The LSI Lab and Association of Artificial Intelligence and Sustainable Development
in collaboration with
Mohamed Premier University, Faculty of Sciences of Oujda, Faculty of Medicine and Pharmacy of Oujda, National School of Applied Sciences of Oujda, Higher School of Technology of Oujda, Mohammed VI Hospital Center of Oujda, Franche-Comté University and The School Of Advanced Engineering Studies – Oujda, organize:

ICSMAI 2025

2nd International Conference on Smart Medical, IoT & Ai

TECHNICAL PROGRAM

ABOUT THE CONFERENCE

The **Second International Conference on Smart Medical, IoT & Artificial Intelligence (ICSMAI'25)** brings together researchers, clinicians, engineers, and industry practitioners to advance data-driven healthcare and intelligent connected systems. ICSMAI'25 provides a forum to share cutting-edge results, discuss open challenges, and foster collaborations at the intersection of **medical technologies**, **Internet of Things (IoT)**, and **artificial intelligence**.

Clinical AI and decision support; medical imaging and radiomics; wearable and remote monitoring systems; hospital information systems and digital health; healthcare NLP and conversational agents; bioinformatics, drug discovery and multi-omics; cybersecurity and governance for health data; human factors, education and simulation; smart sensors, edge/embedded AI, and healthcare IoT deployments.

Authors are invited to submit original, unpublished research—including empirical studies, methods and systems, comprehensive surveys, and reports on industrial deployments—that is not under review elsewhere. Submissions should follow the conference guidelines and deadlines published on the ICSMAI'25 website.

ICSMAI'25 is organized by the **LSI Laboratory** together with the **Association of Artificial Intelligence and Sustainable Development (IA2D)**, in collaboration with **Mohammed First University (Oujda)**—including the **Faculty of Sciences**, **Faculty of Medicine and Pharmacy**, the **National School of Applied Sciences**, and the **Higher School of Technology**—the **Mohammed VI University Hospital Center (Oujda)**, and international academic partners: **Université de Franche-Comté (France)**, **Université de Lorraine (France)**, **Université de Moncton (Canada)**, and the **École des Hautes Études d'Ingénierie – Oujda**.

We warmly welcome you to ICSMAI'25 and look forward to your contributions and participation.

The Organizing Committee of the ICSMAI'25

14:00 – 15:00

Welcome and Registration
Main Conference Registration

15:00 – 16:00

Official Opening Ceremony
Conference Hall
Chair: Moderator: Prof. Kamal GHOUMID
President of Mohammed Premier University
Director of ENSA Oujda
Dean of Faculty of Science
Dean of Faculty of Medicine & Pharmacy
Director of CHU
Organizing Committee

16:00 – 19:00

Keynotes Block #1
Conference Hall
Keynote #1 – Prof. Intissar HADDIYA: Environmental determinants of hypertension. Moderator: Prof. K. GHOUMID
Keynote #2 – Prof. Moulay AKHLOUFI: Advances and Challenges in AI for Healthcare. Moderator: Prof. O. SEFRAOUI
Keynote #3 – Prof. Mohammed MESTARI: From Complexity & Network Science to Graph Representation Learning — GNN for Polypharmacy Side Effects. Moderator: Prof. A. NAJI

19:00 – 20:30

Session 1: AI in Healthcare & Medical Diagnosis
Parallel Sessions — Room 1
Chair: M. H. Sebbar, A. Saddari, and K. Alaoui
Papers
Faysal ETROUFI — Benchmarking ML Models for Early Detection of CKD
Abderrazak SADDARI — ML for Antimicrobial Resistance & MDR Classification
Maryam BENHEDDI — Rare EGFR exon 20 mutation detection (EasyPGX™ RT-PCR)
Maryam BENHEDDI — Colorectal Cancers: RAS Status by RT-PCR (TaqMan)
Jihane BENBRIK — ML for Predicting Vitamin D Levels
Oumaima AAMAROUCHI — Brain Tumor Detection: Mixed Init Kernels + GA in CNNs
Omar SEFRAOUI — AI for Multiple Sclerosis: Data-Driven Approach
Oussama ABALI — TMJ Osteoarthritis & AI: Systematic Review
Fatima FATIH — TPE-based CNN Optimization for Lung Disease Diagnosis
Youssef RAFIK — Cardiovascular Diseases Prediction via ML
Ali ARBAOUI — Predicting Autoimmune Flares Using AI & Emotions

20:30 – 22:00

Dinner break
Hotel Restaurants

08:00 – 09:00

Welcome and Registration
Main Conference Registration

09:00 – 11:00

Keynotes Block #2
Conference Hall
Keynote #4 – Prof. Yassamine BENTATA: The Future of Medicine: Horizons and Limits! (Moderator: Prof. M.A. MADANI)
Keynote #5 – Prof. Shermin VOSHMGIR: Web3 at the Intersection of Blockchain, AI & IoT (Moderator: Prof. A. KERKRI)

11:00 – 12:30

Session 2: IoT & Edge AI for Smart Systems
Parallel Sessions — Room 1
Chair: H. Bouali, S. Daoudi and R. Malek
Papers
Kishan Reddy BHIMAVARAM — IoT Urban Agriculture Container Farm
Vinay DANDAMRAJ — Smart IoT-based Hydroponics
Mirthika B — YOLOv8 Wildlife Monitoring & Repulsion
Hicham TIKAOUI — Energy Forecasting in Moroccan Buildings (IoT+ML)
Sidi Omar EL KETTANI — IoT-Edge AI + ISO 42001 for CNC Maintenance
Chakib TAYBI — Dual-Band Reconfigurable Antenna (2.4/5 GHz)
Belaoufi Yassine — SmartRoute+: DL + Crowdsensing for Road Maintenance
El Miloud AR-REYOUCHI — BAI-PLF: Blockchain–AI–IoT Framework
Vighnan KUMAR — AgroHeal: Early Disease ID + Pesticide Recommendation

11:00 – 12:30

Session 3: AI for Biomedical Research & Drug Design
Parallel Sessions — Room 2
Chair: M. Yandouzi and M. Grari
Papers
Kaoutar M'RHAR — Deep Learning for De Novo Drug Design
Oussama GRARI — AI against Biofilm Infections
El Miloud AR-REYOUCHI — Q2OPT-MED: Hybrid AI–Heuristic
Nazih ASSABBANE — SVHRSP for Skin Ageing + Microneedle Strategy
Mouad ALAOUI MHAMMEDI — Physics-Constrained Inverse Design (Encapsulation)
Manale CHAKIR — GRU for ICD-9 Coding (MIMIC-III)

11:00 – 12:30

Session 4: Smart Hospitals & Clinical Decision Support
Parallel Sessions — Room 3
Chair: D. El Moujtahide and M. Zeryouh
Papers
N. HAREESH — AI Stethoscope
Oussama GRARI — Procalcitonin Assay Precision for AI Sepsis
D. EL MOUJTAHIDE — ML: Predicting Creatinine
D. EL MOUJTAHIDE — 4-Year Stability of Biochemical Phenotypes
Sara RAMDANI — AI & IoT for Smart Hypertension: Review
Yassmine EL MOUSSAOUI — AI Simulation for Communication Training
Hakim NASAOUI — MedACT-CL: Tri-Modal Contrastive Learning
Youssef BADININI — PPP & Digitized Healthcare: Mobile Units
Nour El Houda BENKADDOUR — KidneyLab 2.0 (Arduino)
Hind MOUMNI — AI for Psychological Self-Help (Students, Morocco)

12:30 – 15:30

Lunch break
Dining Hall

15:30 – 17:00

Keynotes Block #3 (Healthcare Innovations)
Conference Hall
Keynote #6 – Prof. Abdelkrim DAOUDI: Telemedicine in the Eastern region.

17:00 – 20:00

Session 5: AI, NLP & Cybersecurity
Parallel Sessions — Room 1
Chair: A. KERKOUR ELMIAD and R. Naciri
Papers
Omar SEFRAOUI — Real-Time Cybersecurity Alert Classification
Ayoub JIBOUNI — Robust Similarity for Link Prediction
Anas CHAHID — RAG-Based Conversational AI for Triage
Abdelmounaim KERKRI — Cross-Lingual Alignment (Contrastive Subword)
Abdelmounaim KERKRI — Stream RL: Drift-Aware Policy Optimization
Abdelmounaim KERKRI — RL for Urban Traffic Lights

17:00 – 20:00

Session 6: Energy Management & Industrial Optimization
Parallel Sessions — Room 2
Chair: M.A. Kassmi and D. Bahia
Papers
Sidi Omar EL KETTANI — LLM-Integrated Predictive Maintenance
Sidi Omar EL KETTANI — Expert System + LLM for Maintenance
Mohammed Ali ARBAOUI — Green Hydrogen: Design Choices
Ali ARBAOUI — Heat Exchanger Control: Efficiency Modeling
Hicham TIKAOUI — Vision-Based Angle Detection
Hicham TIKAOUI — Few-Shot Hybrid for Visual Inspection
Hanae EL FAHFOUHI — Informer + Bayesian Tuning (Solar Radiation)

20:00 – 22:00

Dinner break
Hotel Restaurants

08:00 – 09:00

Welcome and Registration
Main Conference Registration

09:00 – 12:00

Session 7: AI in Education, Ethics & Society
Parallel Sessions — Room 1
Chair: A. El Mezouari, M. Benhaddou and J. Oubaha
Papers
Nouhaila CHAREF — AI in Medical Writing: Systematic Review
Anas TALHAOUI — Role Classification in Security Policies
Somaia EL GHAZI — AI in Medical Education: Umbrella Review
Manal BOUDIH — NLP Interviews on Blood Donation (Oujda 23–24)
Hicham ARRID — Patient Experience vs Satisfaction: GAM
Boulerhcha BRAHIM — Social Media Sentiment with AI
Hasnae AMNOUN — AI & Big Data in Marketing: PRISMA (Scopus)
BOUBCHEUR Hanane — AI-Assisted Math Teaching (Hearing/Speech)
Kaoutar GHOMARI — Electrolyte Disorders in Emergency/ICU (CHU Oujda, 2022)
Bilal BOURKHA — AI & Hospital Management in Morocco
Bilal BOURKHA — Private Hospitals: Imitation vs Contextual Innovation

09:00 – 12:00

Session 8: Smart Cities, Mobility & Environment
Parallel Sessions — Room 2
Chair: H. Barboucha and E.M. Ar-Reyouchi
Papers
Asmae EL MEZOUARI — AI-Driven Radiomics in Oncology
Meryem ELKADI — Groundwater Level Prediction (Triffa Plain)
Hanae SENBA — Travel Time Optimization (Fez Old Medina)
Rohit SHITOLE — YOLOv9 + CBAM: Smart Traffic for Emergency
Loubna AZIZI — Urban Green + Smart Tech for Sustainability
Elmehdi HASSANI — AI for Smart Invoice Processing
Meryem BENKADDOUR — Joule's First Principle via CAEx
Salwa KHALYL — LDA vs NMF vs BERTopic (Hotel Reviews)

12:00

Closing Ceremony
Conference Hall

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O. Sefraoui, ENSAO, Oujda, Morocco
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M.A. Madani, ENSAO, Oujda, Morocco
D. Bahia, FSO, Oujda, Morocco
A. Naji, ENSAO, Oujda, Morocco
R. Malek, ENSAO, Oujda, Morocco
A. Kerkri, ENSAO, Oujda, Morocco
A. El Mezouari, ENSAO, Oujda, Morocco
R. Naciri, ENSAO, Oujda, Morocco
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M Benheddi, FMPO, UMP, Oujda, Morocco