



# ISCV2024

The Sixth IEEE International Conference on Intelligent Systems and Computer Vision

May 08-09-10 2024, FSDM-Fez Morocco

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## CONFERENCE PROGRAM



<https://www.iscvconf.com/2024/>



# WELCOME

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Greetings and a warm welcome to the Sixth edition of the International Conference on Intelligent Systems and Computer Vision (ISCV 2024)!

We are delighted to extend our invitation to this esteemed gathering, which serves as a premier platform for researchers, academics, students, and industry leaders to convene and explore the latest advancements in Intelligent Systems and Computer Vision.

Building upon the resounding success of our predecessors in 2015, 2017, 2018, 2020, and 2022; ISCV 2024 promises to be a hallmark event in the realm of technology and innovation. Indexed by SCOPUS, our conference is dedicated to fostering intellectual exchange and collaboration.

This year's conference will embrace a hybrid format, offering both online participation and the opportunity for face-to-face engagement in the vibrant city of Fez, Morocco, the spiritual and cultural capital of the region. Authors will have the flexibility to choose their preferred mode of presentation, ensuring inclusivity and accessibility for all.

We extend our heartfelt gratitude to all those who have contributed to the success of this conference, including the Organizing Committee, Technical Program Committee, keynote speakers, and participants. Your dedication and hard work are truly appreciated.

We hope you find ISCV 2024 to be a rewarding and enriching experience, and we eagerly anticipate meeting you all in person or virtually at the next edition of our conference.

**Welcome aboard, and let the journey begin!**

## Conference Proceedings Citation Index:

All accepted and presented papers will be published in the conference proceedings and indexed by IEEE Xplore Digital Library and Scopus.



IEEE ISCV2024 Conference Record is **#60512**

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## Past Conference Proceedings:

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- **ISCV2022**
- **ISCV2020**
- **ISCV2018**
- **ISCV2017**
- **ISCV2015**

## List of Topics

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The ISCV'2024 conference seeks original and high quality papers in the two major areas and their applications; the **Intelligent Systems** and **Computer Vision**. Relevant topics include, but are not limited to:

### Intelligent Systems and Information Management

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- Machine learning
- Cognitive Learning
- Semantic computing
- Information Retrieval
- Big Data Analytics
- Business Intelligence
- Data Mining
- Deep learning
- Intelligent Decision Making and Multi Agent Systems
- Fuzzy Techniques and Systems

### Computer Vision and Image Understanding

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- Intelligent Image/video processing
- Multimedia analysis, indexing and retrieval
- Activity and event analysis
- Scene understanding
- Human behavior understanding
- Gesture and action recognition
- Facial expression recognition
- Affective computing
- Depth processing, analysis and recognition
- Biometric systems

### Tools and applications

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- Biomedical image analysis
- Cultural heritage
- Intelligent transportation systems
- Computer graphics
- Intelligent control and embedded systems
- Smart grids
- Wireless network technologies
- Security

# Organizing Committees

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# IEEE ISCV'2024 Program

**Wednesday, May 8, 2024 (UTC+1)**

## Opening Ceremony

**Moderator:** Prof. Omar El Beqqali , Faculty of Sciences Fez, Morocco

**9:15 - 10:15**

**Zoom Link:**

<https://us06web.zoom.us/j/84241098232?pwd=39IVa5HewpI8aV7t4lce5jittFQF51.1>

Meeting ID: 842 4109 8232 - PWD: ISCV2024

## Break

**10:15 - 10:45**

## Keynote Speech

**Title:** Intelligent Control and Optimization of Smart Vehicle Systems with High Complexity

**Prof. Hicham Chaoui**  
Texas Tech University-USA

**Moderator:** Prof. Omar El Beqqali , Faculty of Sciences Fez, Morocco

**10:45 - 12:00**

**Zoom Link:**

<https://us06web.zoom.us/j/84241098232?pwd=39IVa5HewpI8aV7t4lce5jittFQF51.1>

Meeting ID: 842 4109 8232 - PWD: ISCV2024

## Lunch

**12:00 - 14:15**

## Parallel sessions [S1- S2- S3-S4]

14:15 - 16:15

### S1 - Machine learning & Applications I

#### Conference hall

**Session chairs:** *Karim El Moutaouakil, El Fazazy Khalid*

- 155 Improving Hybrid Recommendations with VADER-Powered Sentiment Analysis  
*Nossayba Darraz, Ikram Karabila, Anas El-Ansari, Nabil Alami, Mostafa El Mallahi*
- 288 EfficientNetV2 and Attention Mechanisms for the automated detection of Cephalometric landmarks  
*Idriss Tafala, Fatima-Ezzahraa Ben-Bouazza, Aymane Edder, Oumaima Manchadi, Mehdi Et-Taoussi, and Bassma Jioudi*
- 308 Fine-Tuning Vision Transformers for Enhanced Skin Lesion Classification: Navigating the Challenges of Small Datasets  
*Rahmouni Abla, Sabri My Abdelouahed, Aarab Abdellah*
- 194 Random Forest Classifier for Marine Biodiversity Analysis  
*Houria Braikia, Sana Ben Hamida, Marta Rukoz,*
- 206 Advancement in Lung Tumor Segmentation: A Review  
*Souvik Sarkar, Harmanjeet Singh, Jasneet Chawla*



### S2 - Medical Data Analysis & Deep Learning

**Zoom Link:** [Click-Me](#)

**Session chairs:** *Hiba Ramadan, Noura Ahrahrou, Hamid Tairi*

- 269 Automating the Recognition of Microservices from Business Process Analysis  
*Zougari Soundous, Daoud Mohamed*
- 317 Joining CNNs and Transformer networks for enhanced breast ultrasound image segmentation  
*Jaouad Tagnamas, Hiba Ramadan, Ali Yahyaouy, Hamid Tairi*
- 231 Predicting Cardiovascular Disease: A Survey on different Datasets and DL/ML Models using ECG  
*Nouhaila Akouz, Asmae El Ghazi, Wassima Moutaouakil, Soufiane Hamida, Abdelhadi Raihani, Bouchaib Cherradi,*
- 209 Diabetic Retinopathy Identification Depend On Deep Learning Techniques: A review  
*Fatima Jabbar Jwad, Ashwan A. Abdulmunem*
- 287 COVID-19 Detection From CT Scan Images Using Deep Learning Models  
*Syeda Sadia Alam, Kawsar Habib Munna, Md Mushtaq Shahriyar Rafee,*





### S3 - Machine learning & Applications II

**Zoom Link:** [Click-Me](#)

**Session chairs:** *Mohamed El Far, My Abdelouahed Sabri*

- 257 Reinforcement Learning in Stock Portfolio Optimization: A Comprehensive Literature Review  
*Manale Mortaji*
- 268 Meta-Learning in Neural Networks for Few-Shot Learning: A Comprehensive Exploration  
*Salim Salmi , Lahcen Oughdir , Anass el Affar*
- 277 SolvPredict: A Comprehensive Exploration of Predictive Models for Molecule Solubility  
*Aitouhanni Imane*
- 306 Speech Emotion Recognition System Using Discrete Wavelet Transform and Support Vector Machine  
*Fadwa Abakarim, Abdenbi Abenaou*
- 235 Towards a Generic Data-Driven Model for Optimal Health Service  
*Ismail Bouajaja, Omar Bouattane, Oussama Barakat, Stephan Robert-Nicoud*
- 315 Functional Local Mean K-Nearest Neighbor: introducing a novel metric for improved algorithm performance  
*Mohammed Sabri, Ali Yahyaouy, Antonio Balzanella, Rosanna Verde, Jamal Riffi, Hamid Tairi*



### S4- Smart Applications & Industry 4.0

**Zoom Link:** [Click-Me](#)

**Session chairs:** *Ismail Boumhidi, El Bachir Tazi, Boukili Bensalem*

- 218 Smart Campus Indoor Navigation with Aggregate Profiling for Emergency Scenarios  
*Omar Alfandi and Arne Bochem*
- 227 Radiation Pattern Stability and Miniaturization Improvements of Planar Antennas for Radar and Medical Imaging using the Theory of Characteristic Modes  
*Mouad El Mouden, Badiia Ait Ahmed, Mohamed Zied Chaari, Juan Ruiz Alzola, Marta Cabedo-Fabrés, Otman Aghzout,*
- 236 Clothes Type and Color Classification Using TinyML  
*Rim Miftah, Asmaa Mourhir, Soufiane Lamchoudi,*
- 240 Adaptive Mobile Diminished Reality Framework for 3D Visual Privacy  
*Salam Tabet, Ayman Kayssi, Imad H. Elhaji*
- 301 The gap between the expectations of Gen Z and Organizations in Industry 4.0  
*Teresa Dieguez, Paula Loureiro, Isabel Ferreira*
- 325 Artificial Intelligence and Industry 4.0 Trends A Comprehensive Review and Case Study Analysis in the Moroccan Context

Anass Ben Abdelouahab, Adham Chaibi, Samia Haman, Zineb Bentassil, Abdelmajid Elouadi, Aniss Moumen,

## Break

16:15 - 16:30

Parallel sessions [S5- S6- S7- S8]

16:30 - 18:30

### S5 - Machine learning & Applications III

#### Conference hall

**Session chairs:** *Abdessamad Benlahbib, Hamza Alami*

- 264 Contribution of Artificial Intelligence for Fetal Heart Rate Interpretation and Medical Decision Support: A Review  
*Charlotte Bredy-Maux, Oussama Barakat, Nicolas Mottet*
- 204 Real-Time Monitoring of Oilfield Operations with Deep Neural Networks  
*Abhay Dutt Paroha*
- 224 Neural Network-Driven Optimization for Cost Minimization in Telecom Energy Systems with Nonlinear Converter Efficiencies  
*Othmane Hamzaoui, Brian Françoise, Hussein Obeid, Stephane Le Masson, Hamid Gualous*
- 238 Models for Short-Term Energy Load Forecasting: the Moroccan Cities Case and Datasets  
*Rachida Hachache, Rachid Bennani, Abdelaali Chaoub, Antonio Grilo, Ahmed Tantaoui, Brahim Lakssir, Ali Yahyaouy*
- 318 Implementing Analog Artificial Neural Networks for Enhanced Energy Efficiency and Speed in Machine Learning Applications  
*El Hafci Mohamed, My Abdelouahed Sabri, Aarab Abdellah*
- 214 Long Short-Term Memory Networks for Server Workload Prediction  
*Meryeme El Yadari, Saloua El Motaki, Ali Yahyaouy, Philippe Makany, Khalid El Fazazy, Hamid Gualous, Stéphane Le Masson*



### S6 - Medical Data Analysis & Deep Learning

**Zoom Link:** [Click-Me](#)

**Session chairs:** *Chakir Loqman, Hassan Satori, Badr Bousofi*

- 159 Pioneering Pain Relief: Exploring Neuromodulation with Electrical Impulses and Mechanical Techniques for Effective Pain Management  
*Mohamed Touil, Youness Kadil, Houda Filali, Asmaa Radouane,*
- 291 CoML: Machine Learning based approach for COVID-19 related Suicidal Ideation detection  
*Salah Bouktif, Akib Khanday, Ali Ouni*
- 171 Predictive Power of AI: Tackling Child Undernutrition in Morocco  
*Mustapha Berrouyne Hinde Hami, Youness Jouilil*

- 252 Exploring Machine Learning Algorithms for Myocardial Infarction Diagnosis  
*Sara El Omary, Souad Lahrache, and Rajae El Ouazzani*
- 319 Predicting risk criticalities of hospital sterilization using fuzzy FMEA and artificial neural network  
*Amine En-Naaoui, Mohammed Kaicer, Aicha Aguezzoul*



## S7- Intelligent Energy Management Systems

**Zoom Link:** [Click-Me](#)

**Session chairs :** *Hamid Gualous, Mamadou Lamine Doumbia , Mamadou-Bailo Camara*

- 239 Improving Power Precision in Hybrid Renewable Energy Systems with a Quad Active Bridge DC-DC Converter and Neural Network-Based Decoupling  
*Sabhi Khalid, Mohamed Talea, Hicham Bahri*
- 275 Nonlinear Backstepping Control of a PMSG-Based Wind Energy Conversion System Connected to the Grid  
*Adil EL Kassoumi, Mohamed Lamhamdi, Ahmed Mouhsen, Mohammed Fdaili, Azeddine Mouhsen, Imad Aboudrar*
- 320 MPPT based Fractional Short-Circuit Current - Model Predictive Control for PV System in Real Weather Conditions for Heat-Pump Applications  
*Claude Nzoundja Fapi, Mohamed Lamine Toure, Mamadou Bailo Camara and Brayima Dakyo*
- 345 Combined Akima Interpolation and Deep Learning LSTM Method based Building Energy Efficiency Prediction  
*Jura Arkhangelski; Mahamadou Abdou-Tankari; Gilles Lefebvre; Mustapha Karkri*
- 326 Dynamic Selection of Electric Vehicle Charging Stations Using Deep Reinforcement Learning  
*Khalil Bachiri, Yahyaouy Ali, Maria Malek, Nicoleta Rogovschi, Younès Bannani, Hamid Gualous*



## S8- Biometric systems & Cybersecurity

**Zoom Link:** [Click-Me](#)

**Session chairs:** *Omar El Beqqali, Mostafa El Mellahi, Ali Yahyaouy*

- 213 Optimization of Graph Convolutional Networks with Variational Graph Autoencoder Architecture for 3D Face Reconstruction Task  
*Mahfoudh M. Batarfi, Manohar Mareboyana*
- 234 Cryptocurrency volatility: Challenges for modeling  
*Lamarti Sefian Mohamed, Mustapha Khalfouni*
- 266 Detecting DDoS Attacks using Machine Learning in IoT Environment  
*Amine Berqia, Habiba Bouijij, Ahmed Merimi, Abdellah Ouaggane*

- 293 Face recognition using Nuclear Norm-based Angle Two-Dimensional Principal Component Analysis  
*Khalid Choug dali, Driss Gretete, Elalji Jamal,*
- 310 Real-Time Attendance System Using Facial Recognition  
*Anitha Julian, Sasi kumar, Naveen kumar,*
- 346 Towards Maximum Efficiency: Combining ELM with BA for Credit Card Fraud Detection  
*Fatima Zohra El hlouli, Jamal Riffi, Mohamed Adnane Mahraz , yahyaouy Ali, Khalid EL Fazazy, Hamid Tairi*
- 294 *Enhancing Student Attendance System through Fingerprint Recognition Using Transfer Learning Techniques*  
*Slimane Ennajar ,Walid Bouarif*

**Thursday, May 9, 2024 (UTC+1)**

## **Keynote Speech**

**Title: From connectionist parallelism to a distributed computing practice**

**Prof. Mohammed Mestari**

**ENSET Mohammedia-Morocco**

**Moderator: Prof. El Habib Nfaoui, Faculty of Sciences Fez, Morocco**

**9 :15 - 10:15**

**Zoom Link:**

[https://us06web.zoom.us/j/84241098232?pwd=39IVa5HewpI8aV7t4lce5jittF](https://us06web.zoom.us/j/84241098232?pwd=39IVa5HewpI8aV7t4lce5jittFQF51.1)

[QF51.1](https://us06web.zoom.us/j/84241098232?pwd=39IVa5HewpI8aV7t4lce5jittFQF51.1)

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## **Break**

**10:15 - 10:30**

## **Parallel sessions [S9- S10- S11-S12]**

**10:30 - 12:30**

### **S9- Deep Learning & Applications I**

#### **Conference hall**

**Session chairs: Afaf Bouhoute, Nabil El Akkad**

- 256 Abnormal Event Detection in Videos using LSTM Convolutional Autoencoder  
*Abdelhafid Berroukham, Khalid Housni, Mohammed Lahraichi*
- 221 Formalization of materialized view problem in semantic databases  
*Narkoy Batouma, Mahamat Atteib Doutoum Mahamat, Lang Dionlar, Ali Ouchar Cherif, Ladjel Bellatreche, Bery Leouro Mbaïoussoum,*
- 260 Requirement Specification in Problem and Solution Domains  
*Hatime Bencharqui, Adil Anwar*
- 207 Addressing Sparsity and Cold Start Challenges in Recommender System Using Advanced Deep Learning Architectures  
*Ikram karabila, nossayba darraz, anas el-ansari, nabil alami, salma chennouni, mostafa el mallahi*
- Diabetic Retinopathy Prediction Based on a Hybrid Deep Learning Approach  
*Mohammed Oulhadj, Jamal Riffi, Chaimae Khodriss, Adnane*
- 347 *Mohamed Mahraz, Ali Yahyaouy, Meriem Abdellaoui, Idriss Benatiya Andaloussi, Hamid Tairi*



## S10- Deep Learning & Computer Vision

**Zoom Link:** [Click-Me](#)

**Session chairs:** *Bennani Mohamed Taj, Mohamed Adnane Mahraz, Adil Bardane*

- 241 Landfill Detection using Computer Vision and Aerial Imagery  
*Yassine Ibork, Asmaa Mourhir*
- 250 Deep Learning-Based Estimation of Olive Flower Density from UAV Imagery  
*Youness hnida, Mohamed Adnane Mahraz, Jamal Riffi, Tairi Hamid, Ali Achebour*
- 332 Analysing recorded video to evaluate how engaged and emotional students are in remote learning environments  
*Benyoussef Abdellaoui, Ahmed Remaida, Zineb Sabri, Mohammed Abdellaoui, Younes El Bouzekri El Idrissi, Aniss Moumen*
- 212 **Process Quality Assurance of Artificial Intelligence in Medical Diagnosis**  
*Negin Moghadasi, Misagh Piran, Rupa S. Valdez, Stephen Baek, Negar Moghaddasi, Thomas L. Polmateer, James H. Lambert*



## S11- Deep Learning Architectures & Applications

**Zoom Link:** [Click-Me](#)

**Session chairs:** *Ismail El Batteoui, Dounia El Bourakadi, Jamal Riffi*

- 169 Comparison of ResNet50V2 and MobileNetV2 Models in Building Architectural Style Classification  
*Slamet Riyadi, Febriyanti Azahra Abidin, Nia Audita*
- 215 Fully Mixed Max-Average Pooling: A Comparative Study for a Convolutional Neural Network  
*Brahim Ait Skourt, Nikola S. Nikolov, Aicha Majda*
- 229 Hybrid Deep Learning Perspective on Stock Market Liquidity Prediction in the MENA Region  
*Mariam Ait Al, Said Achchab, Younes Lahrichi*
- 261 How does vector alteration affect transformer models?  
*Ibtissam Touahri*



## S12- Intelligent System & Data Engineering

**Zoom Link:** [Click-Me](#)

**Session chairs:** *Khalid Haddouch, Ikram El Azami, Taime Abderazzak*

- 167 Sign Language Animator: A Platform for Multilingual Sign Language Synthesis  
*Ouargani Younes, Noussaima El Khattabi*
- 223 Ontology Design for Requirements Engineering  
*Hatime Bencharqui, Adil Anwar*
- 253 Artificial intelligence in computerized adaptive testing to assess the cognitive performance of students: review

- Mohamed El Msayer, Es-Saâdia Aoula, Bouchra Bouihi,*
- 283 Record Linkage Approaches in Big Data: A Comprehensive Review  
*Fatima Zahrae Saber, Ali Choukri, Mohamed Amnai,*
- 242 Crowd density estimation with a block-based density map generation  
*Omar elharrouss, Hanadi Hassen Mohammed, Somaya Al-Maadeed, Khalid Abualsaud, Amr Mohamed, Tamer Khattab*

## Lunch

12:30 - 14:15

### Parallel sessions [S13- S14-S15]

14:15 - 15:45

#### S13- Deep Learning & Applications II

##### Conference hall

**Session chairs:** *El Habib Nfaoui, Mohamed Elghmary, Aziz khamjane*

- 216 Robust Multi-view Multi-Modal Ensemble for Improved Image Classification with Feature Selection  
*Mohamed Ait Blal*
- 222 Harnessing feature engineering to improve machine learning: A review of different data processing techniques  
*Abla Rahmouni, Ennaji Asmae, Aarab Abdellah, My Abdelouahed Sabri*
- 322 Restoration of Remote Sensing Imagery via Unified Denoising and Dehazing Approaches  
*P Vidyasri, Josna Yusuf, Thulasi A, Khaled Ahamed.S,*
- 274 Transforming Human-Machine Interaction: Generative AI Virtual Assistant  
*Safrin Fathima, K Deeshith Reddy, Sanjay Kumar Sen, Jeevan Babu Gotru*
- 254 Artificial Intelligence Implementation In Virtual Learning Environment: An Overview  
*Fatouchi Fatima zahrae, Aoula Es-Saadia, Youssfi Mohamed*



#### S14- IoT & Cloud Computing

**Zoom Link:** [Click-Me](#)

**Session chairs:** *Abdellatif El Abderrahmani, Anas Bouayad*

- 191 Optimizing Costs for Cloud-Based Long-Running Activities using ILP  
*Driss Riane, Widad Ettazi, Ahmed Ettalbi,*
- 205 In-Depth Analysis of LoRa Mesh Routing for Effective Forest Fire Prevention

- Mustapha Hammouti, Omar Moussaoui, Mohammed Haissaine, Abdelkader Betari*
- 219 Revolutionizing WBAN Networks: A Novel Encoding Method for Robust Transmission Integrity in Noisy Environments  
*Mostapha Bekkour, Nabih Alaoui, Mohamed Saban, Mohamed Zied Chaari, Juan Ruiz Alzola, Otman Aghzout*
- 247 Drone-type-Set: Drone types detection benchmark for drone detection and tracking  
*Khloud AlDosari, Ibtisam Osman, Omar ELHARROUSS, Somaya Al-Maadeed, Mohamed Zied Chaari,*
- 255 Contribution to the optimization of the flight duration of autonomous drones: Flight path planning  
*Khaoula Khaled, Ouadoudi Zytoune*
- 290 Revolutionizing Critical Care: IoT-Powered Predictive Maintenance Framework for ICU Ventilators  
*Zineb El Otmani Dehbi, Fatima-Ezzahraa Ben-BOUAZZA, Ayman Edder, Bassma Jioudi, oumaïma manchadi,*



### S15- E-learning & Recommender System

**Zoom Link:** [Click-Me](#)

**Session chairs:** *Adil Jeghal, Mohammed Zouiten, Youness Oubenaalla*

- 160 Comparative evaluation of YouTube, Facebook, TikTok, and Instagram as online learning resources  
*Timmi Mohamed, Loubna Laaouina, Adil Jeghal, Said El Garouani, Yahyaouy Ali,*
- 165 Content and Link analysis of Moroccan entrepreneurs group  
*Yassine Akallal, Boutaina Hdioud, Rachid Oulad Haj Thami,*
- 300 Innovative Solutions for Emerging Challenges in Education  
*Teresa Dieguez, Paula Loureiro, Isabel Ferreira*
- 302 Revolutionizing HR Practices: The Impact of Artificial Intelligence on Human Resource Management  
*Adil Benabou, Fatima Touhami, Lamiae Demraoui*
- 328 Item Based Collaborative Filtering Tourism Recommender System using Apache Mahout  
*Khalid Al Fararni, Badraddine Aghoutane, Loukmane Maada, Fouad Nafis, yahyaouy Ali, Jamal Riffi, My Abdelouahed Sabri*
- 335 The Evolution and History of E-learning: From 1840 to Present  
*Nabil Seghyar, Meryem Amame, Mounir Gouiouez*

### Break

**15:45 - 16:00**

**Visit - Fez Medina**

**16:00 - 19:00**



**Friday, May10 , 2024 (UTC+1)**

## **Keynote Speech**

**Keynote Title: How AI and Machine Learning are shaping the future of Online Social Networks?**

**Prof. Lotfi Ben Romdhane  
University of Sousse-Tunisia**

**Moderator:** Prof. El Fazazy Khalid , Faculty of Sciences Fez, Morocco

**9 :15 - 10:15**

**Zoom Link:**

[https://us06web.zoom.us/j/84241098232?pwd=39IVa5HewpI8aV7t4lce5jittF](https://us06web.zoom.us/j/84241098232?pwd=39IVa5HewpI8aV7t4lce5jittFQF51.1)

[QF51.1](https://us06web.zoom.us/j/84241098232?pwd=39IVa5HewpI8aV7t4lce5jittFQF51.1)

Meeting ID: 842 4109 8232 - PWD: ISCV2024

## **Break**

**10:15 - 10:30**

## **Parallel sessions [S16- S17-S18]**

**10:30 - 12:00**

### **S16- Intelligent system & smart Applications**

#### **Conference hall**

**Session chairs:** *Khalid El Fahssi, Chaibi Nouredine, Fatima El Haoussi*

- 192 Improved Intensity-Based Image Registration via Archimedes Optimization Algorithm  
*Mohamed Kmich, Hicham Karmouni, Inssaf Harrade, Mohammed Jamil Ouazzani, Hassan Qjidaa, Mhamed Sayyouri*
- 276 High efficiency, intelligent charger for Li-ion batteries in Electrical Vehicle controlled by application  
*Ismail Boumedra, Abdelamin Diani, Mohammed Jamil Ouazzani, Hassan Qjidaa*
- 202 Real-time Handwritten Digit Recognition Using CNN on Embedded systems  
*Ismail Mchichou , Mohamed Amine Tahiri , Hicham Amakdouf, Mohammed Ouazzani jamil , Hassan Qjidaa*
- 323 Hydrogen Vehicle Routing Problem with Time Windows and Vehicle Capacity  
*Soukayna Abibou, Dounia El Bourakadi, Yahyaouy Ali, Hamid Gualous*

- 226 The impact of temporal features in anomaly detection in smart cities (motion and optical Flow as example)  
*Alaoui Mrani El Mehdi, Bouayad Anas , Fardousse Khalid*
- 298 Converging human and algorithmic biases in recruitment process: influences on decision making  
*Abdelaziz Daaif, Maha Soulami, Mohamed Youssfi, Loubna Aminou*



### S17 - Image Processing & transportation system

**Zoom Link:** [Click-Me](#)

**Session chairs:** *Khalid Satori, Amal Hjouji, Fadoua Sabbane*

- 233 Image Enhancement Using Modified Laplacian Filter, Clahe And Adaptive Thresholding  
*Sabeeh Abdul Rehman, Dr. Zoe Jeffrey, Dr. Yichuang Sun, Dr. Oluoyomi Simpson*
- 237 Enhancing Radiation Stability and Image Quality in Periodic Planar Structures: A Characteristic Mode Analysis Approach for Cancer Imaging  
*Rabab Sedrati, Badiia Ait Ahmed, Mohamed Zied Chaari, Juan Ruiz-Alzola, Marta Cabedo-Fabrés, Otman Aghzout*
- 278 Comparison of the rendering speed of the most popular image-based rendering techniques  
*Anouar Ragragui, Adnane Ouazzani Chahdi, Amina Arbah, Hicham El Moubtahij, Akram Halli, Khalid Satori*
- 230 A Survey on Traffic Sign Classification using Artificial Intelligence Techniques  
*Amine Kherraki, Rajae El Ouazzani*
- 248 Geospatial Analysis of Electric Vehicle Charging Infrastructure Deployment: Evaluation of Technical Factors via Artificial Intelligence  
*Mohamed Benayad, Abdelilah Rochd, Nouriddine Houran, Mehdi Maanan, Hassan Rhinane*



### S18 - Explainable & Generative AI

**Zoom Link:** [Click-Me](#)

**Session chairs:** *Jaouad Boumhidi, Badraddine Aghoutane, Hicham El Moubtahij*

- 208 Explainability in CNN based Deep Learning models for medical image classification  
*Alami Amine, Jaouad Boumhidi, ,Chakir Loqman*
- 258 Explainability in Unsupervised Multi-Modal Graph Neural Networks based on Subgraph Feature Extraction  
*Khalil Bachiri, Maria Malek, Ali, Nicoleta Rogovschi*

- 286 SelfRewardRAG: Improving Medical Reasoning through Retrieval and Self-Evaluation through Retrieval Augmented Generation and Large Language Models  
*Zakaria Hamane, Fatima Ezzahraa Ben Bouazza, Fennan Abdelhadi*
- 296 XAI for Understanding the Success in Curbing COVID-19  
*Salah Bouktif, Nimmi Kunnath, Ali Ouni*

## Closure Ceremony

**12:00 - 12:30**

**Zoom Link:**

<https://us06web.zoom.us/j/84241098232?pwd=39IVa5HewpI8aV7t4lce5jittFQF51.1>

Meeting ID: 842 4109 8232 - PWD: ISCV2024