award Ceremony	**Amphitheater 8**

Session 1:	Sentiments Analysis Based Approaches	
Session chairs:	Tarik CHAFIK (FSBM) Kamal EL GUEMMAT (ENSET, UH2C); Nawal SAEL (FSBM); Amal ZAOUCH(ENCG, UH2C)	
16:15	*Paper ID*: 104 Sentiment Analysis of Patients in Healthcare: The Case of COVID-19 Vaccination *Authors: Soumaya Ounacer,Nouhaila Elammouri, Soufiane ardchir, Mehdi Lghaouch,and Mohamed Azzouazi*	**Classroom**
16:35	*Paper ID:* 71 Improving Dialectal Sentiment Analysis: A Contextual Approach Using Multilingual Embeddings for Darija and Other Arabic Dialects Transcoding *Authors: Hasnae Sakhi and Sanaa Elfilali*	
16:55	*Paper ID*: 24 Using Sentiment Analysis Extracted Features to Predict Stock Price *Authors: Mariame Tarsi, Ibtissame Ezzahoui, Samira Douzi and Abdelaziz Marzak*	
17:15	*Paper ID*: 102 Sentiment Classification of COVID-19 Tweets: A Hybrid Hadoop Approach Using Deep Learning and Fuzzy Logic Theory *Authors: Fatima Es-Sabery*	

Session 2	Computational Complexity, Cost Estimation, and System Integration	
Session chairs:	Zineb GOTTI (ENCG, Kénitra); Nazia LAAZ(EHTP, UH2C); Soumaya OUNACER (FSBM), Abdelali ZAKRANI(ENSAM, UNH2C)	
16:15	*Paper ID*: 3 Evaluating the Computational Complexity of Various Machine Learning Algorithms *Authors: Salsabila Benghazouani, Said Nouh and Abdelali Zakrani*	**Classroom**
16:35	Paper ID: 48 Evaluation of Cost Estimation Methods for Software Development Projects: A Comparative Study *Authors: Hicham Lahdili, Nouh Said and Abdelali Zakrani*	
16:55	Paper ID: 98 AI-Driven Generative Automatic Matching for Heterogeneous Systems: A Multi-Agent System Implementation on the .NET Platform *Authors: Zouhair Ibn Batouta, Karima Moumane, Oussama Hamal and Mohamed Talea*	
17:15	Paper ID: 86 Innovative Approaches to Enhancing Database Querying with AI *Authors: Wiam Khalifi, Sara Riahi, Mohamed Nabil Saidi and Adil Kabbaj*	

Session 3	AI in E-Commerce and Tourism: Recommendations and Engagement	
Session chairs :	Khalid BENABBES (ENS MEKNES); Soukaina MERZOUK (FP, UCD); Laila MOUSSAID (ENSEM, Casablanca); Sara OUAHABI (FSBM)	
16:15	Paper ID: 91 Comparative Analysis of Similarity Metrics for Visual Recommendation in E-commerce: AI Approaches and Performance *Authors: Anas Laamouri and Nawal Sael*	**Classroom**
16:35	Paper ID: 79 The Future of Travel: A Review of Chatbot Recommender Systems in E-Tourism and Smart Tourism *Authors: Mohamed Badouch, Hasna Mahmoud, Omar Zioudi and Mehdi Boutaounte*	
16:55	Paper ID: 106 Enhancing Tourism Experiences in Morocco: LLM -A Comparative Study of Fine-Tuning and Retrieval-Augmented Generation with Llama-3 *Authors: Laila Machkour, Meriem El brahimi, Rajae Benlahmar, Bouchra Bouhamidi, El Habib Ben Lahmar, Omar Zahour, Brahim Zahour*	
17:15	Paper ID: 81 Customer Loyalty Dynamics and Optimization of Promotional Strategies: An Analysis Based on Segmentation and Purchasing Behavior *Authors: Mohamed Meftah, Soumaya Ounacer, Mohamed Azzouazi and Khadija Mahjoubi*	

Session 4:	AI in Recruitment and User Profiling and Computer Vision	
Session chairs:	Hassan SILKAN (FS-UCD); Jaouad DABOUNOU (FST, UH1); Abdelaziz ETTAOUFIK (FSBM); El Mostafa RAJAALLAH (ISS, UH1)	
16:15	Paper ID: 82 Intelligent Automated Resume Analysis and Ranking System for Profile Recruitment Based on Computer Vision and LLMs *Authors: Omar Zahour, Abdelhamid Sebbar, El Habib Benlahmar and Brahim Zahour*	**Classroom**
16:35	Paper ID: 55 Advanced User Profile Similarity Prediction: Integrating Bipartite Graphs with SimRank *Authors: Ibtissam El Achkar and Mohamed Rachdi*	
16:55	Paper ID: 101 Predicting Employees with Leadership Potential Using Machine Learning Techniques *Authors: Fatima Zahra Abbour, Soumaya Ounacer, Soufiane Ardchir, Mohamed Azzouazi and Khadija Mahjoubi*	
17:15	Paper ID: 67 Face-based engagement detection methods: A Review *Authors: Ikram Qarbal, Nawal Sael and Sara Ouahabi*	

Session 5 (Online):	Innovations in Security, Agriculture, and Environmental Monitoring with AI	
Session chairs :	Mohssine BENTAIB (FSBM); Imane LAMAATI (FST, Settat); Anass NOURI (FSC, UTI), Omar ZAHOUR (FSBM)	
16:15	Paper ID: 95 Machine Learning for Web Traffic Classification Authors: Veera Venkata Naga Krishna Chaitanya Atkuri	Google Meet
16:35	Paper ID: 45 Assessing the risks of cyberthreats associated with military-specific information management systems Authors: Dorah Chauke, Fhumulani Mphadzha and Docas Nwanebu	
16:55	Paper ID: 96 EAGLE-Based Temporal Logic for Intrusion Detection: A Comprehensive Study Authors: Veera Venkata Naga Krishna Chaitanya Atkuri	
17:15	Paper ID: 2 Investigating Factors Influencing Chatbot Adoption for Enhancing Government Services: An empirical study Authors: Prianka Sarker	

Session 6:	AI Applications in Agriculture	
Session chairs:	Rachida AIT ABDELOUAHED (FSBM); Mohammed AZZOUAZI (FSBM); Abdelaziz MARZAK (FSBM); Youssef SEKHARA (FSBM)	
10:15	Paper ID: 11 Machine Learning Models for Enhanced Crop Yield Prediction Authors: Imade Abourabia, Mohammed Yassine Elghomari, Soumaya Ounacer and Mohamed Azzouazi	Classroom
10:35	Paper ID: 50 Daily Harvest Forecast of Raspberries Crop Using Deep Learning Approach Authors: Khadija Khouya, Fatima Zahra Doukali, Abdellah Asamar, Ayoub Tamim, Younes El Fellah and Khalid Ait Adda	
10:55	Paper ID: 70 Revolutionizing Agriculture with LoRa: Intelligent Crop Monitoring and Autonomic Irrigation Authors: Aitlmoudden Othmane, Khaddar Almahdi and Sael Nawal	
11:15	Paper ID: 109 Leveraging LLM Techniques for Moroccan Agriculture: Performance Analysis of RAG and Fine-Tuning Approaches with Llama 3 Authors: Meriem El brahimi,Laila Machkour,Rajae Benlahmar,Bouchra Bouhamidi, Omar Zahour, El Habib Ben Lahmar,Brahim Zahour	
11:35	Paper ID: 88 Integrated Approach to Forest Conservation through AI and GIS Authors: Mohamed Atifi, Lahcen Zidane, Aziz Boujeddaine, Oussama Hamal and Hamid Khalifi	

Session 7 :	AI for Healthcare and Medicine	
Session chairs :	Sara AREZKI (FST, UH1); Ichrak BENAMRI (FSBM); Mohammed LAHRAICHI (CRMEF CASA SETTAT); Khalid KENDALI (FSBM)	
10:15	*Paper ID: 49* Comparative Analysis of Blood Vessel Segmentation Techniques in Breast MRI *Authors: Laila El Jiani, Sanaa El Filali, El Habib Benlahmar and Khawla Moustafi*	**Classroom**
10:35	*Paper ID:78* AI-Enhanced Detection of COVID-19 and Lung Diseases via Chest X-Rays *Authors: Kaoutar El Handri, Adil Bouhouch and Ossama Hamal*	
10:55	*Paper ID: 75* Advanced Radiomics and Deep Learning for PDL1 Biomarker Prediction in Non-Small Cell Lung Cancer *Authors: Adil Karim and El Habib Benlahmar*	
11:15	*Paper ID: 83* AI and Deep Learning in the Diagnosis and Treatment of Prostate Cancer: Stat of the art and Applications *Authors: Oumaima Boussouis, Youness Tabii and Mounia Abik*	
11:35	*Paper ID: 41* Utilizing Transformer Models for Smartphone-Based Skin Cancer Detection *Authors: Adil El Mertahi, Samira Douzi and Khadija Douzi*	

Session 8 :	Advancements in Natural Language Processing and AI-driven Systems	
Session chairs:	Faouzia BENABBOU (FSBM); Imane CHEMLAL (FSBM); Mohammed GHAZOUANI (FSBM); Omar ZAHOUR (FSBM)	
10:15	*Paper ID:18* Evaluating Empathy-Driven Chatbot Interactions in Digital Banking *Authors: Mohammed Kasbouya and Nawal Sael*	**Classroom**
10:35	*Paper ID: 54* Revolutionizing Information Retrieval: Unveiling a Next-Generation AI-Powered Question-Answer System for Comprehensive Document Analysis *Authors: Najwa Zaher, Mohamed Ghazouani and Nadia Chafiq*	
10:55	*Paper ID: 68* Towards an Intelligent Automated Evaluation System for Python Powered by Large Language Models *Authors: Mariam Mahdaoui, Said Nouh and My Seddiq El Kasmi Alaoui*	
11:15	*Paper ID: 17* Evaluating LDA and BERTopic in Topic Modeling for Recommendation Systems Using Moroccan News articles *Authors: El Mehdi Lghaouch, Soumaya Ounacer, Soufiane Ardchir and Mohamed Azzouazi*	

11:35	Paper ID: 4 Natural Language Processing for Moroccan Dialect: An Overview *Authors:Otman Moussaoui, Yacine El Younoussi and Naoufal Rtayli*	
11:55	Paper ID: 47 Evaluating the Quality of Scientific Articles: A Review of Citation and Content-Based Metrics *Authors: Mohammed Barchane, El Habib Ben Lahmar and Omar Zahour*	

Session 9 :	Enhancing Learning Outcomes and Transformation	
Session chairs :	**Khadija ACHTAICH (FSBM); Tarik AHAJJAM (FSBM); Mounir SADIQ (FSBM); Sara OUAHABI (FSBM)**	
10:15	*Paper ID:63* Forecasting Academic Success in Secondary Education: A Comprehensive Data Mining Approach Using Machine Learning Models *Authors: Salma Sammah, Mohammed Ait Daoud, Khadija Achtaich and Abderrahim Tragha*	
10:35	*Paper ID: 62* Improvement of Information Retrieval Systems on Digital Educational Platforms *Authors: Nisrine Safeh, Mohamed Rachdi and Abdelwahed Namir*	
10:55	*Paper ID: 72* Leveraging RAG and AI Agents to Enhance Specialized LLMs in Education *Authors: Laila El Jiani, Sanaa El Filali, Mohannad Tazi and Abderrahmane Moujar*	
11:15	*Paper ID: 89* Artificial Intelligence and the Transformation of Education for Logistics in Morocco: Exploring the Case of Jumia *Authors: Mustapha Khiati, Mohamed Radid, Nisrine Safeh, Nadia Chafiq, Marouane Mkik and Ali Hebaz*	**Classroom**
11:35	*Paper ID: 100* Approaches Based on AI for Engineering Education: Methods, Evaluations, and Applications *Authors:Rokaya El Gounidi, Nadia Chafiq and Mohamed Ghazouani*	
11:55	*Paper ID: 111* Adaptive M-Learning Resources Using Learner Context and Processing Preferences *Authors: Khalid Benabbes, Ahmed Zellou, Khalid Housni, Brahim Hmedna and Ali El Mezouary*	
12:15	*Paper ID: 110* Early Prediction of Student Dropout in MOOCs *Authors: Brahim Hmedna, Aicha Bakki,Ali El Mezouary,Ibtissam Zaaj,Kaoutar Boumalek,Khalid Benabbes*	

Session 10 (Online):	AI in Agriculture, Fraud Detection, and Environmental Monitoring	
Session chairs:	Zakariyaa AIT ELMOUDEN (EST , USM); El Habib BENLAHMAR (FSBM); Abderrahmane DAIF (FSBM); Mustapha HANOUNE (FSBM)	
10:15	Paper ID: 5 Website Ethical Hacking and Penetration Testing Authors: Sunain Aijaz and Muhammad Zeeshan Zahid	Google Meet
10:35	Paper ID: 12 Deep Learning in Precision Agriculture: An In-Depth Review of Weed Classification Models and Techniques Authors: Himani Patel	
10:55	Paper ID: 33 Cutting Edge Hybrid Models for Credit Card Fraud Detection: Integrating GRFO-KNN, Temporal Analysis, and LSTM Networks Authors: Ishita Choudhary, Himanshi Kapoor and Eva Kaushik	
11:15	Paper ID: 37 Revolutionizing Morocco's Environmental Future: IoT-Driven Air and Water Quality Monitoring for Smart Cities Authors: Luma Abuorabi and Mohd Basheer	
11:35	Paper ID: 32 Job enhancement: A multi-faceted approach of natural language processing and machine learning for skills matching. Authors: Onesime Mbulayi, Nickson Mukombozi Zero-Faray, Joel Mukoso Ngangudila, Python Kabeya and Hikma Shabani	
11:55	Paper ID: 7 Building Secure Software: Best Practices Through the Development Lifecycle Authors: Alin-Marius Stanciu and Carla-Patricia Julean	

Session 11:	AI and Sustainable Solutions: Logistics, Security, and Electric Vehicles	
Session chairs:	Nabil AHARRANE (FSBM); Nawal SAEL (FSBM); Khalid KENDALI (FSBM); Oussama HAMAL (ENAM)	
15:15	Paper ID: 103 The Growing Importance of Sustainable Logistics Solutions in the Healthcare Sector: Overcoming Environmental Challenges While Optimizing Medical Supply Chain Management for a Greener Future Authors: Ikram Ait Hammou, Khiai Mustapha, Marouane Mkik, Boushib Kaoutar, Ali Hebaz and Omar Zahour	Classroom
15:35	Paper ID: 80 An Ontological Approach to Information Security Risk Management Based on ISO/IEC 27001:2022 Authors: Youssef El Marzak,KHALIFA MANSOURI and SOPHIA FARIS	
15:55	Paper ID: 36 Voltage balancing for supercapacitors in electric vehicles using recurrent neural networks (RNN) Authors: Elmehdi Ennajih, Hakim Allali, Ezzitouni Jarmouni and Ayoub El Jafry	

Session 12	AI for Safety: Road, Fall, and Anomaly Detection	
Session chairs:	Tarik AHAJJAM (FSBM); Rachida AIT ABDELOUAHED (FSBM); Sanaa EL FILALI (FSBM)	
15:15	*Paper ID: 64* Advanced Detection of Mobile Obstacles: A CNN Ap-proach for Road Safety *Authors: Hamza Assemlali, Soukaina Bouhsissin and Nawal Sael*	**Classroom**
15:35	*Paper ID: 40* Contrastive Learning on Vision-Based Fall Detection *Authors: Oumaima Guendoul, Youness Tabii and Rachid Oulad Haj Thami*	
15:55	*Paper ID: 31* Data-Driven Anomaly Detection for Public Safety in Smart Cities: State of the Art *Authors: Asmae Baala, Mostafa Hanoune and Mohssine Bentaib*	

Session 13	Cybersecurity and Cloud Computing	
Session chairs:	Abdessamad BELANGOUR (FSBM); Faouzia BENABBOU (FSBM); Soumaya OUNACER (FSBM)	
15:15	*Paper ID: 13* Multi-Classification Approach for Malicious Social Bots Detection Based on Transformers *Authors: Zineb Ellaky and Faouzia Benabbou*	**Classroom**
15:35	*Paper ID: 57* Intelligent Deep Learning Strategy for Safeguarding IoT Networks Against RPL Selective Forwarding Exploits *Authors: Mohamed Badouch, Hasna Mahmoud, Omar Zioudi and Mehdi Boutaounte*	
15:55	*Paper ID: 107* AI-Driven Load Balancing in Cloud Computing: A Survey *Authors: Salma Yamari, Omar Zahour and El Habib Benlahmar*	

Session 14	Blockchain and Smart Contracts: Security, Identity, and Financial Integration	
Session chairs:	Abdelaziz ETTAOUFIK (FSBM); Said NOUH (FSBM); Youssef SEKHARA (FSBM)	
15:15	*Paper ID: 46* Advanced Approaches for Vulnerability Detection in Solidity-Based Smart Contracts: A Comparative Review *Authors: Najwa El Inani, Khadija Sabiri, Faouzia Benabbou and Amal Zaouch*	**Classroom**
15:35	*Paper ID: 14* A decentralized identity management and student data verification system using Blockchain and IPFS *Authors: Gharbaoui Amine, Ettaoufik Abdelaziz and Tragha Abderrahim*	
15:55	*Paper ID: 84* Blockchain Integration in Moroccan Banking: Opportunities and Challenges for Banque Populaire du Maroc *Authors: Said Youssef, Khaddar Al Mahdi, Eddaoui Ahmed and Chafiq Tarik*	