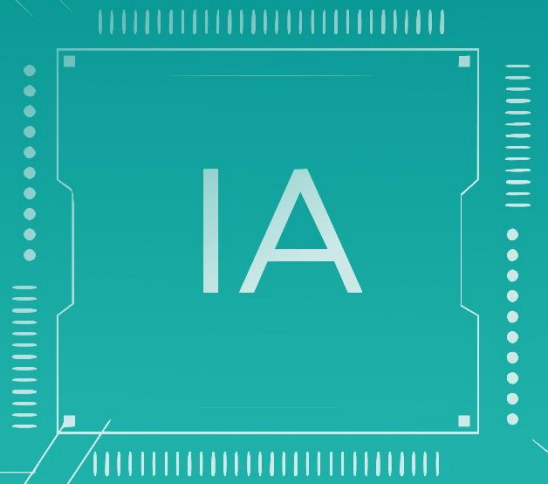# SITA'23

The fourteenth International Conference on Intelligent Systems: Theories and Applications

November 22,23 2023 - Mohammedia - Morocco

Program

IA

WHAT IS SITA'23 ?

SITA'23 is the 14th International Conference on Intelligent Systems: Theories and Applications. It is a major international scientific event organized with the objective of bringing together researchers and industry professionals sharing the Intelligent Systems passion. SITA'23 aims at presenting the latest research works dealing with emerging Theories and Applications of Intelligent Systems. Emphasis will be particularly laided on the contribution of these new theories in solving the complex problems that many scientific and industrial communities encounter. SITA'23 will be held on November 22th and 23th 2023 at Faculty of Sciences and Techniques of Mohammedia (FSTM), Mohammedia, Morocco.

KEYNOTE SPEAKERS

BERNADETTE BOUCHON-MEUNIER
Director of Research Emeritus
at CNRS LIP6
Sorbonne University

Bernadette Bouchon-Meunier is a director of research emeritus at the National Centre for Scientific Research and Sorbonne University, the former head of the department of Databases and Machine Learning in the Computer Science Laboratory of the University Pierre et Marie Curie-Paris 6 (LIP6). She is the Editor-in-Chief of the International Journal of Uncertainty, Fuzziness and Knowledge-based Systems and the Co-executive director of the IPMU International Conference held every other year since 1986. She is the (co)-editor of 27 books, and the (co)-author of five. She has (co)-authored more than 400 papers. She is currently a Former President of the IEEE Computational Intelligence Society and the IEEE France Section Computational Intelligence chapter vice-chair. She is an IEEE Life Fellow, an International Fuzzy Systems Association Fellow and an Honorary Member of the EUSFLAT Society. She received the 2012 IEEE Computational Intelligence Society Meritorious Service Award, the 2017 EUSFLAT Scientific Excellence Award and the 2018 IEEE CIS Fuzzy Systems Pioneer Award.

OUSSAMA BARAKAT
Professor-researcher
In Automation and Computer Science
at the University of Franche-Comté

Oussama Barakat has been a Professor-researcher at the University de Franche-Comté since 1992, where he has assumed a number of academic and scientific responsibilities. He has been Vice Dean of the Faculty of Science and Technology, Vice President of the University, project manager for PRES Bourgogne Franche-Comté... His research interests include industrial engineering and hospital engineering. He has developed several approaches to knowledge modeling and decision support in healthcare systems: decision support for optimizing care pathways, routing caregivers for home hospitalization, modeling and optimization of operating theatres, and regulation of hospital emergencies.

He has been responsible for several research projects in the field of artificial intelligence applied to healthcare (Envergure, Interreg France-Switzerland, etc.).

The SITA'23 program contains fifteen IEEE CIS sessions, two plenary sessions and two special workshops.

Wednesday, November 22, 2023 - Morning

8:30 – 9:00 Registration open

9:00 – 10:00 Opening Ceremony

10:00 – 10:45 Plenary session

Similarity measures and fuzzy modeling in data mining

Keynote Speaker *Bernadette BOUCHON-MEUNIER (Director of research Emeritus CNRS-Sorbonne University)*

10:45 – 11:30 Coffee Break

11:30 – 13:30 IEEE CIS Session 1.1 (Natural Language Processing)

- **Analytics of ensemble learning-based methods for Arabic text classification**
  Tarik Sabri, Said BAHASSINE, Omar EL BEGGAR, Mohamed KISSI
- **Arabic stems are being built in a database utilising an automated process**
  Abderrahman LAABIDI, Abdellah YOUSFI, Iazi SAID, Si Lhoussain AOURAGH
- **An innovative method for topic modeling employing speed reading**
  Fatima-Zahrae SIFI, Wafae SABBAR, Amal EL MZABI, Fatima ES-SABERY
- **Call Center Customer Sentiment Analysis Using ML and NLP**
  Imad AATTOURI, Hicham MOUNCIF, Mohamed RIDA

11:30 – 13:30 IEEE CIS Session 1.2 (Smart Cities and Urban Mobility 1)

- **Deep Learning Approaches for Vessel Estimated Time of Arrival Prediction: A Case Study on the Saint Lawrence River**
  Ismail BOURZAK, Sara EL MEKKAOUI, Abdelaziz BERRADO, Stéphane CARON, Loubna BENABBOU
- **Crops Classification Using Machine Learning And Google Earth Engine**
  C.ACHAHBOUN, M. Chikhaoui, M. Naim, M. Belfkih
- **Enhancing Driver Safety: Real-time Drowsiness Detection with InceptionV3 Transfer Learning**
  Fatima Zahrae BARRI, Ikram EL ASRI
- **A MCDA Approach for Prioritizing Road Safety Indicators**
  Ibtissam EL KHALAI, Zoubida CHORFI, Abdelaziz BERRADO
- **The Smart City of Tomorrow: A Simulation Platform for Optimizing EV Routes to Charging Points – A Moroccan Perspective**
  Nour-Eddine MOUMNI, Rachid ALAOUI, Driss KIOUACH, Ibrahim EL-FEDANY

11:30 – 13:30 IEEE CIS Session 1.3 (Digital Health 1)

- **Unveiling Intractable Epileptogenic Brain Networks with Deep Learning Algorithms: A Novel and Comprehensive Framework for Scalable Seizure Prediction with Unimodal Neuroimaging Data in Pediatric Patients**
  Bliss SINGHAL, Fnu POOJA
- **Adverse Drug Reactions Detection from Social Media: an Empirical Evaluation of Machine Learning Techniques**
  Oumayma ELBIACH, Hanane GRISSETTE, El Habib NFAOUI
- **A Comparative Study of SAM's Performance Against Three U-Net Architectures on Retinal Vessels Segmentation Task**
  Yasine LEHMIANI, Sami BELATTAR, Abdelhak MAHMOUDI
- **The Big Data and Machine Learning in Managing Global Health Crises : The Case of the Covid-19 Pandemic**
  Abdessamad ESSAIDI, Mostafa BELLAFKIH, El Mehdi KANDOUSSI
- **Transformer-Driven segmentation of New Lesions in Multiple Sclerosis scans**
  Khaoula ALAOUI BELGHITI, MOUNIA MIKRAM, MARYEM RHANOUI

11:30 – 13:30 IEEE CIS Session 1.4 (eXplainable Artificial Intelligence)

- **Explainable Artificial Intelligence: A Review and Case Study on Model-Agnostic Methods**
  Khadija LETRACHE, Mohammed RAMDANI
- **Comparative Study between Global and Local Explainable Models**
  Sidi Mohamed DAFALI, Mohamed KISSI, Omar EL BEGGAR
- **Supervised association rules for adapting online Competency-Based Learning Path**
  Jallal TALAGHZI, Abdellah BENNANE, Mostafa BELLAFKIH
- **Genetic Algorithm-Based Approach for Discovering Involutory MDS Matrices**
  El Mehdi BELLFKIH, Said NOUH, Imrane CHEMS EDDINE IDRISSI, Khalid LOUARTITI, Jamal MOULINE
- **Identifying Near-Duplicate Pairs in Exams: Similarity Detection Using Kshingling, Minhashing, and LSH**
  Nabila EL RHEZZALI, Imane HILAL, Meriem HNIDA

13:30 – 15:00   Lunch

Wednesday, November 22, 2023 – Afternoon

15:00 – 16:00 Plenary session

The contribution of Artificial Intelligence to the regulation of hospital emergencies.

Keynote Speaker *Oussama BARAKAT (University of Franche-Comté)*

16:00 – 16:30 Coffee Break

16:30 – 18:30 IEEE CIS Session 2.1 (Machine Learning 1)

- **Optimizing Learning Performance through AI-Enhanced Discussion Forums**
  Jamal Eddine RAFIQ, Abdelwahed NAMIR, Abdelali ZAKRANI, Mohammed AMRAOUY, Abdellah BENNANE
- **Enhancing Control in Manufacturing and Microgrid Systems: Deep Reinforcement Learning with Double Q-Learning**
  Mohamed BALLOUCH, Omar SOUISSI, Mohammed RAISS El-FENNI
- **Impact Machine Learning Classification And Technical Indicators, Forecast The Direction Of Bitcoin**
  Mohamed EL BADAOUI, Brahim RAOUYANE, Samira EL MOUMEN, Mostafa BELLAFKIH
- **Constrained Probabilistic Self-Organizing Maps**
  Zakariya ABIBI, Zakariae EN-NAIMANI, Khalid HADDOUCH
- **Data Obsolescence Detection Within Connected Environments**
  Jean Raphael RICHA, Hamza NOUEIHED, Richard CHBEIR

16:30 – 18:30 IEEE CIS Session 2.2 (Smart Cities and Urban Mobility 2)

- **Improvement artificial bee colony meta-heuristic for solving manufacturing flow-shop scheduling problem under blocking constraint**
  Omar NEJJAROU, Said AQIL, Mohamed LAHBY
- **Exploring Urban Livability Factors: A Novel Algorithm for Improved Confirmatory Factor Analysis**
  Ebnou ABDEM Seyid ABDELLAHI, Jérôme CHENAL, Rida AZMI, Meriem ADRAOUI, Cédric STÉPHANE Tekouabou KOUMETIO, El Bachir DIOP, Zouhair EL HADRI, M'barek IAOUSSE
- **Minimizing Maximum Tardiness in a Distributed Flow Shop Manufacturing Problem under No-Waiting and Sequence Dependent Setup Time Constraints**
  Achraf SAYAH, Said AQIL, Mohamed LAHBY
- **Ensemble Forecasting For Predicting Petroleum Products Traffic in Oil Terminal**
  Abdeltif BOUJAMZA, Saad LISSANE ELHAQ, Ahmed LOUKILI
- **Enhancing the Traveling Salesman Problem Solutions with Reinforcement Learning: A Variant Exploration-Exploitation Approach Beyond ε-Greedy**
  Sanaa EL JAGHAOUI, Aissa KERKOUR ELMIAD, Abdelhamid BENAINI
- **Road Signs Recognition by Using YOLOv8 Model**
  Abdellah NABOU, Ibtissam BEN RABBAA, Mouaad AIT AHMED OUHAMOU, Atheer L. Salih, El-Hassan ABDELWAHED

16:30 – 18:30 IEEE CIS Session 2.3 (Digital Health 2)

- **Data Preprocessing For Machine Learning Application in Healthcare: A Review**
  Ismail CHAHID, Aissa KERKOUR ELMIAD, Mohammed BADAOUI
- **The convergence of Virtual Reality and Personalized medicine**
  Ahlam BELMAQROUT, Btihal EL GHALI, Najima DAOUDI, Abdelhay HAQIQ
- **Blood Vessel Detection in Fundus Images Using Symbolic Approach**
  Sanae LAMTI, Noureddine KERZAZI, Rachid SEKHSOUKH, Youssef HARRAR, Fatima Zahra MABROUKI, Wissale OUJIDI
- **Application of a hybrid EfficientNet-SVM model to medical image classification**
  Imane BOUSLIHIM, Walid CHERIF, Mohamed KISSI
- **Indirect Assessment of Hyperechogenicity of Substantia Nigra Utilizing Sleep-based Biomarkers**
  Marek MIKULEC, Jiří MEKYSKA, Zoltán GALÁŽ, Luboš BRABENEC, Kateřina BOČKOVÁ , Irena REKTOROVÁ

16:30 – 18:30 IEEE CIS Session 2.4 (Artificial Intelligence for Software Engineering)

- **Low-code/No-code Development : A Systematic literature review**
  Hind EL KAMOUCHI, Mohamed KISSI, Omar EL BEGGAR
- **Intelligent Facility Layout Planning for Emergency Department: A Multi-Agent System and PSO Approach**
  Khalil BOURAMTANE, Said KHARRAJA, Jamal RIFFI, Omar ELBEQQALI Saïd BOUJRAF
- **Application of Artificial Intelligence in ERP System's Fulfillment of the Purchasing Function**
  Hanane L'YARFI, Noureddine MOTAKI, Mostafa DERRHI, Imane LAHLOU
- **New Strategy for Developing and Enhancing Online Analytical Processing Cubes on Graphs**
  Redouane LABZIOUI, Khadija LETRACHE, Mohammed RAMDANI
- **Error-Correcting Codes and the Power of Machine Learning: Enhancing Data Reliability**
  Imrane CHEMSEDDINE IDRISSI, Said NOUH, El Mehdi BELLFKIH, Abdelaaziz MARZAK, Mohammed EL ASSAD ASSAD

09:00 – 11:00 IEEE CIS Session 3.1 (Digital Health 3)
- **Multi-criteria Decision Analysis to Support Clinical Decision Making in Oncology: A Literature Review**
  Hanane AMROUNE, Abdelaziz BERRADO
- **Towards a general cancer prognosis platform: Application to lung cancer**
  Wafaa TIZI, Abdelaziz BERRADO
- **Reliable secure Medical data sharing model based Private Blockchain structure**
  Hamza RAFIK, Abdelaziz ETTAOUFIK, Abderrahim MAIZATE
- **Enhancing Large Language Models' Utility for Medical Question-Answering: A Patient Health Question Summarization Approach**
  Nour Eddine ZEKAOUI, Siham YOUSFI, Mounia MIKRAM, Maryem RHANOUI
- **Food Recognition and Nutrition Estimation using MobileNetV2 CNN architecture and Transfer Learning**
  Karima MOUMANE, Ikram EL ASRI, Taoufiq Cheniguer, Soufiane Elbiki

09:00 – 11:00 IEEE CIS Session 3.2 (Machine Learning 2)
- **Exploring Student Involvement in E-Learning**
  Khalid BENABBES, Ahmed ZELLOU, Khalid HOUSNI, Ali EL MEZOUARY
- **Pattern Matching to improve Accuracy and Efficiency of File Lifecycles Forecasting**
  Adrian KHELILI, Sophie ROBERT HAYEK, Soraya ZERTAL
- **From Development to Deployment: An Approach to MLOps Monitoring for Machine Learning Model Operationalization**
  Anas BODOR, Meriem HNIDA, Daoudi NAJIMA
- **Prediction of Speeding Intention Based on the Theory of Planned Behavior**
  Abderrahim EL HAFIDY, Taoufik RACHAD
- **Enhancing Recommender Systems through Hybrid Fusion of SVD/SVD++ and k-Nearest Neighbors**
  Nabil AZRI, Adil HADDI, Abdelghani AZRI
- **Textual-Visual multimodal sentiment analysis: A Review of Approaches and Challenges**
  Soukaina FATIMI, Wafae SABBAR, Abdelkrim BEKKHOUCHA

09:00 – 11:00 IEEE CIS Session 3.3 (Artificial Intelligence for Renewable Energy 1)
- **Deep Learning Model for Multi-Step Ahead Prediction of Solar Irradiance: Case of Study of Morocco**
  Saad BENBRAHIM, Loubna BENABBOU, Hanane DAGDOUGUI, Ismail BELHAJ, Abdelali DJDIAA, Hicham BOUZEKRI, Abdelaziz BERRADO
- **Electricity demand Forecasting: A systematic literature review**
  Ayoub ATANANE, Loubna BENABBOU, Abderrazak EL OUAFI
- **Fractional order sliding mode control of wind turbines based on wind speed estimator**
  Yassamine ZOUBAA, Sihame CHOUIEKH, Ayoub EL BAKRI, Ismail BOUMHIDI
- **Gamification in Energy Consumption Systems: A Systematic Literature Review**
  Mohammed LAOUADI, Mohamed KISSI, Omar EL BEGGAR
- **Towards an Effective Electrical Market Design: Identifying and Defining Key Criteria for Decision-Making**
  Souhaila CHIGUER, Loubna BENABBOU, Hanane DAGDOUGUI, Ismail BELHAJ, Abdelali DJDIAA, Hicham BOUZEKRI, Abdelaziz BERRADO

09:00 – 11:00 IEEE CIS Session 3.4 (Cyber-security and Smart Networks and Services)
- **A New Hybrid Approach using Deep Learning in handling IoT Attack**
  Asmae BENTALEB, Chaimaa REMMACH, Jaafar ABOUCHABAKA
- **Comparative Analysis of Physical Layer Network Coding-Based Random Access Techniques in WSN Communications**
  Mansour LMKAITI, Hicham MOUNCIF
- **Business-IT Alignment in Cloud environment : Survey on the use of process mining**
  Manal BOUACHA, HANAE SBAI
- **Cloud Infrastructure Monitoring Using Splunk: Expectations and Challenges**
  Hajar AITIDDIR, Noureddine KERZAZI

11:00 -11:30 Coffee Break

11:30 - 13:30 IEEE CIS session 4.1 (Robotic and autonomous machines)
- **An intelligent ANFIS mobile robot controller Using an expertise-based guidance technique**
  Brahim HILALI, Mohammed RAMDANI, Abdelwahab NAJI
- **Power Quality Improvement using a Robust Voltage Vector-Controlled Three-Phase SAPF-based Fuzzy Logic and Space Vector Modulation**
- *Bouchaib ESSOUSSI, Ahmed MOUTABIR, Bahloul BENSASSI, Abderrahmane OUCHATTI, Yassine ZAHRAOUI, Bouchaib BENAZZA*
- **Simultaneous Localisation and Mapping of a Mobile Robot in a Static Environment**
  Gabriel BORG, Matthew MONTEBELLO
- **Comparison of Standard and Modified Ant Colony Algorithm with Fuzzy system for Path Planning of Robot in Complex Environment**
  Sudeep SHARAN, Anh Tong Ngoc MINH, Peter NAUTH, Juan Jose DOMINGUEZ-JIMENEZ
- **Deep Learning Empowered Hand Gesture Recognition: using YOLO Techniques**
  Nourdine HERBAZ, Hassan EL IDRISSI, Abdelmajid BADRI

11:30 – 13:30 IEEE CIS Session 4.2 (Machine Learning 3)
- **Variability and correlation of parameters for dynamic balancing of an assembly line based on a statistic method**
  Youness HILLALI, Samir CHAFIK, Najlae ALFATHI, Mourad ZEGRARI
- **A Graph Based Approach for Cyberbullying Classification Using Machine Learning Algorithms**
  Khadija KHEDRAOUI, Khalid ZINE-DINE, Abdellah MADANI
- **A weighted average ensemble learning based on the cuckoo search algorithm for fraud transactions detection**
  Mohammed TAYEBI, Said EL KAFHALI
- **Sentiment analysis in digital learning: Comparing Lexical, Traditional machine learning, and deep learning approaches**
  Mohammed AMRAOUY, Mostafa BELLAFKIH, Abdellah BENNANE, Mohammed MAJID HIMMI, Jallal TALAGHZI

11:30 - 13:30 IEEE CIS Session 4.3 (AI for Renewable Energy 2)
- **Forcasting diurnal Heating Energy Consumption using ANN, RNN and ARNN**
  Khaoula ELHABYB, Amine BAINA, Mostafa BELLAFKIH
- **Transformer-Based Model for Multi-Horizon Forecasting Ozone in Marrakech city, Morooco**
  Abdellatif BEKKAR, Badr HSSINA, Samira DOUZI, Khadija DOUZI
- **Monitoring Wind Turbine using Internet of Things: A Systematic Mapping Study**
  Mohammed RIDA OUAZIZ, Mohammed ZAIM, Laila CHEIKHI

13:30-15:30 Lunch
16:00-17:00 Closing ceremony

Thursday, November 23, 2023
Special workshops

SITA'23 will host two special workshops during the conference days. The first workshop will be dedicated to the artificial intelligence in football, while the second workshop is devoted to the Intelligent and secure Transport organized in memory of the late Pr. Azedine BOULMAKOUL and present its different research works.

Workshop 1: Artificial Intelligence applied to Football

9h00 - 10h00 : Coffee reception

10h00 - 11h30 : Introduction to Artificial Intelligence in football

- Overview of AI in football (Marwane LOTFI, Karim HASSANI)
- **FIFA** – The present and future of Football Data (Bahaeddine El FAKIR)

11h30 - 13h30 : Case studies in the use of AI in various clubs and federations

- **Sevilla FC**, Spain, (Marino Arnáiz ÁVILA)
- **Club America**, Mexic, (Enrique CHÀZARO)
- **Italian Federation of Football**, Italy, (Vanni Di Febbo)
- **Oakland Roots**, USA, (Julian SFEIR)
- **Parma Calcio**, Italy, (Matteo MATEOTTI)
- **Ajax Amsterdam** & **Feyenoord**, Netherland, (Chelsea DISSELDORP)
- **FUS**, Morocco, (Marouane LOTFI)
- **FUS**, Morocco, (C. Jamal SELLAMI)

13h30 - 15h00 : Lunch Break

15h00 - 16h00 : Major advances in AI for football

- **The future of Machine Learning in football**
  Matteo MATEOTTI
- **Improving existing measures through modeling and fuzzy logic**
  Karim HASSANI

Workshop 2: Intelligent and Secure Transport (In memory of Pr A. Boulmakoul)

9h00 - 10h00 : Plenary session

- **Smart and secure transport & introduction of Boulmakoul scientific contributions**
  Keynote Speaker *Ahmed LBATH (Institut CARNOT LSI)*

10:00 - 11:00 Tracks 1

- **Multimodal transportation networks**
  Hicham MOUNCIF
- **Container terminals operational management**
  Mohamed RIDA
- **Mobile Object and Fuzzy Graph Modeling: Case study of HazMat Telegeomonitoring**
  Adil EL BOUZIRI
- **Analysis and Optimization of Urban Security Through Voronoi Spatial Diagrams**
  Aziz MABROUK

11:00 -11:30 Coffee Break

11:30 - 12:30 Tracks 2

- **Unified Trajectory Model: Meta-modeling and applications for the smart city**
  Lamia KARIM
- **Smart pedestrians simulation and risk modeling**
  Meriem MANDAR
- **Reactive distributed geo-decisional ecosystem based on microservices**
  Ghyzlane CHERRADI
- **IoV distributed architecture for real-time intelligent congestion trajectories analytics**
  Mohamed NAHRI

12:30 - 13:30 Tracks 3

- **Intelligent & Resilient Urban Network System: A distributed real-time reactive intelligent transport system for supervision and symbolic control of urban traffic**
  Adil EL BOUZIRI, Lamia KARIM, Aziz MABROUK
- **Intelligent reactive system and intuitionistic fuzzy reasoning for risk analysis of driver-pedestrian interactions**
  Meriem MANDAR, Adil EL BOUZIRI, Omar EL BEGGAR

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MINKU Leandro (University of Leicester- UK)
MOUJABBIR Mohammed (FP, khouribga)
MOUMANE Karima (ENSIAS-Rabat, Morocco)
MOUSSAOUI Omar (University Med 1st, Morocco)
NAFAOUI El habib (FS DM-Fes, Morocco)
NAJI Abdelwahab (ENSA-Oujda, Morocco)
NAJID Abdellah (INPT-Rabat, Morocco)
NKAMBOU Roger (UQAM-Montreal, Canada)
NOUR EL FATH Mustapha (University Laval, Canada)
PARK You-Jin (University of Technology, Taipei, Taiwan)
RACHAD Taoufik (ENSIAS-Rabat, Morocco)
RACHIDI Tajje-Eddine (AUI-IFRANE, Morocco)
RADOUANE Mohammed (ENSIAS-Rabat, Morocco)
RAHMANI Ahmed (Ecole Centrale, LILLE, France)
RAMDANI Mohammed (FSTM , Morocco)
RANC Daniel (TELECOM Sudparis-Paris, France)
RAOUYANE Brahim (FSAC-Casablanca, Morocco)
RETBI Asmae (EMI-Rabat, Morocco)
RIFQI Maria (LIP6-Paris, France)
ROBERT Serge (UQAM-Montreal, Canada)
ROS JOAQUIN Nicolas (University of Murcia, Spain)
SABBAR Wafae (FSJES-Casablanca, Morocco)
SADDOUNE Mohammed (FSTM, Morocco)
SARDI Lamyae (FS-Rabat, Morocco)
SAYAGH Mohammed (ETS-Montreal, Canada)
SELLAMI Asma (University of Sfax-Sfax, Tunisia)
TAMTAOUI Ahmed (INPT-Rabat, Morocco)
TESTIK Murat Caner (HacettepeUniversity, Turkey)
TOVAL Ambrosio (University of Murcia, Spain)
VENTURA SOTO Sebastián (University of Córdoba, Spain)
WANG Hui (Queen's University Belfast, Northern Ireland)
YOUSFI Abdellah (FSEJ-UM5-Rabat, Morocco)
YOUSSFI Mohamed (ENSET-Mohammedia, Morocco)
ZAKRANI Abdelali (ENSAM-Casablanca, Morocco)
ZEITOUNI Karine (UVSQ-Versailles, France)
ZELLOU Ahmed (ENSIAS-Rabat, Morocco)
ZEROUAOUI Hasnae (UM6P, Morocco)
ZINE-DINE Khalid (FS-Rabat, Morocco)

Planning SITA'23 conference

Wednesday 22/11/2023		Thursday 23/11/2023									

Conference SITA'23 (left vertical band)

Time	Wednesday		Time (Conference SITA'23)	Sessions			Workshop 1 : Amphi ENSET	Time	Workshop 1 content	Workshop 2 : ROOM 2	Time	Workshop 2 content
8:30 - 9:00	Registration Hall		9:00 - 11:00	Session 3.1 Room 4 / Session 3.2 Room 1 / Session 3.3 Room 3 / Session 3.4 Room 5				9:00 - 10:00	Coffee reception		9:00 - 10:00	Plenary session
9:00 - 10:00	Opening Ceremony Amphi		11:00 - 11:30	Coffee Break				10:00 - 11:30	Introduction to Artificial Intelligence in football		10:00 - 11:00	Tracks 1
10:00 - 10:45	Plenary Session Amphi		11:30 - 13:30	Session 4.1 Room 4 / Session 4.2 Room 3 / Session 4.3 Room 1				11:30 - 13:30	Case studies in the use of IA in various clubs and federations		11:00 - 11:30	Coffee Break
10:45 - 11:30	Coffee Break		13:30 - 15:00	Lunch				13:30 - 15:00	Lunch		11:30 - 12:30	Tracks 2
11:30 - 13:30	Session 1.1 Amphi / Session 1.2 Room 4 / Session 1.3 Room 2 / Session 1.4 Room 1							15:00 - 16:00	Major advances in AI for football		12:30 - 13:30	Tracks 3
13:30 - 15:00	Lunch											
15:00 - 16:00	Plenary Session Amphi		16:00 - 17:00	Closing ceremony								
16:00 - 16:30	Coffee Break											
16:30 - 18:30	Session 2.1 Amphi / Session 2.2 Room 1 / Session 2.3 Room 2 / Session 2.4 Room 4											

SITA'23 PARTNERS