MISI'25 - MATHEMATICS AND INTELLIGENT SYSTEMS IN INDUSTRY

09-10 July 2025 | Safi, Morocco

- Agenda -

TIME (Safi) UTC +1	Wednesday July 09	TIME (Safi) UTC +1	Thursday July 10	
08:00 - 09:00	*Registration*	08:30 - 09:15	*Keynote Speaker 3*	
09:00 - 09:30	*Opening Ceremony*	09:15 - 10:00	*Keynote Speaker 4*	
09:30 - 10:15	*Keynote Speaker 1*	10:00 - 10:30	*Coffee Break*	
10:15 - 10:45	*Coffee Break*	10:30 - 13:00	*Parallel Sessions (TM1)*	
10:45 - 13:00	*Parallel Sessions (WM1, WM2)*	13:00 - 15:00	*Lunch*	
13:00 - 15:00	*Lunch*	15:00 - 15:45	*Keynote Speaker 5*	*AI Hackathon on Parallel*
15:00 - 15:45	*Keynote Speaker 2*	15:45 - 17:45	*Online Sessions(TM2, TM3, TM4)*	
15:45 - 18:15	*Parallel Sessions (WM3, WM4)*	17:45 - 18:00	*Coffee Break*	
18:15 - 18:30	*Coffee Break*	18:00	*Roundtable & Closing Ceremony*	

MISI'25 - MATHEMATICS AND INTELLIGENT SYSTEMS IN INDUSTRY 2025
Day 1 - July 09, 2025

Keynote Speaker 1 : Pr. Raphael Couturier
July 09 | 09:30 - 10:15 | Amphi B
Session Chairs : Pr. Khalid NAJIB

- Some practical applications of AI/ML (Pr. Raphael Couturier , Marie and Louis Pasteur University, France)

WM1: Data Science and Analytics	WM2 : Digital Technologies in Industry
July 09	10:45 - 13:00	Amphi A	July 09	10:45 - 13:00	Amphi B
Session Chairs : Pr. Abdelghafour Atlas & Pr. Halima LAKHBAB	Session Chairs : Pr. Younes EL YAZIDI & Pr. Hassna MAHFOUD
- On the Use of 3D Modeling, Reconstruction and Printing Techniques for the Development of an Anatomical Simulator of Lumbar Disc Herniation: A Case Study in Medical Education (MANFOUMBI EVOUANDI Paul-Emmanuel Benjamin) - A Hybrid Feature Selection Framework Using Genetic Algorithm and LASSO for Robust Deepfake Detection (abdel motalib lagsoun) - GenAI Meets Explainability : Turning Churn Predictions into Personalized Retentions Strat (Meryem houssam) - Fine-tuning AraBERT for Legal Arabic Text Extraction and Classification (Monir EL OUARROUDI) - HumanActNet: A Deep Spatio-Temporal Learning Framework for Fine-Grained Human Motion Analysis and Interpretation (RAHIL GHIZLANE) - Meta-Ensemble Learning for Predicting NASDAQ Stock Movements: An Empirical Study (ELKINANI Ilyas) - The use of AI and Machine Learning in Sales Forecasting and Commercial Performance Optimisation in the OPCI Sector (Yassir DAHBI) - Comparative Analysis of Supervised Machine Learning Approaches for 3D Facial Recognition (Ahmed Bassani) - A Hybrid Framework Combining Transformers, Reinforcement Learning and Econometric Models for Multi-Horizon Financial Forecasting (Marwane Aarab)	- Framing Adversarial Machine Learning and Federated Learning Threats through MITRE ATLAS (Tarik GUEMMAH) - 3D Modeling and Printing of a Middle Ear Surgery Simulator: A Case Study on Cholesteatoma (El boudali hidayah) - Smart Inventory Management: Q-Learning algorithm for Spare Parts Optimization (Houda Elhadaf) - On the Use of 3D Modeling, 3D Reconstruction, and 3D Printing Techniques for the Development of a Personalized Total Ankle Prosthesis: A Case Study in Post-Traumatic and Degenerative Joint Conditions (TASSEMBEDO Awa) - Digital twins for predictive maintenance in healthcare (Hicham Maadan) - Extraction of Single-Diode Photovoltaic Model Parameters Using Monte Carlo Optimization Experimental Data (Oussama KHOUILI) - Contribution to Glaucoma screening from fundus images by Artificial Intelligence: Study based on Deep Learning and optimization of data flow for diagnostic assistance (MOUNGUENGUI KASSA Yuly Stani) - The Textile industry: Environmental impact Towards a circular economy (Kenza DOULKIFL) - An Intelligent RAG-Based Chatbot for Navigating HSE Standards in Industrial Contexts (Wissal Zenoual)

Keynote Speaker 2 : Pr. Mohamed Hosni
July 09 | 15:00 - 15:45 | Amphi B
Session Chairs : Pr. Habib Maagoul

- Ensemble Machine Learning Methods: Concepts, Construction & Applications (Pr. Mohamed Hosni, ENSAM, Moulay Ismaïl University of Meknes, Morocco)

WM3: Numerical Simulation and Scientific Computing July 09 | 15:45 - 18:15 | Amphi A Session Chairs : Pr. Aissam Bekkari & Pr. El Mahdi El Guarmah	WM4: Optimization and Optimal Control July 09 | 15:45 - 18:15 | Amphi B Session Chairs : Pr. Mohamed HOSNI & Pr. Driss Harzallah
- A non-overlapping time Schwarz domain decomposition method applied to an Euler-Bernoulli beam equation (Abdelhalim Ben bouzid) - Optimizing Energy Consumption in MEC Task Offloading with Deep Q-Networks (Chaouki Halima) - Comparative Study of the Seismic Behavior of a Building With and Without Base Isolation (Case of the 2004 Al Hoceima Earthquake) (Faiz Omar) - Error Analysis of Physics–Informed Neural Networks Approximating the Euler–Bernoulli Beam Equation (chahid chadi) - Numerical Study of the Influence of a Corrosion Crack on a Welded Pressure Pipe Made of P265GH Steel (SALMI Houda) - AgriLink: A Smart Solution for Real-Time Monitoring and Enhanced Agricultural Connectivity (Kamal Baraka) - Fuzzy Deep Learning Approach for Fake News Detection in Social Networks Fuzzy (Zouhair Hajji chakir) - Stability Analysis of a Delay Differential Model for Unemployment Dynamics (Sanaa ElFadily)	- Benchmarking Metaheuristics for CNN Optimization: A Comprehensive Study (Fakhita Eddaoudi) - A new improved Bat Algorithm for traveling salesman problem (Ghazouani HEIDER) - Generalized weak ε-subdifferential and applications (Abdelghali AMMAR) - Q-Learning-Assisted Simulated Annealing for TSP Optimization (Adil Nouhaila) - Optimisation of a flotation chain to optimize the quality of the product and equipement reliability (Jawad Kaabouch) - Developing a strategic supplier evaluation framework based on multi-criteria decision-making: A Moroccan company case study (Driouch Chaimaa) - SmartCrows: An Adaptive Metaheuristic for Structural Design Problems (MOUHAYEN Kaoutar) - First Steps in Clinical Implementation of a Lung Nodule Classification Method by Artificial Intelligence (MAGNANGA-BOUKANDZA Joey Ben Elbher)

MISI'25 - MATHEMATICS AND INTELLIGENT SYSTEMS IN INDUSTRY 2025
Day 2 - July 10, 2025

Keynote Speaker 3 : Pr. Abdon Atangana July 10 | 08:30 - 09:15 | Amphi B Session Chairs : Pr. Abdelilah JRAIFI

- Bridging Algebra and Nature: Toward a Deformable 3D Hyper-complex framework for Modeling Dynamic Systems (Pr. Abdon Atangana, University of the Free State, South Africa)

Keynote Speaker 4 : Pr. Mohammed Madiafi July 10 | 09:15 - 10:00 | Amphi B Session Chairs : Pr. Mustapha OUJAOURA

- Artificial Intelligence Meets Agriculture: The Next Green Revolution (Pr. Mohammed Madiafi, ENSAS, Cadi Ayyad University of Marrakech, Morocco)

TM1 : Statistical Methods and Data Analysis + Complex Systems Engineering
July 10 | 10:30 - 13:00 | Amphi B
Session Chairs : Pr. Houda Lifi & Pr. Ahmed Bentajer

- Mapping a Decade of Educational Assessment Research: A Bibliometric Analysis of ILSAs (2015–2025) (Imane KLILI)
- Performance evaluation of machine learning models for stock price forecasting using technical indicators (Radia Oussouaddi)
- Predictive modeling of customer churn in the Moroccan telecommunications sector using advanced machine learning algorithms (Ikram ELBOAKMIRI)
- Machine Learning Enhanced Calibration of Stochastic Volatility Jump-Diffusion Models via Tikhonov Regularization (Ikram El Bouhali)
- Modeling Academic Performance Using Regression Techniques in Machine Learning (Nouhaila ben el khadra)
- Global dynamics of an HBV infection model described by fractional partial differential equations (Eloualy Mohammad)
- Machine Learning and Time Series Forecasting for Solar Resource Prediction in Moroccan Regions (Jaouad Zerhouni)

Keynote Speaker 5 : Pr. Abdelmalek Zine
July 10 | 15:00 - 15:45 | Amphi B
Session Chairs : Pr. Ibtissam Medarhri

- Formulations mixtes duales pour les problèmes d'écoulements de fluides non newtoniens (Pr. Abdelmalek Zine, Institut Camille Jordan, Ecole Centrale Lyon, France)

Hackathon_MISI25 July 10 | 14:00 - 19:00 Salle A	AI Hackathon_MISI25 Chairs : - Pr. Mohamed Hosni - Pr. Khalid Jabir - Pr. Said Echchadi	Look for more informations on the **AI Hackathon_MISI25** on

TM2 : Online Sessions (All Topics)
July 10 | 15:45 - 17:45 | Amphi A
Session Chairs : Asmaa Benghabrit & Hind Mestouri

- Predictive Maintenance of Turbofan Jet Engine's Remaining Useful Life using C-MAPSS Dataset (Oussama Benlansour)
- Urban growth in Morocco : Leveraging Geospatial Big Data for Sustainable Régional Planning using LSTM-based models (Yassmine Elmersly)
- Multimodal Generative AI & the Future of Human Communication (Nouhaila Chab)
- Optimizing Student Attendance Systems with Transfer Learning & Vision Transformers:An Iris Recognition Approach(Slimane Ennajar)
- Industrial Defect Classification Through 2D & 3D Data Integration (Hamza MOUNCIF)
- Integration of IoT Technologies for Predictive Maintenance in Industry 4.0 (NOUHAILA CHOUARFA)
- Automated Machine Learning Models for Prediction & Classification of Brain Tumors (Khadija EL Haddad)
- Two-Stage Spectrum Sensing approach based Energy & Entropy for Cognitive Radio-IoT Networks(Khadija Lahrouni)

TM3 : Online Sessions (All Topics)
July 10 | 15:45 - 17:45 | Salle 1
Session Chairs : Manal Zettam & Abdelati El Allaoui

- Secure & Compliant Identity Management Using Blockchain, Cryptography & Machine Learning (Ilias Barihi)
- Threat Detection in Internet of Things Messaging Protocol: Leveraging the MQTTEEB-D Realistic Dataset (Hamza ALLAGA)
- Adaptive Blockchain Based Access Control ABAC for Secure Cloud Data Access: A Comprehensive Approach (Mbark ABOUESSAOUAB)
- Multimodal Emotion Recognition Using CNNs: A Web-Based Application for Facial and Vocal Analysis (Mestouri Hind)
- Smart Irrigation for Sustainable Agriculture : An IoT and AI-Based Solution (Akram Boumnich)
- Advancing Volatility Forecasting in Financial Indices : From GARCH to Deep Learning and Multifractal Analysis (NAIMA OUALLA)
- Efficiency Analysis and optimization of a Buck Converter for Electric Vehicle Charging (SAHBANI SANA)

TM4: Online Sessions (All Topics)
July 10 | 15:45 - 17:45 | Amphi B
Session Chairs : Kamal Baraka & Mohamed Madiafi

- Numerical Treatment of Nonlinear Diffusion Equation (Moujid Salma)
- Translation in the Age of Artificial Intelligence: Machine vs.Human (BABALAHCEN RAJAA)
- Stability of HIV infection with New Generalized Hattaf Fractional Derivative and therapy (Hanae BOUKHRISSI)
- Numerical scheme of fractional differential equations with new mixed fractional derivative (Fatima ASSADIKI)
- Identifying Key Drivers of Supply Chain Resilience for Modeling Using AI and Hybrid Predictive Models (Wadia EL KADMIRI)
- Mathematical analysis of a financial model through the generalized Hattaf fractional derivative (Khadija Toufiq)
- Modeling the dynamics of sheep populations in response to price fluctuations using Hattaf fractional derivative (Sara Lasfar)