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UNIVERSITÉ SIDI MOHAMED BEN ABDELLAH DE FES



**ISACS'23 : The 4th International Conference on Intelligent Systems
and Advanced Computing Sciences**

26-27 October 2023 TAZA (Morocco)



**The 4th International Conference on Intelligent Systems and
Advanced Computing Sciences (ISACS)**

Taza, Morocco.

Conference Program

26-27 October 2023



Springer



Scopus®



Thursday October 26th

Welcoming and Registration

09:00 - 09 :30

Google meeting Link: <https://meet.google.com/gbu-hauc-nqa>

Opening Ceremony

09:30 - 10 :00

Keynote Talk 2: Chip Technology and Computing: the need of new mind set to sustain the future.

10:00 - 10 :45

Prof. Said HAMDIOUI, Netherlands.

Moderator : Prof. A. Essahlaoui

Coffee Break

10:45 - 11:15

Session 1: Artificial Intelligence (Amphitheater)

Chairs: Prof. A. Ahaitouf , Prof. A. El Ouzizi, Prof. El. Nfaoui and Prof. A. El Affar

Google meeting Link: <https://meet.google.com/gbu-hauc-nqa>

- **ID: 113 - Abd Allah Aouragh and Mohamed Bahaj.** «Integrating Machine Learning and Optimisation for Parkinson's Detection: A Study of SMOTE, Featurewiz, Genetic Algorithm and Grid Search».
- **ID:.7 - Rachid Fateh, Hicham Oualla, Es-Said Azougaghe, Anouar Darif, Ahmed Boumezzough, Said Safi, Mathieu Pouliquen and Miloud Frikel.** «Kernel Adaptive Filters for Machine Learning-Based System Identification with Binary Output Data».
- **ID:31 - Mohamed Achraf El Youbi El Idrissi, Loubna Laouina, Adil Jeghal, Hamid Tairi and Moncef Moncef Zaki.** «Application of machine learning to additive manufacturing tasks: the state of the art».
- **ID:32 - Sara El Ouahabi, Safaa El Ouahabi and El Wardani Dadi.** «Sentiment Analysis for Moroccan Dialect using the model of Maching learning».
- **ID:36 - Jaouad Tagnamas, Hiba Ramadan, Ali Yahyaouy and Hamid Tairi.** «Combining CNNs and Transformer networks for improved breast ultrasound image segmentation».

11:15 - 13:00

(Parallel sessions)

Session 2 : Machine Learning (Meeting room)

Chairs: Prof. E.B Tazi, Prof. S. El Hazzat, Prof. M. El Ouzizi and Prof. A. Chillali

Google meeting Link: <https://meet.google.com/izs-nhfz-vjm>

- **ID: 42 - Youssef Es-Sabry, Marwane Bensaad, Hind Talbi and Elmiloud Chaabelasri.** «Numerical Investigation of Natural Convection in a Right-

	<p>Angled Trapezoidal Enclosure Filled with Hybrid Nanofluid under Magnetic Effects».</p> <ul style="list-style-type: none"> • ID: 54 - Sabri Abdelouahed, Ennoui Assia and Aarab Abdellah. «Face detection based on deep learning approaches: A comparative study». • ID: 59 - Azzedine El Mrabet, Ayoub Tber, Rachida Elmousaid, Laamari Hlou and Rachid El Gouri. « Tiny Machine Learning for IoT-Enabled Embedded Systems: A Review». • ID: 63 - Mohamed Htiti, Aziza El Ouaazizi, Ismail Akharraz and Abdelaziz Ahaitouf. «New Deep Steganography Model Based on Josephus Confusion». • ID: 74 - Hajar Krim and Abdelhadi Assir. «Intelligent Deep Learning Model for Disease Detection in Plants: Leveraging Particle Swarm Optimization in Intelligent Agriculture». <p style="text-align: center;">Session 3 : Computer vision (room B1)</p> <p style="text-align: center;">Chairs: Prof. J. Boumhidi, Prof. S. Alaoui and Prof. M. Abarkan</p> <p style="text-align: center;">Google meeting Link: https://meet.google.com/ejt-idai-gkt</p> <ul style="list-style-type: none"> • ID: 87 - Wijdane Merioumi, Ghita Ibrahim and Bouchra Benchekroun. «Exploration of the Integration of Artificial Intelligence in Decision-Making Process: A Thematic literature Review». • ID: 94 - Salma Sbail and Nawal Sael. «Machine Learning for Fake Reviews Detection in Online Platforms: Comparative Study». • ID: 100 - Meryem Ouazzani Chahdi, Afafe Annich, Adnane Ouazzani Chahdi and Khalid Satori. «Advancing Visual Relationship Detection: Comparative Analysis of ResNet101 vs. ResNet152». • ID: 114 - Meryem Ec-Sabery, Adil Ben Abbou, Abdelali Boushaba, Fatiha Mrabti and Rachid Ben Abbou. « HyIDS: A Hybrid Intrusion Detection System in IaaS Cloud». • ID: 123 - Sanae Filali Zegzouti, Oumayma Banouar and Benslimane Mohamed. «Comparative analysis of deep learning-based generative models used for recommendation systems».
13:00 - 15 :00	Lunch
15:00 - 15 :45	<p style="text-align: center;">Keynote Talk 1 : Data Science and its applications</p> <p style="text-align: center;">Prof. Mo Medwani, United States of America.</p> <p style="text-align: center;">Moderator : Prof. M. Nemich</p> <p style="text-align: center;">Google meeting Link: https://meet.google.com/pta-qaek-ngf</p>
16:00 - 16:15	Coffee Break
16:15 - 18:00 (Parallel sessions)	<p style="text-align: center;">Session 4 : Artificial Intelligence (Amphitheater)</p> <p style="text-align: center;">Chairs: Prof. M. Nemich, Prof. M. Ouriagli, prof. Em. Boufounas and Prof. A. Mouhib</p> <p style="text-align: center;">Google meeting Link: https://meet.google.com/pta-qaek-ngf</p>

	<ul style="list-style-type: none"> • ID: 10 - Oumaima Stitini, Soulaïmane Kaloun and Omar Bencharef. «A scenario case study of a recommender system designed using various collaborative filtering algorithm techniques». • ID: 12 - Moulay Abdellah Kassimi, Abdessalam Essayad and Khalid Tatane. «Classifying Authenticity of Prophet’s statements using Artificial intelligence techniques». • ID: 22 - Charlène Béatrice Bridge-Nduwimana, Aziza El Ouazizi and Majid Benyakhlef. «Pre-treatment Proposal for Effective Forecasting of Used car Pricing». • ID: 23 - Youssef Achir, Ayman Nait Cherif, Youssef Mohamed, Elgarej Mouhcine and Omar Bouattane. «Overview of Self-Sovereign Identity for Blockchain-based Authentication». • ID: 24 - Amri Meryem and Haddouch Khalid. «Comparison of performance of feature engineering techniques for text classification».
<p>16:15 - 18:00</p> <p>(Parallel sessions)</p>	<p style="text-align: center;">Session 5 : Security and information processing (Meeting room)</p> <p>Chairs: Prof. A. El Ouazizi, Prof. D. Achemlal and Prof. S. Lalaoui Rhali</p> <p>Google meeting Link: https://meet.google.com/sbu-wgeq-wtnf</p>
	<ul style="list-style-type: none"> • ID: 29 - Ismail Fdilal, Khadija Louzaoui and Khalid Benlhachmi. «Unveiling Blockchain Technology: A Comprehensive Exploration of Types and Variants». • ID: 52 - Adil Marouan, Morad Badrani, Nabil Kannouf and Abdelaziz Chetouan. «A comparative study on signature algorithms of Blockchain 2.0-based applications». • ID: 62 - Zakaria Al Bakkari, Adil El Makrani, Ikram El Azami and Moulay Hafid Aabidi. «Forecasting Stock market index Using a Hybrid Model LSTM-CNN with Attention Mechanism». • ID: 69 - Mohammed Bahbib and Majid Ben Yakhlef. «Effects of applying stemmers with word representation on Arabic text classification performance using deep learning methods».
	<p style="text-align: center;">Session 6: Artificial Intelligence (Classroom B1)</p> <p>Chairs: Prof. K. El Moutaouakil Prof. EL. Tazi and Prof. M. Ben Yakhlef</p> <p>Google meeting Link: https://meet.google.com/uwr-rxju-ktt</p> <ul style="list-style-type: none"> • ID: 85 - Farida Bouroumane and Mustapha Abarkan. «Measuring the effectiveness of serious games intended for use in teaching». • ID: 91 - Mohamed Daouad, Fadoua Ataa Allah and El Wardani Dadi. «Impact of spectrogram resizing for automatic speech recognition case of Amazigh isolated word». • ID: 107 - Lamyae El Youbi El Idrissi, Ismail Akharaz and Abdelaziz Ahaitouf. «Recommender Systems based on Matrix Factorization: Comparative Analysis». • ID: 13 - Naima Elyanboiy, Mohamed Khala, Ismail Elabbassi, Nourddine Elhajrat, Omar Eloutassi, Youssef El Hassouani and Choukri Messaoudi. «Artificial intelligence approaches for smart anomaly detection in solar power systems».

	<ul style="list-style-type: none"> ID: 14 - Hajar Elkarch, Rachid Elgouri, Mohamed Benaly and Abdelkader Mezouari. «Raspberry Pi 4-Based Real-Time System for Solar Panels Soiling and Dust Detection Using Deep Learning and Computer Vision Approaches».
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	Coffee Break
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Friday October 27th	
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10:00 - 10:45	<p style="text-align: center;">Keynote Talk 3 : Unlocking the Potential of Aerial Networking with Reinforcement Learning</p> <p style="text-align: center;">Prof. AMINE DHRAIEF, Tunisia.</p> <p style="text-align: center;">Moderator : Prof. M. Ben Yakhlef</p> <p style="text-align: center;">Google meeting Link: https://meet.google.com/gbu-hauc-nqa</p>
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10:45 - 11:10	Coffee Break
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11:10 - 12:50 (Parallel sessions)	<p>Session 7: Artificial Intelligence (Amphitheater)</p> <p>Chairs: Prof. S. Alaoui, Prof. A. Labzour and Prof. A. Boua</p> <p>Google meeting Link: https://meet.google.com/gbu-hauc-nqa</p>
	<p>ID: 18 - Marwane Bensaad, Youssef Es-Sabry and Elmiloud Chaabelasri. Meshless artificial viscosity model for shock capturing in shallow water flows ».</p> <p>ID: 33 - Hillali Youness, Najlae Alfathi, Samir Chafik and Mourad Zegrari. «Variability study for balancing an assembly line: dynamic balancing ».</p> <p>ID: 45 - Ouadiâ Chekira, Abdelfettah El-Ghajghaj, Younes Boujoudar, Hassan El Moussaoui, Tijani Lamhamdi, Ali Boharb and Hassan El Markhi. «Efficient Energy Management for a Solar-Wind Microgrid Using Fuzzy Logic Control».</p> <p>ID: 53 - Ali Lamrani Alaoui, Abdel-Iltaah Amrani, Ahmed Alami Merrouni, Jamal-Eddine Salhi, Abdelkarim Daoudia, Youssef El Hassouani, Elmiloud Chaabelasri and Mohammed Halimi. «Energy efficiency optimization of buildings during the cold season under desert climate ».</p> <p>ID: 55 - Jawad El Marbouh and Nacer Eddine El Kadri Elyamani. «Evaluation of RANS turbulence models, including the GEKO model for turbulent flow around a wind turbine blade S809».</p>
	<p>Session 8 : Intelligent Control and Neural Network (Meeting room)</p> <p>Chairs: Prof. M. El Ouazizi, Prof. A. El Affar and Prof. M. Nemich, R. El Alami</p> <p>Google meeting Link: https://meet.google.com/irq-yfkp-tsm</p>
	<p>ID: 58 - Elhoussein Elouardi, Ismail Lagrat, Omar Mouhib, Ahmed Bentaleb and Brahim El Ouardi. «Fuzzy-PI Controller Using Line Integral Lyapunov Fuzzy Function : Application to Electric Vehicle Powered by PMSM motor».</p>

	<p>ID: 61 - Ibrahim Elidrissi, Fatima Ez.Zahra Lamzouri, Abderrahman Mouradi and El-Mahjoub Boufounas. «Intelligent Control for increasing Maximum Extracted Power of a Wind Generation System».</p> <p>ID: 67 - Issam Bekki, Fatima Ez.Zahra Lamzouri, Aumeur El Amrani and El-Mahjoub Boufounas. «An Intelligent MPPT Controller Based on Bald Eagle Search Optimization Algorithm for a Thermoelectric Generator System ».</p> <p>ID: 72 - Meriem Megrini, Ahmed Gaga and Youness Mehdaoui. «A Comparative Study of Neural Network and Fuzzy Logic Controller Approaches for BLDC Motor Speed Control».</p> <p>ID: 81 - Badr El Kihel, Nacer Eddine El Kadri Elyamani and Abdelhakim Chillali. «Assessment of the Wind Power Capacity in the Taza Province of Morocco ».</p>
	<p style="text-align: center;">Session 9 : Computer vision (Classroom B1)</p> <p style="text-align: center;">Chairs: Prof. C. El Kasri, Prof. M. Ben Yakhlef and Prof. A. EL AZZOUZI</p> <p style="text-align: center;">Google meeting Link: https://meet.google.com/euj-pfsu-vft</p>
	<p>ID: 104 - Abderrahmane Kaouachi, Salah Daoudi and Imad Elmahi. «Modeling Multiphase Flows Through Porous Media : A Study of the IMPES Solver for Oil and Gas Storage Reservoirs».</p> <p>ID: 121 - Zakaria El Khadiri, Rachid Latif and Amine Saddik. «Physiological Indicators Estimation Through Photoplethysmography Wave Analysis using Serial-EMD and Fast PCA methods».</p> <p>ID: 16 - Inasse El Arabi, Anas Chafi and Salaheddine Kammouri Alami. «A Comparative Study of Lie-Trotter and Strang Markus Methods for Numerical Simulation of the Advection-Diffusion-Reaction Equation».</p> <p>ID: 27 - Abdelghani Idrissi, Tarek El Bardouni, Ibrahym Dourki and Mohamed Drissi El-Bouzaidi. «Investigation of the performance of X-ray tubes using Geant4 Monte Carlo toolkit ».</p> <p>ID: 28 - Soukaina Samhale, Khadija Louzaoui and Khalid Benlhachmi. «Human-Computer Interaction: A Bibliometric Analysis».</p>
<p>13:10 - 15:00</p>	<p style="text-align: center;">Lunch</p>
<p>15:45 - 17 :30 (Parallel sessions)</p>	<p style="text-align: center;">Session 10 : Security and information processing (Meeting room)</p> <p style="text-align: center;">Chairs: Prof. S. El Hazzat, Prof. A. Dakkak and Prof. M. El Ouazizi</p> <p style="text-align: center;">Google meeting Link: https://meet.google.com/uuu-zqaq-avq</p> <ul style="list-style-type: none"> • ID: 68 - Khadija El Kinani, Salma Bendaoud and Fatima Amounas. « A New Image Crypto-compression Scheme using hybrid approach with DWT and ECC for Emerging IoT Applications». • ID: 79 - Fatehi Al Talqi. « Design And simulation Microstrip Antenna with Array 1×4 Circular Patch for GPS at 6.6 GHz». • ID: 83 - Mouhssine Elbathaoui, Nawfal Jebbor and El-Mahjoub Boufounas. « Effects of SRR metamaterial cell variables on resonance frequency and miniaturization». • ID: 97 - Mohamed Loughmari and Anass El-Affar. « Toward a DoS and DDoS Detection using Extreme Gradient Boosting».

	<ul style="list-style-type: none"> ID: 57 - Ikram Karabila, Nossayba Darraz, Salma Chenouni, Anas El-Ansari, Nabil Alami and Mostafa El Mallahi. «A new approach to recommendation system based on Sentiment Analysis».
	<p>Session 11: Computer vision (Amphitheater)</p> <p>Chairs: Prof. M. Nemich Prof. S. Alaoui and Prof. A. Ahaitouf</p> <p>Google meeting Link: https://meet.google.com/pdw-qong-yzy</p>
<p>15:45 - 17 :30 (Parallel sessions)</p>	<p>ID: 98 - Hamid El Moumen and Nabil El Akchioui. « About the reliability analysis by Stochastic Petri net and Markov model: Comparative study».</p> <p>ID: 101 - Ibrahim Khouyaoui, Jaouad Foshi and Mohamed Hamdaoui. «Design and comparison Analysis of circular and rectangular Patch Microstrip Antennas with slot and Dielectric Superstrates».</p> <p>ID: 103 - Tarik Belhadad, Anass Kanna, Tarik El Rhafiki and Nacer Eddine El Kadri Elyamani. «CFD Verication of Consistent Wall Law for K-ω SST Turbulence Model in Adverse Pressure Gradient-Free Downward Flow».</p> <p>ID: 106 - Hassane Benlaghrissi and L. Meriem Ouahidi. « Emerging Mobile Apps for Enhancing L2 Listening: A Case Study of Moroccan Students».</p>
<p>17:30 - 17 :45</p>	<p>Coffee Break</p>
<p>17:45 - 18 :15</p>	<p>Closing Ceremony</p>