12:30 – 14:30 : Lunch

14:30 – 15:30 : session 2.3 (Control, dynamic systems and optimisation 1)

+ **Zakaria KOURAB**, "Integrating Novel Circuit Design with Optimization Algorithms for Advanced Parameter Identification in PEM Fuel Cells", LCCPS, ENSAM, Hassan II University, Morocco
+ **Soufiane AMEUR,** "Human-Robot Collaboration in Remanufacturing: An Application for Computer Disassembly", LCCPS, ENSAM, University of Hassan II, Casablanca, Morocco.
+ **Hala MELLOULI,** " Applied Artificial Neural Networks for industrial decision-making optimization", AICSE, ENSAM, University Hassan II, Morocco
+ **Manal KOUIHI,** "Genetic Algorithm-Driven Optimization for Standalone PV/Wind Hybrid Energy Systems Design", LCCPS, ENSAM, University Hassan II, Morocco

14:30 – 15:30 : session 2.4 (Control, dynamic systems and optimisation 2)

+ **ASMAE CHAKIR,** "Machine learning algorithms based for demand-side energy forecasting of an office building loads", LPRI, EMSI of Casablanca, Casablanca, Morocco
+ **Sara BOUSKOUR,** "Deciphering the Interplay of Precipitation, NDVI, and Modeling for Enhanced Wheat Production Strategies", Hassan II University, Mohammedia, Morocco
+ **Youness HILLALI**, "Balancing assembly line based on lean management tools", LCCPS, ENSAM, Casablanca, Morocco
+ **Sofia LEMSSADDAK,** "A novel asymmetrical multilevel inverter with reduced number of switches Regulated by PD-PWM Method", LCCPS, ENSAM, UH2C, Morocco

15:30 – 16:30 : Session 2.5 (Exploitation and Exploration 1)

+ **Houda MOUTTALIB,** "Exploring the Horizon: Challenges and Solutions in Integrating Extended Reality (XR) into STEM Education", 2IACS Lab, ENSET, University Hassan II, Morocco
+ **Abdelghani AZRI,** "Improving Explainable Matrix Factorization with User-Item Features for Recommender Systems", Hassan First University, FST, LAVETE Lab, Settat, Morocco
+ **Hasnae BRIOUYA,** " Surveying Lightweight Neural Network Architectures for Enhanced Mobile Performance", Computer Sciences Lab, Faculty of Sciences, Ibn Tofail University, Morocco
+ **Rahma ELKAMOUCHI**, « Multi-Agents System in Healthcare : A systematic literature review", Laboratory 2IACS, ENSET, University Hassan II Casablanca Morocco

15:30 – 16:30 : Session 2.6 (Exploitation and Exploration 2)

+ **Ilyasse MELLAL,** "Advances in the Security of SDNs: Exploration of Recent ML-based Approaches", Faculty of Sciences, Mohammed V University in Rabat, Morocco
+ **Feras ALOBEIDAT,** "Toward an Intelligent Decision Support System for Environmental Application Using Earth Digital Twin", Zayed University, Abu Dhabi, UAE
+ **Adnane EL ALAMI,** " Operation and Control of a Five-Level ANPC Inverter", LCCPS, ENSAM, UH2C, Morocco
+ **Said HOUMAIRI,** "Kinematic Modeling, Optimal Sizing, and Accuracy Analysis of a Compact Delta Robot", IMII Lab, FST, Hassan 1st University, Settat, Morocco

16:30 – 17:00 : Coffee Break

17:00 – 18:00 : Closing of the conference

ORGANIZED BY
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SADASC'24

THE 5TH INTERNATIONAL CONFERENCE ON

Smart Applications and Data Analysis For Smart Cyber-Physical Systems (SADASC'24)

April 18-19, 2024 Tangier, Morocco, Kenzi Solazur Hotel Blvd. Mohamed VI, 90000

ABOUT US

SADASC'2024 will bring together researchers and industry professionals contributing towards different phases of designing, exploiting and maintaining Smart Cyber Physical Systems and their Applications. These phases include requirements engineering, data acquisition/cleaning, storage, deployment, exploitation, and visualization. Designing these systems also has to consider issues such as ethics, security and privacy.

SADASC'2024 follows the success of the previous conferences held in:


Marrakech (2020, 2022)


Casablanca (2018)


Agadir (2016)

TOPICS AND SCOPE OF THE CONFERENCE

- Designing and modeling Smart Applications and Cyber-Physical Systems
- Machine Learning and recommender system
- Embedded Systems, Network technologies and IOT
- Data management
- Exploitation and Exploration
- Green Communications, Computing and Technologies
- Control, dynamic systems and optimization
- Case studies

PROGRAM OF THE CONFERENCE

Thursday 18 APRIL 2024

8:30 – 9:00 : Opening of registration

9:00 – 10:00: Opening remarks :

+ Pr. **Housseine AZEDDOUG** President of Hassan II University Casablanca
+ Pr. **Abdelmajid BADRI**, Director of ENSAM Casablanca
+ Pr. **Mohamed HAMLICH** President of SADASC, ENSAM, UH2C Casablanca

10:00 – 10:45: Coffee Break

10:45 – 11:15: **Keynote Speaker**, "Improving maintenance operations with advanced machine learning", Pr. **Sebastián VENTURA**, University of Córdoba, Spain

11:15 – 12:35 : **Session 1.1** (Designing and modeling 1)

+ **Bouthaina SLIKA**, « Predicting Lung Infection Severity in Chest X-ray Images through MultiScore Assessment", University of the Basque Country UPV/EHU, San Sebastian, Spain
+ **Hanan SABBAR**, « Computer vision and artificial intelligent techniques for medical image segmentation: An overview of technical aspects and introduction to state-of art application", LAROSERI Lab, Chouaib Doukkali University, EL Jadida, Morocco
+ **Ikhlass BOUKROUH**, « Modeling and managing product unavailability risk in inventory through a fuzzy Bayesian network", Faculty of Sciences and Technique of Tangier, Abdelmalek ESSAADI University Tetouan, Morocco.
+ **Mohammed HAMIM,** « A Binary Particle Swarm Optimization based Hybrid Feature Selection Method for Accident Severity Prediction", AICSE Lab, University Hassan II, Casablanca,Morocco

11:15 – 12:35 : **Session 1.2** (Designing and modeling 2)

+ **Daniel William VOSKERGIAN,** « The integration of NLP and Topic-Modeling-Based Machine Learning Approaches for Arabic Mobile App Review Classification", Al-Quds University, Computer Engineering Department, Jerusalem, Palestine.
+ **Sara BAALI**, « Feature Selection for High-Dimensional Gene Expression Data: A Review", AICSE Lab, University Hassan II, Casablanca, Morocco.
+ **Youssra AMAZOU,** « Legal contract quality and validity assessment Through the Bayesian Networks", Faculty of Sciences and Technologies of Tangier, Abdelmalek Essaadi University of Tetouan, Morocco
+ **Qamar EL MAAZOUZI**, « Optimizing Recommendation Systems in E-learning: Synergistic Integration of Lang Chain, GPT Models, and Retrieval Augmented Generation (RAG)", Mohammadia School of Engineers, Mohammed V University, Rabat, Morocco.

12:35 – 14:30 : Lunch

14:30 – 15:15 : **Tutorial** : « Library for statistical testing and comparisonof algorith results",Pr. **Christian LUNA** & **José Maria LUNA**, UCO, CORDOBA, SPAIN

15:15 – 16:30 : **Session 1.3** (Network technologies & IOT1)

+ P. **TENE**, "ML based Control in Precision Agriculture : LED Intensity and CO2 emission case study", University of Southern Denmark, Sønderborg Alsion 2, Denmark
+ **K. A. COULIBALY,** "Industry 4.0: Internet of Things and Cyber-Physical Systems for the implementation of pedagogical factory Digital Twin", Univ. Bordeaux, ESTIA, France
+ **Taha HOUDA**, « Multi-Robot Interaction with Mixed Reality for Enhanced Perception", College of Computer Engineering and Science, Prince Mohammad Bin Fahd University, AlKhobar Saudi Arabia
+**Ouiam AMENCHAR**, "Designing a Firefly Algorithm-Enhanced Protocol for Efficient 3D Heterogeneous Wireless Sensor Networks in Water Quality Monitoring", LabTIC, ENSA de Tanger, Université Abdelmalek Essaâdi, Morocco

15:15 – 16:30 : **Session 1.4** (Network technologies & IOT2)

+ **Loubna MOUJOUD**, « Ensemble Learning for Malware Detection", Department of Mathematics Computer Science and Networks INPT Rabat, Morocco
+ **Zineb BAKRAOUY**, « Enhancing Security Through Data Analysis and Visualization with ELK", STRS Lab., INPT, Rabat, Morocco
+ **Abdelwahed ELMOUTAOUKKIL,** « Industry 4.0 Efficiency: Predictive Maintenance with TinyML and Incremental Model", LCCPS, ENSAM, University Hassan II, Casablanca, Morocco
+ **OUSSAMA EL ALLAM**, « Tiny-ML and IoT based early covid19 detection wearable system", LCCPS Lab, ENSAM Casablanca, UH2C, Morocco

16:30 – 17:00 : Coffee Break

17:00 – 18:00 : **Tutorial** : « "Robotic" disassembly for recycling », Pr. **Adil OLABI,** ENSAM de Lille, France

17:00 – 18:00 : **Tutorial** : « Fisher Discriminant Analysis (FDA) », Pr. **Franck DUFRENOIS**, Université du Littoral Côte d'Opale, France

20:00- 00:00: Gala Dinner

Friday 19 APRIL 2024

9:00 -10:00 : **keynote speaker** , "Food Recommender System. Bridging Gap Between Health and User Behavior", Pr. **Mourad OUSSALAH**, University of Oulu, Finland

10:00 –10:30 : Coffee Break

10:30 – 11:30 : **Session 2.1** (Data management 1)

+ **Mohamad ABOU ALI**, « Revolutionizing Skin Cancer Diagnosis: Unleashing AI Precision through Deep Learning", University of the Basque Country (UPV/EHU), San Sebastian, Spain
+ **Soulaimane IDIRI,** "Fuzzy Bayesian Network applied to modeling vehicles cooling systems failure risk", FST of Tangier, Abdelmalek ESSAADI University Tetouan, Morocco
+ **Maria ED-DARHRI,** "Utilization of FMEA to Optimize Predictive Maintenance**",** ENSAM University of Hassan II, Casablanca, Morocco
+ **Ibtissam YOUB,** "Comprehensive Study on Sentiment Analysis: Insights into Data Preprocessing, Feature Extraction, and Deep Learning Model Selection", LCCPS, ENSAM, UH2C, Morocco

10:30 – 11:30 : **Session 2.2** (Data management 2)

+ **Loubna BOUHSAIEN**, "A Combined AHP-TOPSIS Model for the Selection of Employees for Promotion", FST of Tangier, Abdelmalek Essaadi University, Tetouan, Morocco
+ **Nissrine BAJJA**, "TOWARDS EXPLAINABLE MODELS: EXPLAINING BLACK-BOX MODELS", LCCPS, ENSAM, UH2C, Morocco
+ **Oussama NDAMA**, « Advanced NLP and N-Gram Techniques in Financial News Sentiment Analysis: Diverse Machine Learning Approaches", DSAI2S Research Team, C3S Laboratory, FST of Tangier, Abdelmalek Essaâdi University, Tetouan, Morocco
+ **Mohammed Marouane SAIM,** "Comparative Study of Feature Selection Algorithms for Cardiovascular Disease Prediction with Artificial Neural Networks", ERSC, E3S Research Center, Mohammed V University of Rabat, Morocco.

11:30 – 12:30 : **Tutorial**, « Computational costs of injection molding simulations », Pr. **Gilles REGNIER,** Arts et Métiers, CNRS, CNAM, France. Arts et Métiers Rabat campus, France

11:30 – 12:30 : **Tutorial**, « Utilization of Cyber-Physical Systems (CPS) and Artificial Intelligence (AI) in building energy management ", Pr. **Octavian CUREA**, ESTIA, Bayonne, France