



MINISTRY OF ENERGY, MINES AND SUSTAINABLE
DEVELOPMENT



MINISTER OF NATIONAL EDUCATION, VOCATIONAL TRAINING, HIGHER
EDUCATION, AND SCIENTIFIC RESEARCH



International
Conference

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AI2SD

Advanced Intelligent Systems for Sustainable Development

Second
Edition

Digital Transformation is Lever of the Industrial Revolution 4.0

International Conference On Advanced Intelligent
Systems for Sustainable Development Applied To
Agriculture , Energy , Health , Environment Industry
and Economy



Springer

General Chair

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The Second Edition of the International Conference on Advanced Intelligent Systems for Sustainable Development applied to Agriculture, Energy, Health, Environment, Industry and Economy

Organized By

Abdelmalek Essaâdi University and Cadi Ayyad University

In Coordination with

MINISTRY OF ENERGY, MINES AND SUSTAINABLE DEVELOPMENT
MINISTRY OF NATIONAL EDUCATION, VOCATIONAL TRAINING
HIGHER EDUCATION AND SCIENTIFIC RESEARCH



ROYAUME DU MAROC



Ministry of Energy Mines
and Sustainable
Development



Kingdom of Morocco



Ministry of National Education
Vocational Training
Higher Education and Scientific Research



Université Abdelmalek Essaâdi



Welcome to AI2SD'2019



General Chair

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Ph.D Organisation Committee

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Mohammed Rida ECH-

CHARRAT,

Soumaya EL MAMOUNE

After the success of the first edition AI2SD'18, this second International Conference on Advanced Intelligent Systems for Sustainable Development 2019 (AI2SD-2019) held in the beautiful Marrakech city, Morocco, continues to establish new scientific and professional bridges in fields of Advanced Intelligent Systems and technology. This event has distributed multidisciplinary technical program in “**Digital Transformation is lever of the Industrial Revolution 4.0**” that draw attention and participation from over 400 researchers in the field of Advanced Intelligent Systems for Sustainable Development. It is also expected a great opportunity amongst students, researchers and shareholders to exchange their idea with others in the knowledge of Sustainable Development and establish an excellent network with a new colleague.

At this special event, 15 international distinguished keynote speakers and a large number of invited speakers will deliver their outstanding research works in various fields of Advanced Intelligent Systems joining together with 253 oral presentations and about 62 poster presentations that would be a great opportunity to all participants to share their recent research information and knowledge among each other. In addition to that, a free International Summer School for Big Data and Data Mining Models will take place in our conference, 8 courses animated by 8 international professors for the benefit of 100 Ph.D. students.

All articles in this issue have been subjected to a peer-review process based on their originality and quality. The aim of the conference is to be a platform for researchers to present their latest research works and to exchange their ideas. The topics covered in this conference have covered following aspects:

- Advanced Intelligent Systems for Education and Intelligent Learning System
- Advanced Intelligent Systems for Sustainable Development Applied to Industry
- Advanced Intelligent Systems for Sustainable Development Applied to Economy
- Advanced Intelligent Systems for Multimedia Processing and Mathematical Modeling
- Advanced Intelligent Systems for Information and System Security
- Advanced Intelligent Systems for Supporting Decision and Prediction
- Advanced Intelligent Systems for Sustainable Development Applied to Agriculture
- Advanced Intelligent Systems for Sustainable Development Applied to Energy
- Advanced Intelligent Systems for Sustainable Development Applied to Health
- Advanced Intelligent Systems for Sustainable Development Applied to Environment
- Advanced Intelligent Systems for Computational Web and Big Data Analytics
- Advanced Intelligent Systems for Networking Systems and IOT
- Advanced Intelligent Systems for GIS and Spatial Data
- Advanced Intelligent Systems for Electrical Engineering



HONORARY PRESIDENTS



Mr. REBBAH Azziz

Minister of Energy, Mines
and Sustainable Development
Kingdom of Morocco



Mr. AMZAZI Saaid

Minister of National
Education, Vocational
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and Scientific Research
Kingdom of Morocco

HONORARY GUESTS



Pr. ERRAMI Mohammed
President of UAE
Tetouan-Morocco



Pr. BENNOUNA Mustapha
Adviser of the president of Euromed
Fes-Morocco



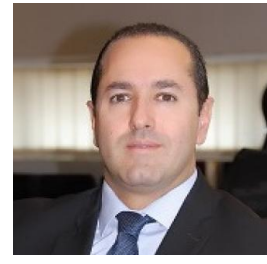
Pr. MIRAOUI Abdellatif
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Marrakech-Morocco



Pr. KHALFAOUI Mohamed
Director of CNRST
Rabat-Morocco



Pr. ADDOU Mohamed
Dean of FSTT
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Pr. IKKEN Badr
Director of IRESEN
Rabat-Morocco



Pr. HAMMOUCH Ahmed
Director of SRI
Rabat-Morocco



Pr. HBID Hassan
Dean of FSSM
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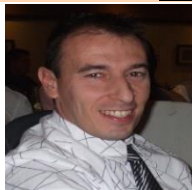
Pr. ESSAÏDI Mohammed
Director of ENSIAS, MedV U
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KEYNOTE SPEAKERS



**KACPRZYK
JANUSZ
SRI**
Poland-Warsaw



**Lloret Mauri
JAIME**
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**LABBASSI
Kamal**
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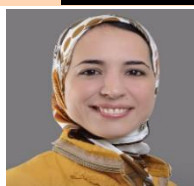


**OUAZAR
DRISS**
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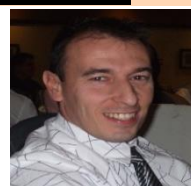
COURSE LEADERS



**Pr. EZZIYYANI
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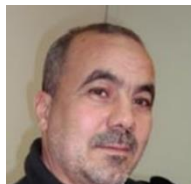
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Mohammed Rida**
AEU, FST
Tangier-Morocco



OPENING HOURS

SUNDAY, JULY 07 TH 2019
14H00/18H00
MONDAY, JULY 08 TH 2019
09H00/19H00
TUESDAY, JULY 09 TH 2019
09H00/19H00
WEDNESDAY, JULY 10 TH 2019
09H00/19H00
THURSDAY, JULY 11 TH 2019
09H00/12H00

SESSIONS TOPICS

A	ADVANCED INTELLIGENT SYSTEMS FOR EDUCATION AND INTELLIGENT LEARNING SYSTEM
B	ADVANCED INTELLIGENT SYSTEMS FOR SUSTAINABLE DEVELOPMENT APPLIED TO INDUSTRY
C	ADVANCED INTELLIGENT SYSTEMS FOR SUSTAINABLE DEVELOPMENT APPLIED TO ECONOMY
D	ADVANCED INTELLIGENT SYSTEMS FOR MULTIMEDIA PROCESSING AND MATHEMATICAL MODELING
E	ADVANCED INTELLIGENT SYSTEMS FOR INFORMATION AND SYSTEM SECURITY
F	ADVANCED INTELLIGENT SYSTEMS FOR SUPPORTING DECISION AND PREDICTION
G	ADVANCED INTELLIGENT SYSTEMS FOR SUSTAINABLE DEVELOPMENT APPLIED TO AGRICULTURE
H	ADVANCED INTELLIGENT SYSTEMS FOR SUSTAINABLE DEVELOPMENT APPLIED TO ENERGY
I	ADVANCED INTELLIGENT SYSTEMS FOR SUSTAINABLE DEVELOPMENT APPLIED TO HEALTH
J	ADVANCED INTELLIGENT SYSTEMS FOR SUSTAINABLE DEVELOPMENT APPLIED TO ENVIRONMENT
K	ADVANCED INTELLIGENT SYSTEMS FOR COMPUTATIONAL WEB AND BIG DATA ANALYTICS
L	ADVANCED INTELLIGENT SYSTEMS FOR NETWORKING SYSTEMS AND IOT
M	ADVANCED INTELLIGENT SYSTEMS FOR GIS AND SPATIAL DATA
N	ADVANCED INTELLIGENT SYSTEMS FOR ELECTRICAL ENGINEERING

PROGRAM

SUNDAY, JULY 07 - 2019		WELCOME DESK & REGISTRATION	
	14H00	Badges recovery	18H00



Welcome to the *Second* edition of
The International Conference on Advanced
Intelligent Systems for Sustainable Development

AI2SD-2019

July 08, 09, 10 and 11 – 2019 Marrakech, Morocco



MONDAY, JULY-08-2019	09H00	WELCOME DESK & REGISTRATION BADGES RECOVERY		AI2SD'2019 CHINA-ARAB COOPERATION FORUM (MOROCCO) AI2SD'2019 年中阿合作论坛(摩洛哥) THE 11TH ONE BELT AND ONE ROAD INTERNATIONAL COOPERATION SUMMIT ON TECHNOLOGY TRANSFER 第十一届“一带一路”技术转移国际合作峰会 CHINA-ARAB STATES TECHNOLOGY AND CULTURE TRANSFER CENTER 中国-阿拉伯国家技术文化转移中心 ----- (9H-10H30) EXCHANGE AGREEMENT PANEL1: TECHNOLOGY TRANSFER FOR ELECTRONIC SYSTEM OF ENERGY PR. MOSTAFA EZZIYYANI, AEU - MOROCCO DR. BADERIKKEN, IRESEN-MOROCCO DR. XING JIGUOS, CAST-TC ----- (10H30-12H00) EXCHANGE AGREEMENT PANEL2: TECHNOLOGY TRANSFER FOR CHINESE MEDICINE PR. MOSTAFA EZZIYYANI, AEU - MOROCCO DR. YOUSSEF RACHDI / DR. AHMED EL MOUDDEN, MEADICAL CENTER -MOROCCO DR. XING JIGUOS, CAST-TC				INTERNATIONAL SUMMER SCHOOL FOR BIG DATA AND DATAMINING MODELS (conference room) TUTORIAL1: Artificial Intelligence Solutions for Augmented Reality: Surgical Operations Pr. KETTANI NASSER TUTORIAL2: IoT and 5G for Precision Agriculture Pr. LLORET MAURI JAIME		12H00
	14H00	OPENING CEREMONY ▪ MINISTER OF ENERGY, MINES AND SUSTAINABLE DEVELOPMENT ▪ MINISTER OF NATIONAL EDUCATION, VOCATIONAL TRAINING, HIGHER EDUCATION AND SCIENTIFIC RESEARCH ▪ PRESIDENT OF ABDELMALEK ESSAADI UNIVERSITY ▪ PRESIDENT OF CADY AYYAD UNIVERSITY ▪ ADVISER OF THE PRESIDENT OF FES EUROMED UNIVERSITY ▪ GENERAL DIRECTOR OF AFRICAN TRAINING AND RESEARCH CENTRE IN ADMINISTRATION FOR DEVELOPMENT (CAFRAD) ▪ DIRECTOR OF NATIONAL CENTER FOR SCIENTIFIC AND TECHNICAL RESEARCH (CNRST) ▪ GENERAL DIRECTOR OF RESEARCH INSTITUTE IN SOLAR ENERGY AND NEW ENERGIES (IRESEN) ▪ DIRECTOR OF SCIENTIFIC RESEARCH AND INNOVATION ▪ DIRECTOR OF INTERNATIONAL COOPERATION, MINISTRY OF GENERAL AFFAIRS AND GOVERNANCE ▪ DEAN OF FACULTY OF SCIENCES AND TECHNIQUES OF TANGIER (FSTT) ▪ DEAN OF FACULTY OF SCIENCES SEMLALIA OF MARRAKECH (FSSM) ▪ CONFERENCE GENERAL CHAIR ▪ AWARDS								15H30
	15H30	COFFEE BREAK☕								16H00
	16H00	KEYNOTE Mr. IKKEN Badr General director, institute of research in Solar energy and new energies (IRESEN) “GREEN AND SMART BUILDING PARK” PR. KHALIL ISMAIL Professor at Institute of Telecooperation Johannes Kepler University Linz “A CLOUD COMPUTING, QUO VADIS” MODERATOR: Pr. LLORET MAURI JAIME								17H00
	17H00	PARALLEL SESSIONS (PS) PS 1 A ROOM 1 PS 2 I ROOM 2 PS 3 J ROOM 3 PS 4 B ROOM 4 PS 5 F ROOM 5 PS 6 L ROOM 6						INTERNATIONAL SUMMER SCHOOL FOR BIG DATA AND DATAMINING MODELS (conference room) TUTORIAL3: Advanced Applications of Machine Learning and AI Pr. MOUSANNIF HAJAR TUTORIAL4: Decision Support System Pr. EL MAMOUNE SOUMAYA		19H00
	END OF DAY									



TUESDAY, JULY-09-2019	09H00	<u>SPECIAL PANEL</u> Panel Topic: Network Technology and AI to Improve Water Quality and Use Optimization for Agriculture Irrigation 1. Pr. Jaime LLORET MAURI 2. Pr. Kamal LABBASSI 3. Pr. Pascal LORENZ 4. Pr. Mohammed EZZIYYANI 5. Pr. Mostafa EZZIYYANI 6. Pr. Manal FAOUZI ABDEL WAHAB MODERATOR: Pr. Hajar MOUSANNIF						11H00
	11H00	COFFEE BREAK 						11H30
	11H30	PARALLEL SESSIONS(PS) PS 7  ROOM 1 PS 8  ROOM 2 PS 9  ROOM 3 PS 10  ROOM 4 PS 11  ROOM 5 PS 12  ROOM 6						14H30
	14H30	LUNCH 						16H00
	16H00	<u>KEYNOTE</u> PR. KACPRZYK JANUSZ Professor of Computer Science at the Systems Research Institute, Polish Academy of Sciences “A Status Quo Biased Multistage Decision Model for Regional Agricultural Socioeconomic Planning Under Fuzzy Information” PR. GELBUKH ALEXANDER Professor at Instituto Politécnico Nacional Mexico “Trends in opinion mining and sentiment analysis: Where intelligence meets democracy” MODERATOR: Pr. El Hassan Abdelwahed						17H00
	17H00	PARALLEL SESSIONS(PS) PS 13  ROOM 1 PS 14  ROOM 2 PS 15  ROOM 3 PS 16  ROOM 4 PS 17  ROOM 5 PS 18  ROOM 6						19H00
	17H30	COFFEE BREAK 						18H00
		END OF DAY						



WEDNESDAY, JULY-10- 2019	09H00	SPECIAL PANEL (CONFERENCE ROOM) Panel Topic: How Complex Systems and Evolution of Artificial Intelligence Drive Sustainable Development in Industry 4.0 Revolution and Digital Transformation 1. Pr. Alexander GELBUKH 2. Pr. Mohamed SEAID 3. Pr. Driss OUAZAR 4. Pr. Nasser KETTANI 5. Pr. A. S. BERNOUSSI 6. Pr. Zine-Dine KHALID MODERATOR: Pr. Zine-Dine KHALID						11H00
	11H00	COFFEE BREAK 						11H30
	11H30	PARALLEL SESSIONS(PS)						14H30
		PS 19  ROOM 1	PS 20  ROOM 2	PS 21  ROOM 3	PS 22  ROOM 4	PS 23  ROOM 5	PS 24  ROOM 6	
	14H30	LUNCH 						16H00
	16H00	PARALLEL SESSIONS(PS)				POSTER SESSION		19H00
		PS 25  ROOM 1	PS 26  ROOM 2	PS 27  ROOM 3	PS 28  ROOM 4			
	17H30	COFFEE BREAK 						18H00
	20H30	GALA DINNER						23H00
		END OF DAY						

THURSDAY, JULY-11-2019	09H00	CLOSING & CERTIFICATION						11H00
	11H00	TOURIST VISIT OF THE CITY OF MARRAKECH						20H00



SESSION 1:

SESSIONS CONTENT

TOPIC A: Advanced Intelligent Systems for Education and Intelligent Learning System SESSION CHAIRS : EL AFIA ABDELATIF, ADNANE LATIF			
		MONDAY, JULY 08- 2019 (17H30 TO 19H00)	A
17H00	El-Kaber Hachem and Moulay Hachem Alaoui Harouni	Data mining for the development of E-learning	17H15
17H15	Hussam Awwad and Naem Harb	Applied study of energy saving, voltage drop reducing technically using reactive power compensation and cable resizing in Gaza electrical grid and its program simulation quality improvement	17H30
17H30	Mohamed Mazighe, Mhamed El Mrabet and Adbelali Astito	Hardware in Loop Application DSP F28379D based Modeling and implementation of vector control for Permanent Magnet Synchronous Motor	17H45
17H45	Damnati Brahim and Reddad Hanane	Abrupt climatic changes for the last 13,000 cal years BP using the Ifrah Lake data (Middle atlas, Morocco)	18H00
18H00	Mohammed Erritali, Anass Abdelhamid El Alami and Hanane Ezzikouri	Data Mining Algorithms for Knowledge Extraction from Web Log Files	18H15
18H15	Hamza Lamsyehe, Mounir Kouhila, Youness Bahomou, Haytem Moussaoui, Ali Idlimam, Hind Mouhani, Abdelkader Lamharrar and Mohamed Kouhila	Experimental approach for a better valorisation of sardine fillets: determination of the isostatic heat and free enthalpy by sorption isotherm	18H30
18H30	Rachid Habachi, Boulal Abdellah, Achraf Touil, Abdelkabar Charkaoui and Abdelwahed Echchatbi	Barriers to the Adoption of Smart Grids in Morocco	18H45
18H45	Sonia Souabi, Asma Retbi, Mohammed Khalidi Idrissi and Samir Bennani	Toward a Recommendation-Oriented Approach based on Community Detection within Social Learning Network	19H00

SESSION 2:

TOPIC I Advanced Intelligent Systems for Sustainable Development Applied to Health SESSION CHAIRS: EL FELSOUFI ZOUBIR, KHALI ISSA SANAE			
17H00	Ilyas Mzougui and Zoubir El Felsoufi	Combination of DSM and MCDM methods for failure mode and effects analysis	17H15
17H15	Abir Belaala, Labib Sadek Terrissa, Nouredine Zerhouni and Christine Devalland	Spitzoid Lesions Diagnosis based on GA feature selection and Random Forest	17H30
17H30	Mohammed Ed-Dhahraouy, Hicham Riri, Manal Ezzahmouly, Abdelmajid El Moutaouakkil, Farid Bourzgui, Hakima Aghoutan and Salwa Belaqziz	AUTOMATIC LOCALIZATION OF SUPRAORBITAL AND INFRAORBITAL FORAMINA REGION ON CBCT IMAGES	17H45
17H45	Derrar Yasser and Malti Abde	A Rigid Visual Servoing Approach for Non-Rigid Objects Using Weighted triangular	18H00
18H00	Ed-Drissiya El-Allaly, Mourad Sarrouti, Nouredine En-Nahnahi and Said Ouatik El Alaoui	A LSTM-based method with Attention Mechanism for Adverse Drug Reaction Sentences Detection	18H15
18H15	Achraf Laghmich, Fatima Zahra Alaoui Ismaili, Zeineb Zian, Amina Barakat and Mohcine Bennani Mechita	Molecular epidemiology of Alpha-Thalassemia in a Moroccan population.	18H30
18H30	Zakaria Kaddour, Soumia Derrar and Abed Malti	VRAnat: A Complete Virtual Reality Platform for Academic Training in Anatomy	18H45
18H45	Farah Saidi and Abed Malti	Fast Hyperelastic Deformation with Mooney-Rivlin Model for Surgical Simulation of Liver Deformation	19H00



SESSION 3:

TOPIC J: Advanced Intelligent Systems for Sustainable Development Applied to Environment			
SESSION CHAIRS: AMMARI MOHAMMED, BEN ALLAL LAILA		MONDAY, JULY 08 - 2019 (17H30 TO 19H00)	
17H00	Boudriki Semlali Badreddine and El Amrani Chaker	A Big Data Architecture to Acquire and Preprocess Satellites Datasets	17H15
17H15	Jamal Mabrouki, Ahmed Moufti, Souad El Hajjaji, Azoulay Karima, Bencheikh Iman and Essoufy Mohamed	Optimization of the coagulant flocculation process for treatment of leachate of the controlled discharge of the city Mohammedia (MOROCCO)	17H30
17H30	Hadeer Nagy, Heba Awadallah, Mohamed Omar, Alaa Mostafa and Younes Braik	Environmental Assessment of Water Quality and Heavy Metals Pollution of Seawater in Tobruk Bay - Libya	17H45
17H45	Dkhissi Ouafae, Souabi Salah, El Hakmaoui Ahmed, Bakraouy Hajar, Chatoui Mohamed, Fadil Mouhcin and Kadmi Y	OPTIMIZATION OF OPUNTIA DOSE AS BIO-FLOCCULANT FOR OIL REFINERY WASTEWATER USING RESPONSE SURFACE METHODOLOGY	18H00
18H00	Toufik Datsi, Ahmed El Oirrak and Khalid Aznag	Classification of Iris Plant Using Perceptron Neural Network	18H15
18H15	Heba Amin, Safia Darwesh, Mohamed Omar and Alaa Mostafa	Ecological Risk Assessment for Sediment and Water of Oil Terminal Operation in Sidi Kreir Coastal Area, Alexandria, Egypt	18H30
18H30	Omar Jellouli, Abdes Samed Bernoussi, Amharref Mina and Mustapha Ouardouz	Forest Fire phenomena: Vulnerability and Control	18H45
18H45	Fatima Zahra Karmil, Sara Mountadar, Abdelkader Hayani, Anouar Rich, Mostapha Siniti and Mohammed Mountadar	Experimental and Predictive Study using Cryoscopy and Calculation code Modeling of Seawater at Different Concentrations and Ice Water- Salts Precipitation	19H00

SESSION 4:

TOPIC B Advanced Intelligent Systems for Sustainable Development Applied to Industry SESSION CHAIRS: ABDELMAJID EL MOTAUOAKIL, HASSAN SILKAN			
			B
17H00	Mohammed Errouame and Mahacine Amrani	Life cycle assessment of the headrest manufacturing	17H15
17H15	Mohammed Abattouy, Mustapha Ouardouz and Hamid Azzouzi	Smart manufacturing Modeling: thermal and residual stress in metal additive manufacturing	17H30
17H30	Naila Fares, Abdelouahid Lyahyaoui. and Abdelfettah Sedqui	Sustainable smart cities: Optimization of demand responsive transport by using data science tools	17H45
17H45	Mounir Kouhila, Bahammou Younes, Zakaria Tagnamas, Hamza Lamdyeh, Haytem Moussaoui, Abdelkader Lamharrar and Ali Idlimam	Modeling drying kinetics of Dosidicus gigas undergoing Microwave treatment	18H00
18H00	Khabir Abdelilah, Elfelssoufi Zoubir and Hamid Azzouzi	MODELISATION D'ALLOCATION DES RESSOURCES HUMAINES	18H15
18H15	Hajar Baghdadi, Karim Rhofir and Mohamed Lamhamdi	A Novel Modeling Method of NAND device	18H30
18H30	Aissa Ouballouch, Rachid El Alaiji, Mohammed Sallaou and Larbi Lasri	Finite Element Modeling of an optimized liquefier design for 3D printing of CFRTPCs by thermal simulation	18H45
18H45	Noureddine Seddari, Mohammed Redjimi and Mohamed Belaoued	A DEVS/MAS-based Framework for Modeling/Simulation of Complex Systems	19H00
19H00	Ahlam Hamim, Aya Lamrini, Souhaila Bouriah and Mohammed Ezziyyani	Study of growth and yield parameters of two cultivars of blueberry in Loukkos region	19H15



SESSION 5:

TOPIC F Advanced Intelligent Systems for Supporting Decision and Prediction			
SESSION CHAIRS: MOHAMMED EL MRABET, ABDESSADEK AAROUD		MONDAY, JULY 08 - 2019 (17H30 TO 19H00)	F
17H00	Ahmed B. Elmadani and Abdulkream I. Salem	Developing a Decision Support System for Seaport (Case Study: Elmergib Seaport)	17H15
17H15	Abdelkrim Maarir, Abdelouahed Ait Ider and Belaid Bouikhalene	Hierarchical Dimensionality Reduction based Fuzzy C-means Methods for Change Detection in Temporal Satellite Images	17H30
17H30	Jalal Boussaid and Hassan Azdimousa	Elector Relationship Management: Concepts, Practices and Technological Support	17H45
17H45	Mohamed Omar, Nadia Badr, Heba Amin and Mohamed Ghaly	Risk Assessment of Oil Spills at Alexandria Port, Alexandria, Egypt	18H00
18H00	Mohamed Omar, Alaa Mostafa, Heba Amin and Safia Darwesh	Oil Spill Modeling at Sidi Kreir SUMED Oil Terminal, Alexandria, Egypt	18H15
18H15	Abdelhamid El Wahabi, Hady Baraka Ibrahim, Salaheddine Hamdoun and Karim El Mokhtari	Detection and Control System for automotive products applications by Artificial Vision using deep learning	18H30
18H30	Abdelhamid El Wahabi, Hady Baraka Ibrahim, Salaheddine Hamdoun and Karim El Mokhtari	Design of a Mini Robot for the Automation of 3D winding machines axes and Self-Correction by artificial vision using deep learning	18H45
18H45	Sara Baghdadi and Nouredine Aboutabit	Front and Rear Vehicle Classification	19H00
19H00	Mar Parra, Lorena Parra, Javier Rocher, Jaime Lloret, Pedro. V. Mauri and Josep V. Llinares	A Novel Low-Cost Conductivity Based Soil Moisture Sensor	19H15

SESSION 6:

TOPIC L: Advanced Intelligent Systems for Networking Systems and IoT SESSION CHAIRS: MOHAMMED BAHAJ, ABDESSAMED EL BERNOUSSI			
MONDAY, JULY 08 - 2019 (17H30 TO 19H00)			
17H00	Mustapha Elqasemy and Said Raghay	Better Routing Strategies for Optimizing Energy in Wireless Sensor Networks	17H15
17H15	Soukaina Bouarourou, Abdelhak Boulaalam and El Habib Nfaoui	Services Search Techniques Architecture for the Internet of Things	17H30
17H30	Souad Faïd and Mohamed Moughit	The benefits of SDN integration on 5G mobile network	17H45
17H45	Ramzi Mosbah and Larbi Guezouli	Self-Driving Cars: Level 2	18H00
18H00	Sara Riahi and Azzeddine Riahi	Self-optimization of wireless systems: an approach by the game theory	18H15
18H15	Youssef Hamdaoui	Smart Distribution Network in Islanded MicroGrid Using renewable Resources	18H30
18H30	Amine Haibaoui, Bouchaib Hartiti, Abderrazzak Elamim, Abderaouf Ridah, Abdelkrim Batan and Philippe Thevenin	Investigation and Performance Analysis of Two Identical Grid-Connected Photovoltaic Installations in Two Moroccan Cities Using a Monitoring Systems	18H45
18H45	Mensouri Mohammed and Aaroud Abdessadek	Performance and Complexity Comparisons of Polar Codes and LDPC Codes	19H00
19H00	Mahmood Khan, Muhammad Faran Majeed, Amjad Mehmood, Khalid Saeed and Jaime Lloret	The Impact of Mobility Speed over Varying Radio Propagation Models using Routing Protocol in MANET	19H15



SESSION 7:

TOPIC G Advanced Intelligent Systems for Sustainable Development Applied to Agriculture SESSION CHAIRS: KHALIL EL HAMI, MOHAMMED EZZIYYANI TUESDAY, JULY 09 - 2019 (11H30 TO 14H30)			
			G
11H30	Meriem El Ouardi, Souad Lahrache, Saïd Amiri, Abdelbaki El Belhiti El Alaoui and Rajae El Ouazzani	Detecting Unhealthy Wheat Plants by Using Transfer Learning Method	11H45
11H45	Lyna Miloudi, Khaled Rezeg, Okba Kazar and Mohamed Kotoub Miloudi	Smart Sustainable Farming Management Using Integrated Approach of IoT, Blockchain & Geospatial Technologies	12H00
12H00	Khadija Echarrafi, Ibtissam El Hassani, Mounia El Hajji, Mohamed Ben Abbou, Rais Zakia and Mustapha Taleb	The optimization of the compost formulation using mixture designs experiment	12H15
12H15	Sara Belattar, Otman Abdoun and El Khatir Haimoudi	Intelligent Management of using Natural Resources in Agriculture	12H30
12H30	Javier Rocher, Daniel A. Basterrechea, Manal Fawzy, Jaime Lloret and Mohamed Youssef	Sensors and Biosorption for Better Reuse of Wastewater	12H45
12H45	Hajji Tarik and Mohammed Ouazzani Jamil	Big Data Analytics and Artificial Intelligence Serving Agriculture	13H00
13H00	Asmae El Mezouari, Mehdi Najib and Abdelaziz El Fazziki	Towards a Smart Irrigation Scheduling System through Massive Data and Predictive Models	13H15
13H15	Asmae Baggar, Nadia Benbrahim, Youness Rakhila, Fatima Gaboun and Amal Safi	Nutrient quality and Yield potential of some Moroccan Lentil genotypes (<i>Lens culinaris Medik</i>)	13H30
13H30	Adil Soufi, Mustapha Ait Rami, Mustapha El Jarroudi and Moussa El Jarroudi	Epidemic models for plants infection under mixed effects of temperature and wetness	13H45
13H45	Assia Kritihi	The etiological agent of BCWD and RTFS in salmonid aquaculture ability of adhesion and biofilm formation.	14H00
14H00	Maroi Tsouli Fathi, Soumaya EL MAMOUNE, Mostafa Ezziyyani and Mohammed Ezziyyani	Crop Yield Prediction Using Deep Learning in Mediterranean Region	14H15
14H15	Taghouti Mohammed Redouane and Mostafa Ezziyyani	The Data Analytics Model of the Chemical Substances for Predicting the Ecotoxicological Effects on the Quality of Agricultural Production and Environmental Risk Assessment.	14H30

SESSION 8:

TOPIC L Advanced Intelligent Systems for Networking Systems and IoT SESSION CHAIRS: SAID OUATIK EL ALAOU, JIHAD ZAHIR TUESDAY, JULY 09 - 2019 (11H30 TO 14H30)			
			L
11H30	Yassine Rayri, Hatim Kharraz Aroussi and Mouloudi Abdelaaziz	Energy Management in WSNs	11H45
11H45	Benazouz Salma, Baddi Youssef and Abderrahim Hasbi	Software Defined Networking based for Improved Wireless Sensor Network	12H00
12H00	Khalid Kandali, Hamid Bennis and Mohamed Benyassi	A Novel Route Discovery Mechanism based on Neighborhood Broadcasting Methods in VANET	12H15
12H15	Youssef Hamdaoui	Benefits of Electric Vehicle Penetration in a Smart Distribution Network	12H30
12H30	Sara Riahi and Azzeddine Riahi	Optimization and evolutionary games, stochastic equilibrium application to cellular systems	12H45
12H45	Mohamed Ihmaji, Abdelmounim Hassan, Jamal Zbitou, Hamid Bennis and Mohamed Latrach	Design of a Miniature Microstrip Antenna with DGS Structure for RFID Tag	13H00



13H00	Yasmina Andaloussi, Moulay Driss El Ouadghiri and Ziad Saif Mohammed Al Robieh	Access control models for smart environments	13H15
13H15	Tarik Ait Otman, Sanae Khali Issa and Mohamed Ait Kbir	Design and implementation of a compact architecture for the transfer of information via LI-FI technology	13H30
13H30	Amine Atmani, Ibtissame Kandrouch, Nabil Hmina and Habiba Chaoui	Big Data for Internet of Things: A survey on IoT frameworks and platforms	13H45
13H45	Mohamed Nassim Aarab and Otman Chakkor	MIMO-OFDM for Wireless Systems: an Overview	14H00
14H00	Mohamed Khardioui, Abdelouahed Bamou, My Driss El Ouadghiri and Badraddine Aghoutane	Implementation and evaluation of an Intrusion Detection System for IoT: Against routing attacks	14H15
14H15	Fatima Lakrami, Najib El Kamoun, Ouidad Labouidya and Khalid Zine-Dine	Analysis and evaluation of Cooperative Trust models in Ad Hoc networks: Application to OLSR Routing Protocol	14H30

SESSION 9:

TOPIC A Advanced Intelligent Systems for Education and Intelligent Learning System SESSION CHAIRS: MOHAMMED RIDA ECH-CHARRAT , MUSTAPHA METOUJ TUESDAY, JULY 09 - 2019 (11H30 TO 14H30)			
11H30	Sana Nabil, Jaber Elbouhdidi and Mohamed Yassin Chkouri	Toward a new performing recommendation system	11H45
11H45	Samir Bourekkache, Okba Kazar, Samir Tigane and Laid Kahloul	Personalized E-learning system based on adaptation of learner preferences and characteristics	12H00
12H00	Hamid Ouanan	Development of deep learning-based facial recognition system	12H15
12H15	Naaïma Boudad, Soumia Ezzahid, Rdouan Faizi and Rachid Oulad Haj Thami	Exploring the Use of Word Embedding and Deep Learning in Arabic Sentiment Analysis	12H30
12H30	Oussama El Hammoumi, Fatimaezzahra Benmarrakchi, Nihal Ouherrou and Jamal El Kafi	The Use of NN to Detect Learning Styles of Children with Learning Disabilities in E-Learning System	12H45
12H45	Hamza Alami, Nouredine En-Nahnahi, Mostafa Ezziyyani and Said El Alaoui Ouatik	Exploring Convolutional Neural Networks and Recurrent Neural Networks for Arabic Question Classification	13H00
13H00	Asmae Blilat and Abdelali Ibriz	A new architecture of Service composition-based Context-Aware Mobile Learning System	13H15
13H15	Hamid Ouanan	A novel face recognition system based on Gabor and Zernike features	13H30
13H30	Ouafae El Aissaoui, Yasser El Madani El Alami, Oughdir Lahcen, Ahmed Dakkak and Youssouf El Alloui	Predicting student performance by considering the most important variables: A multiple linear regression-based approach	13H45
13H45	Safae El Alami El Hassani, Khalid Digua, Hamid Mellouk, Anas Driouch, Bouchra Bejjany, Adil Dani and Hassan Chaair	Optimization of parameters extraction of natural antioxidant from Moroccan grape pomace	14H00
14H00	Najoua Tahiri and Mohamed El Alami	An Intelligent E-learning System for autistic children: Multi-agent architecture	14H15
14H15	Soufiane Ardchir, Soumaya Ounacer, Mohamed Azzouazi, Youssef Ouassit, Mohamed Yassine El Ghoumari and Houda Jihal	Improving prediction of MOOCs student dropout using a feature engineering approach	14H30



SESSION 10:

TOPIC I Advanced Intelligent Systems for Sustainable Development Applied to Health SESSION CHAIRS: NFAOUI EL HABIB, MUSTAPHA MAATOUK			
TUESDAY, JULY 09 - 2019 (11H30 TO 14H30)			I
11H30	Malik Benmansour and Abed Malti	Skills Evaluation of Specific Surgical Tasks using Long Short-Term Memory Networks	11H45
11H45	Djihane Houfani, Sihem Slatnia, Okba Kazar, Noureddine Zerhouni, Abdelhak Merizig and Hamza Saouli	Machine Learning Techniques for Breast Cancer Diagnosis: Literature Review	12H00
12H00	Yasmine Benchaib	Comparative study between Artificial Metaplasticity Learning Algorithm and other Machine Learning Techniques: Application for cardiac arrhythmias classification	12H15
12H15	Mohammed Eddy and Khalil El-Hami	Thermal and electrical conductivities of bio-ceramic amalgams based on hydroxyapatite doped by low metal (Co,Ni,Cu,Mn) concentration for dental and orthopedic engineering	12H30
12H30	El Mehdi Benyoussef, Abdeltif Elbyed and Hind El Hadiri	A Deep Neural Network Classification Approach for Alzheimer's Disease diagnosis	12H45
12H45	Khaoula Slime, Abderrahim Maizate and Larbi Hassouni	Processing and analyzing health data in a big data context: Aspects and implementations	13H00
13H00	Abdelhafid Abouharim, Abdelghafour El Moutarajji and Khalil El-Hami	Effect of multiwall carbon nanotube (MWCNT) concentration on thermal and electrical properties of Glycerol nanofluid	13H15
13H15	Naziha Laaz, Karzan Wakil, Zineb Gotti, Sara Gotti and Samir Mbarki	Integrating Domain Ontologies in an MDA-based Development Process of e-Health Management Systems at the CIM Level	13H30
13H30	Mohammed Ezziyyani, Ahlem Hamdache, Meryem Asraoui, Imad Krikech, Maria Emilia Requena, Catalina Egea-Gilabert and Maria-Emilia Candela	Management alternatives for strawberries diseases	13H45
13H45	Souad Taleb Zouggar and Abdelkader Adla	Measures of Random Forest Pruning: Comparative Study and Experiment on Diabetic Monitoring	14H00
14H00	Hiba Asri, Hajar Mousannif and Hassan Al Moatassime	A hybrid data mining classifier for breast cancer prediction	14H15
14H15	Soukayna Belkadi, Ilias Cherti and Mohamed Bahaj	Lean methods from manufacturing to health care amelioration	14H30

SESSION 11:

TOPIC E Advanced Intelligent Systems for Information and System Security SESSION CHAIRS: EL ADNANI MOHAMED, SAIDA LAZAAR			
TUESDAY, JULY 09 - 2019 (11H30 TO 13H45)			E
11H30	El Mehdi Achrak and Mohamed Yassin Chkouri	Integrate and Apply the recommendation System of Agile Methods	11H45
11H45	Rhaydae Jebli, Jaber Elboudhidi and Mohamed Yassin Chkouri	Automatic Evaluation of UML Class Diagrams Using the XML Schema Matching and the Machine Learning Algorithm	12H00
12H00	Ibtissame Kandrouch, Nabil Hmina and Habiba Chaoui	Modernization and Orchestration of Security Incident Response tools	12H15
12H15	Jihane Larioui and Abdeltif El Byed	An Advanced Intelligent Support System for Multimodal Transportation Network Based on Multi-Agent Architecture	12H30
12H30	Soumaya Ounacer, Houda Jihal, Soufiane Ardchir and Mohamed Azzouazi	Anomaly Detection in Credit Card Transactions	12H45



12H45	Kamri Hicham and Bouchaib Bounabat	Machine Learning Approach for Smart Self-Diagnosing Autonomic Computing Systems	13H00
13H00	Zineb Korachi and Bouchaib Bounabat	Towards a Maturity Model for Digital Strategy Assessment	13H15
13H15	Driss Essaadi and Jalal Laassiri	Using NMAP for data collection in Cloud platform	13H30
13H30	Youssef Sbaytri and Saiida Lazaar	A Lightweight Cellular Automata-based Cryptosystem evaluated with NIST statistical tests	13H45
13H45	Khalid Nassiri, El Arbi Abdellaoui Alaoui, Youssef Rachdi, Youssef Mejdoub	The blockchain use for the security of deployments of the Internet of Things	14H00

SESSION 12:

TOPIC K Advanced Intelligent Systems for Computational Web and Big Data Analytics SESSION CHAIRS: NOURA AKNIN, PASCAL LORENZ			
			K
11H30	Othmane Rahmaoui, Kamal Souali and Ouzzif Mohammed	Towards a Recommended Documentation System Using Data Traceability and Machine Learning in a Big Data Environment	11H45
11H45	Jabrane Kachaoui and Abdessamad Belangour	An Adaptive Control Approach for Performance of Big Data Storage Systems	12H00
12H00	Abdellah El Fazziki, Yasser El Madani El Alami, Ouafae El Aissaoui, Youssouf El Alloui and Mohammed Benbrahim	Improving collaborative filtering approach by leveraging opposite users	12H15
12H15	Moustafa Sadek Kahil, Abdelkrim Bouramoul and Makhoulf Derdour	Big Data and Interactive Visualization: Overview on Challenges, Techniques and Tools	12H30
12H30	Haifa Degachi, Ameni Yengui and Mahmoud Neji	Multimedia Ontology of the Tunisian Archaeology Field	12H45
12H45	Karzan Wakil, Dayang N.A. Jawawi and Naziha Laaz	Role of Interaction Flow Modeling Language (IFML) in the Development of Ubiquitous Web Applications (UWAs)	13H00
13H00	Yahia Mouammime and Hassan Azdimousa	The measurement of consumers Feel Data using Neuromarketing and a Scoring Board: Conceptual Model	13H15
13H15	Ibtissame Kandrouch, Zahra Oughannou, Nabil Hmina and Habiba Chaoui	Comparative and analytical study of Big Data technologies: A survey	13H30
13H30	Yassine Benlachmi and My Lahcen Hasnaoui	Current state and challenges of Big Data	13H45
13H45	Mohammed Yassine Doukali Fenni and Mostafa Ezziyyani	The influences of technology and social networks on social change.	14H00
14H00	Hanane Elfaik and El Habib Nfaoui	A comparative evaluation of classification algorithms for sentiment analysis using word embeddings	14H15
14H15	Salma Gaou and Mohamed Fihri	A New Approach of a List of Items for Search Retrieval Systems	14H30

SESSION 13:

TOPIC L Advanced Intelligent Systems for Networking Systems and IoT			
SESSION CHAIRS: ABDEL WAHAB, KAMAL LABASSI			
TUESDAY, JULY 09 - 2019 (17H00 TO 19H00)			
17H00	Laura Garcia, Lorena Parra, Jose M. Jimenez, Jaime Lloret and Pascal Lorenz	Estimation of the Best Measuring Time for the Environmental Parameters of a Low-Cost Meteorology Monitoring System	17H15
17H15	Alaa Aadri and Najlae Idrissi	An AODV-based routing scheme with layered clustering to enhance energy efficiency and QoS in WSNs	17H30
17H30	Taoufik Benyetho, Hamid Bennis, Jamal Zbitou and Larbi El Abdellaoui	Planar Hexagonal Antenna Array for WLAN Applications	17H45



17H45	Bamou Abdelouahed, Khardioui Mohamed, El Oquadghiri My Driss and Aghoutane Badraddine	Implementing and Evaluating an Intrusion Detection System for Denial of Service Attacks in IoT Environments	18H00
18H00	Marwa Zaryouli and Mostafa Ezziyyani	Decision system dedicated to IT services in a multi-context environment	18H15
18H15	Meriem Ait Rahou and Abderrahim Hasbi	SWCA: Secure weighted cluster head election algorithm in mobile ad hoc network	18H30
18H30	Ismaili Alaoui	Comparative Study of ZigBee and 6LoWPAN Protocols: Review	18H45
18H45	Hala Khankhour, Jâafar Abouchabaka and Otman Abdoun	Genetic Algorithm for Shortest Path in Ad Hoc Networks	19H00

SESSION 14:

TOPIC A Advanced Intelligent Systems for Education and Intelligent Learning System SESSION CHAIRS: FEDDOUL KHOUKHI, OUFAB BAI			
TUESDAY, JULY 09 - 2019 (17H00 TO 19H00)			
17H00	Aziz Hraiba, Achraf Touil and Ahmed Mousrij	Improved Grey-Wolf Optimizer for Reliability Analysis	17H15
17H15	Ibrahim Hamzane and Abdessamad Belangour	A Multi-Criteria Analysis and Advanced comparative study Between IT Governance references	17H30
17H30	Abderrahmane Ben Kacem, Youness Frichi, Oualid Kamach, Samir Chafik and Fouad Jawab	Proposal and validation of a model for predicting the number of injuries due to road accidents in Casablanca city	17H45
17H45	Fatima El Barakaz, Abdelmajid El Moutaouakkil, Fatiha El Adnani and Omar Boutkhoun	A new clustering approach for K-NN algorithm optimization: Application to marketplace profile user prediction	18H00
18H00	Youness Madani, Mohammed Erritali and Jamaa Bengourram	A Recommender approach for an e-learning platform based on social network analysis and collaborative filtering	18H15
18H15	Imane Lahbari, Hamza Alami, Khalid Alaoui Zidani and Said El Alaoui Ouatik	Towards a Passages Extraction Method for Arabic Question Answering Systems	18H30
18H30	Abdellah Bakhoui, Rachid Dehbi, Mouad Banane and Mohamed Talea	Towards a New Semantic Web Approach for interoperability of E-learning Content Exploiting the Next Generation of SCORM	18H45
18H45	Jihane Abdessadak, Hicham Achelhi and Kamal Reklou	INNOVATION BARRIERS CLASSIFICATION: Case of the Northern Region of Morocco	19H00

SESSION 15:

TOPIC H Advanced Intelligent Systems for Sustainable Development Applied to Energy SESSION CHAIRS: AHLEM HAMDACHE, MOHAMMED REDA BRITEL			
TUESDAY, JULY 09 - 2019 (17H00 TO 19H00) 			
17H00	Iliasse Abdenmour, Mustapha Ouardouz and Abdes-Samed Bernoussi	Peer-to-peer energy sharing using cellular automata approach in a Microgrid system	17H15
17H15	Soukaina Essaghir, Mohamed Benchagra and Noureddine El Barbri	Comparative Study of Three Phase Grid Connected Photovoltaic System Using PI, PR and Fuzzy Logic PI Controller with harmonic analysis	17H30
17H30	Yassine Amadane, Hamid Mounir, Abdellatif El Marjani, Mohamed Karim Etthouhami and Adil Atifi	Using CFD simulation and Taguchi approach to optimize the parameters influencing the performance of PEM fuel cell with the serpentine flow field	17H45



17H45	Mohamed Meziane, Mustapha Faqir, Elhachmi Essadiqi and Mohamad Fathi Ghanameh	Numerical investigation of hybrid Darrieus-Savonius wind turbine performance	18H00
18H00	Afaf Dadda and Brahim Ouhbi	Need for using Artificial Intelligence in the evaluation of new industrial Project	18H15
18H15	Abderrazak Khediri, Mohamed Ridda Laouar and Sean B. Eom	Decision Support System Architecture for Smart grids Hardening Against Weather Hazard	18H30
18H30	Ikram Labtaini and Khalil El-Hami	Computational fluid dynamics simulation of nozzle dimensions used in a pulse-jet system of baghouse phosphate dust collector	18H45
18H45	Youssef Hamdaoui	An intelligent power distribution management with dynamic selection in smart building based on prosumers classification and an Intelligent Controller	19H00

SESSION 16:

TOPIC D Advanced Intelligent Systems for Multimedia processing and Mathematical modeling SESSION CHAIRS: AHMED AZOUAOUI, AMAL MAURADI			
			
17H00	Yassir Zardoua, Abdelali Astito and Mohammed Boulaala	A communication on maritime surveillance using image processing	17H15
17H15	Said Broumi, Mohamed Talea, Assia Bakali, Santanu Kumar Patro and Florentin Smarandache	On the Neutrosophic Counterpart of Bellman-Ford Algorithm	17H30
17H30	Abdelhak Fadili, Mohamed El Aroussi and Youssef Fakhri	An efficient method for character segmentation in Moroccan license plate images	17H45
17H45	Meryem Bachar, Ahmed Naddami and Ahmed Fahli	Comparative study of Incremental Conductance and Fuzzy Logic MPPT Algorithms for a New and Mobile Desalination Unit	18H00
18H00	Ahlem Melouah, Hamza Khalfaoui and Said Lemnadjilia	A Novel CNN for Traffic signs Detection	18H15
18H15	Mohammed Fakhour, Ahmed Azough, Fatima-Zahra Kaghat and Mohammed Meknassi	A Cultural Scavenger Hunt Serious Game Based on Audio Augmented Reality	18H30
18H30	Mounia Ajdour and Lahcen Azrar	Static analysis of piezoelectric multilayered plates: Polarization effect	18H45

SESSION 17:

TOPIC F Advanced Intelligent Systems for Supporting Decision and Prediction SESSION CHAIRS : EL BACHARI ESSAID, JAIME LLORET MAURI			
			
17H00	Oussama Aatiq and Mohamed Talea	A literature review of steering angle prediction algorithms for self-driving cars	17H15
17H15	Wahida Handouzi and Ahmed Ziane	Deep ConvNet for facial emotion recognition	17H30
17H30	Faroudja Abid	Predicting Forest Fire in Algeria using Data Mining Techniques: Case Study of the Decision Tree Algorithm	17H45
17H45	Yassine Touzani, Khadija Douzi and Fadoul Khoukhi	Stock price forecasting: New model for stocks selection and price forecasting based on Convolutional neural network	18H00



18H00	Zuherman Rustam, Sri Hartini, Jacob Pandelaki and Nadisa Karina Putri	Comparison of Modified Hierarchical Clustering Based on Density Peaks using Kernel Function with Support Vector Machine in the Classification of Sinusitis	18H15
18H15	Fatima Zohra Ennaji, Abdelaziz El Fazziki, Hasna El Alaoui El Abdallaoui and Mohamed Sadgal	An online framework for earlier cancer diagnosis: Association rules and decision tree-based approach	18H30
18H30	Wajih Abdelaziz Rhalem, Jamal El Mhamdi, Mourad Raji, Ahmed Hammouch, Abd-Errahim Maazouzi, Sanae Raoui, Saaid Amzazi, Salsabil Hamdi and Hassan Ghazal	Application of a discrete to continuous approach based -alignment algorithm for Capillary Electrophoresis DNA sequencing correction	18H45
18H45	Soumaya EL MAMOUNE, Maroi TSOULI FATHI, Wiam EL MAMOUNE, Mostafa EZZIYYANI	Optimization time and path for employee transportation	19H00

SESSION 18:

TOPIC B Advanced Intelligent Systems for Sustainable Development Applied to Industry SESSION CHAIRS: MOHAMMED YOUSSEF, AOUNI ABDESSAMAD			
TUESDAY, JULY 09 - 2019 (17H00 TO 19H00)			B
17H00	Mohammed Eddy, Khalil El-Hami and Bouazza Tbib	Structural modification of cubic zinc bismuth spinel induced by lead substitution	17H15
17H15	Ahmed Ghenabzia, Okba Kazar, Abdelhak Merizig, Zaoui Sayah and Zoubeidi Merouane	Drilling Stuck Pipe Prediction in Algerian Oil Fields: Time Series Forecasting Approach	17H30
17H30	Mouhsene Fri, Kaoutar Douaioui, Nabil Lamii, Charif Mabrouki and El Alami Semaa	A DEA-based hybrid framework to evaluate the performance of port container	17H45
17H45	Hajar Baghdadi, Karim Rhofir and Mohamed Lamhamdi	Iterative Decomposition for simulating the instability of Nano-Switches	18H00
18H00	Noureddine Belmokhtar, Houda El Ayadi, Mohammed Ammari and Laila Ben Allal	A new approach for the management of an industrial waste: A case study	18H15
18H15	Ismail Driouch, Kenza Bouchaâla, Mustapha Faqir, Mohamad Fathi Ghanameh and Elhachmi Essadiqi	Numerical prediction of thickness influence on the aircraft wing design.	18H30
18H30	Kenza Bouchaâla	Investigation of Contact Impact in deep drawing for AA2198 Al-Li sheet using ABAQUS/Explicit	18H45
18H45	Nabiha Saadi, Khalid Zhani, Karim Fathallah, Ahmed Chenaoui and Rachid Dkiouak	Forming limit curves for the isotropic plasticity	19H00
19H00	Jalil Baddaoui, Abdelhakim Nassimi, Tarik Zouadi and Mohammed Rida Ech-Charrat	The impact of national investment in sustainable development on the performance of SSCM: case of Moroccan automotive sector	19H15



SESSION 19:

TOPIC 12 Advanced Intelligent Systems for Sustainable Development Applied to Health SESSION CHAIRS: KHALID ZINE-DINE, EL HASSAN ABDELWAHED			
WEDNESDAY, JULY 10 - 2019 (11H30 TO 14H30) 			
11H30	Mohammed Eddy and Khalil El-Hami	Bio-ceramic amalgams based on hydroxyapatite doped by cobalt, nickel and their toxicity discussion	11H45
11H45	Razika Driouche	Towards Multi-Approaches Bioinformatics Pipeline Based on Big Data and Cloud Computing for Next Generation Sequencing Data Analysis	12H00
12H00	Ahmed Kadiri, Noufal Sefiani and Hamid Azzouzi	A controlled and complete mapping of care processes towards a digital clinic	12H15
12H15	Houssam Benbrahim, Hanaâ Hachimi and Aouatif Amine	Comparative study of Machine Learning Algorithms using the Breast Cancer Dataset	12H30
12H30	Salma Hakim, Manal Ezzahmouly, Abdelaziz El Ouahli, Soumia El Haddaoui, Abdelhak Siwane, Abdelmajid El Moutaouakkil and Zineb Hatim	Image processing of X-Ray images of empty and filled bone cavity by calcium phosphate granules using ImageJ	12H45
12H45	Amal El Kaid, Karim Baina and Jamal Baina	Real case study of improving Elderly Person Fall Video-Detection Algorithm by deep learning	13H00
13H00	El Hachimi Chouaib and Abdessadek Aaroud	Medical Use of Deep learning: Malaria Testing using pre-trained ResNet	13H15
13H15	Charaf Eddine AitZaouiat and Adnane Latif	Design and Performances Evaluation of a Hybrid WBAN for Medical Applications based on the “Inter-MAC” Layer Concept	13H30
13H30	Lamiche Chaabane	Resolving Multiple Sequence Alignment Problem Using Metaheuristics	13H45
13H45	Zuherman Rustam, Sri Hartini, Dea Aulia Utami, Nadisa Karina Putri and Titin Siswantining	Comparison between Fuzzy Kernel C-Means, Fuzzy Kernel Possibilistic C-Means and Support Vector Machine in Soft Tissue Tumor Classification	14H00
14H00	Khaoula Addakiri, Hajar Khallouki and Mohamed Bahaj	Healthcare Data storage based on HBase	14H15
14H15	Nadia Hamjane, Fatiha Benyahya, Mohcine Bennani Mechita, Naima Gailani Nourouti and Amina Barakat	Dietary factors associated with obesity indicators (body mass index and waist circumference) in obese and overweight adults of Tangier (Northern Morocco): a cross-sectional study	14H30
14H30	Sarah Khrouch and Mostafa Ezziyyani	Decision system for the selection of the best therapeutic protocol for breast cancer based on genetic algorithm	14H45

SESSION 20:

TOPIC A ADVANCED INTELLIGENT SYSTEMS FOR EDUCATION AND INTELLIGENT LEARNING SYSTEM SESSION CHAIRS: SANAE KHALI ISSA, AGOUTI TARIK WEDNESDAY, JULY 10 - 2019 (11H30 TO 14H30)			
11H30	Ayoub Arroub	An Overview on the use of Artificial Intelligence in Adaptive learning: Comparative study	11H45
11H45	Mohammed Beyyoudh, Mohammed Khalidi Idrissi and Samir Bennani	Intelligent Production of Serious Games in Intelligent Tutoring Systems based on Adaptive Workflows	12H00
12H00	Lamyae Bennis and Said Amali	From Learning Game to Adaptive Ubiquitous Game Based Learning	12H15
12H15	Aziz Abdel Karim and Khoukhi Faddoul	An Ontological Approach for Service Adaptation in Context Aware Environment	12H30
12H30	Amal Maurady, Loubna Taidi, Soukaina Ettoury and Mohammed Reda Britel	Molecular Docking Studies of Human COX-2 with selective Terpenoids inhibitors	12H45
12H45	Outmane Bourkougou, Essaid El Bachari and Hakim El Boustani	Building effective collaborative learning groups on MOOC Environment	13H00
13H00	Abderrahim El Yessefi, Loubna Cherrat and Mostafa Ezziyyani	Smarter Crossing Analytics System to predict and Anticipate the Student Behavior for Self Automatic Adaptation of Academic Learning	13H15
13H15	Nissrin Nehiri and Noura Aknin	New learning architecture for effective interoperability of learner's data management	13H30

SESSION 21:

TOPIC J ADVANCED INTELLIGENT SYSTEMS FOR SUSTAINABLE DEVELOPMENT APPLIED TO ENVIRONMENT SESSION CHAIRS: MOUNIA AJDOUR, MOULAY DRISS EL OUADGHIR WEDNESDAY, JULY 10 - 2019 (11H30 TO 14H30)			
11H30	Abdeslam Ababou, Achaimae Kharchafi, Mustapha Taleb and Abdelhak Kherbeche	CO2 carbonation on alkaline materials	11H45
11H45	Brahim Bouaakkaz	Mapping land cover from Sentinel-2A using support vector classifier and random forest regressor in the Souss basin Morocco.	12H00
12H00	Saadia El Hajjami and Salah Souabi	Spatio-temporal Evaluation of the Contamination by Metallic Trace Elements of the Surface Waters of Oued Sebou, Morocco.	12H15
12H15	Tawfik Masrour, Ibtissam El Hassani and Mohammed Salim Bouchama	Deep CNN with Transfer Learning for Old Buildings Pathologies Automatic Detection	12H30
12H30	Amal El Khaddari, Jamila Dahmani, Mohamed Ouajdi, Jalila Aoujdad and Salwa El Antry	Effect of endomycorrhizal fungi on growth and development of Thuya plants in a forest nursery	12H45
12H45	Loubaba Rida and Adil Hafidi Alaoui	High-Volume Fly Ash mortar: Solution for Sustainable Development	13H00

13H00	Sara El Ghizi, Nezha El Aadel, Mohamed Sadik and Mustapha Hasnaoui	Biodiversity of the ichthyological fauna of the Dayet Erroumi khmisset: use of classical indices for a diagnosis on the evolution of the ecosystem	13H15
13H15	Nouredine Belmokhtar, Houda El Ayadi, Mohammed Ammari and Laila Ben Allal	A new approach for the management of an industrial waste: A case study	13H30
13H30	Fidâ Baragh, Khalid Draoui, Brahim El Bali, Abdelhak Kherbeche and Mahfoud Agunaou	Response Surface Methodology for the optimization of 4- Nitrophenol degradation by a heterogeneous Fenton-like reaction on Moroccan pillared clays	13H45
13H45	Ilham Boumendil	Physicochemical parameters of Moroccan fish salted waste desalting of natural process	14H00
14H00	Sara Haffane, Salahddine Hamdoune, Abdelali Astito and Abdelilah Azyat	Development of a LoRa-Based System for Air Quality Measurement.	14H15
14H15	Hocine Amarchi	Variabilité des séries pluviométriques de bassin versant de la Seybouse du Nord Est-Algérien	14H30

SESSION 22:

TOPIC F Advanced Intelligent Systems for Supporting Decision and Prediction SESSION CHAIRS: ISSAM QAFFOU, KHALID JBARI WEDNESDAY, JULY 10 - 2019 (11H30 TO 14H30)			
11H30	Khellaf Douaae, Kenatef Hana and Hioual Ouassila	Towards a SaaS Contracts Negotiation Model Based on Multi Agent System	11H45
11H45	Karim El Mokhtari, Monir Azmani and Abdelali Astito	Predictive Natural Language Processing Analysis applied to Arabic	12H00
12H00	Ikram Remadna, Sadek Labib Terrissa, Ryad Zemouri, Soheyb Ayad and Nouredine Zerhouni	Unsupervised Feature Reduction Techniques with Bidirectional GRU Neural Network for Aircraft Engine RUL Estimation	12H15
12H15	El Arbi Abdellaoui Alaoui and Stephane Cedric Koumetio Tekouabou	Prediction of Waiting Time of Bus in Smart Cities using Machine Learning with The Internet of Things	12H30
12H30	Mohammed Rida Ech-Charrat, Israe Ezznati, Loubna Cherrat, Tarik Zouadi and Mostafa Ezziyyani	Facility location problem for reusable containers distribution system	12H45
12H45	Anass Hossam, Abdelhamid Bouzidi and Mohammed Essaid Riffi	Elephants Herding Optimization to solve the Multiple Travelling Salesman Problem	13H00
13H00	Fatima Zahraa Grine, Oulaid Kamach and Naoufal Sefiani	Developing a combined model using AHP and DEMATEL for evaluating logistic hubs location factors: a case study of Morocco	13H15
13H15	Aatila Mohamed, Essaid El Bachari and El Boustani Abdelhakim	MRI Brain Images Classification Using Convolutional Neural Networks	13H30

SESSION 23:

Topic B+J Advanced Intelligent Systems for Sustainable Development Applied to Industry + Advanced Intelligent Systems for Sustainable Development Applied to Environment SESSION Chairs: SALWA BELAQZIZ , Soumaya El Mamoune WEDNESDAY, JULY 10 - 2019 (11h30 to 14h30) B J			
11H30	Abdelmoula Ait Allal, Khalifa Mansouri, Mohamed Youssfi, Mohammed Qbadou and Khalid El Had	Shipyard Impact Assessment for a Sustainable Ships Maintenance and Repair Activity in West Africa	11H45
11H45	Mohamed Beroho, Hamza Briak, Rachid Mrabet and Khadija Aboumari	Effects of climate change on land degradation in Northern Morocco	12H00
12H00	Fatima Zohra El KHO and Noura Aknin	Thing-based Service-oriented Architecture for Industry 4.0	12H15
12H15	Houda Yousseuf, Saida Rahali El-Azzouzi and Kamal Reklaoui	Control of the "cataphoresis" process by artificial intelligence	12H30
12H30	Oumayma Boulaalam, Badraddine Aghoutane and Driss El Ouadghiri	Design of a tourism recommendation system based on user's profile	12H45
12H45	Yousef Al Abdallat	Experience of the Jordanian National Program for Linking Academic Institutions with Industrial Sectors "Faculty for Factory" "Innovation and Sustainable Goals"	13H00
13H00	Ramz Tsouli Fathi, Mohammed Ammari and Laila Ben Allal	Comparative analysis of project management methodologies and its tools	13H15
13H15	El Mazgualdi Choumicha, Tawfik Masrour, Abdelmoula Khoudoudi and Ibtissam El Hassani	Using Machine Learning for predicting Efficiency in Manufacturing Industry	13H30
13H30	Abdelmoula Khoudoudi, Tawfik Masrour and Choumicha El Mazgualdi	Using Machine Learning Algorithms for the Prediction of Industrial Process Parameters Based on Product Design.	13H45
13H45	Ali Noumir, Khalil El-Hami and Bendaoud Saad	Prediction of liquid-liquid equilibrium data for a quaternary system containing an electrolyte resulting from the dissociation of the acetic acid	14H00

SESSION 24:

TOPIC N +H Advanced Intelligent Systems for Electrical engineering +Advanced Intelligent Systems for Sustainable Development Applied to Energy SESSION CHAIRS: Jbilou Mohammed, Hakim EL BOUSTANI				WEDNESDAY, JULY 10 - 2019 (11H30 TO 14H30)  	
11H30	Amal Satif, Rachid Elgouri and Laamari Hlou	A low-cost maximum power point tracking method based on PI controller Arduino implementing		11H45	
11H45	Asmaa Tellabi, Mithil Parekh, Christoph Ruland and Mostafa Ezziyyani	A case study of virtualization techniques used for Mixed Criticality Systems		12H00	
12H00	Saad Ouali and Abdeljebbar Cherkaoui	A Centralized Voltage Control System for Low Voltage Distribution Networks in Morocco with the Presence of Distributed Generation		12H15	



	12H15	El Hachmi Talbi, Lhoussine Abaali and Rachid Skouri	Optimal Power Flow Dispatch using Trust Region Based Multiplier Method	12H30
	12H30	Khalil El-Hami, Bouazza Tbib and Mohammed Eddy	Conversion of sunlight into electricity based on new colored triphosphates: Elaboration and characterization	12H45
	12H45	Ola El Borday, Manal Fawzy, Rania Abdedin and Abeer Salama	Enhancement of Biogas Production from Plant Biomass Using Iron Nanoparticles	13H00
	13H00	Assiya Haddout, Mounir Fahoume, Abderrahim Raidou, Mohamed Lharch and Nadia Elharfaoui	Effects of back contact on CZTS solar cell-A Numerical Simulation Approach	13H15
	13H15	Hind Sefian, Fatima Bahraoui, Zuhair Bahraoui and Abdeladim Batmi	Parametric and non-parametric wind distribution model for Tangier region	13H30
	13H30	Abdelghafour El Moutarajji, Abdelhafid Abouharim and Khalil El-Hami	Synthesis of silver nanoparticles by microwave irradiation and their effect on the gap energy of nano-composite based on MWCNT	13H45
	13H45	Yassine Amadane, Hamid Mounir, Abdellatif El Marjani and Mohamed Karim Etthouhami	The effect of gas diffusion layer (GDL) porosity variation on oxygen distribution along the PEM fuel cell	14H00
	14H00	Abdelmoula Ait Allal, Khalifa Mansouri, Mohamed Youssfi, Mohammed Qbadou and Khalid El Had	Ship Main Engine Waste Heat Recovery for an Efficient Energy Management	14H15
	14H15	Mohamed Nfaoui and Khalil El-hami	Study, Metrology and Supervision of the Energy Production of a Photovoltaic Installation	14H30

SESSION 25:

TOPIC C Advanced Intelligent Systems for Sustainable Development Applied to Economy			
SESSION CHAIRS: Mustapha Ouardouz, Mohammed Haqiq			WEDNSDAY, JULY 10 - 2019 (16H00 TO 19H30)
16H00	Charifa Haouraji, Badia Mounir, Abdelmajid Farchi and Ilham Mounir	Investigating the multivariate Granger causality between residential CO2 emissions, population and economic growth in Morocco	16H15
16H15	Nassim Kharmoum, Sara Retal, Soumia Ziti and Fouzia Omary	A Novel Automatic Transformation Method from the Business Value Model to the UML Use Case Diagram	16H30
16H30	Houda Jihal, Soumaya Ounacer, Mohamed Azouazi and Soufiane Ardchir	Clustering model of false positive elimination in Moroccan fiscal fraud detection	16H45
16H45	Abdelmounim Al Jamar, Othmane Bourhaba, Fatiha Brikat, Mohammed Amine Ben Taher, Mama Hamimida, Hassan Makroum, Mohammed Ahachad and Mustapha Mahdaoui	Forecast of The Installed Capacity of Solar Water Heaters and Its Economic and Social Impact in Morocco: A Time Series Analysis	17H00
17H00	Nassim Kharmoum, Soumia Ziti and Fouzia Omary	Towards a Disciplined Methodology to Generate the E-Business Information System Models from the Business Value Model	17H15
17H15	Mohamed. A. Ali, Esraa Abubaker Othman, Islam Jamal Alden	E-COMMERCE IN SUDAN (ANALYTICAL STUDU)	17H30
17H30	Mohamed. A. Ali, Saria Khalid, Esraa Omer, Ahmed Hego	The Influence of the information and communication technologies Regulation Policies in Sudan on Electronic banking usage	17H45

SESSION 26:

TOPIC D Advanced Intelligent Systems for Multimedia processing and Mathematical modeling SESSION CHAIRS: MOHAMMED AHACHAD, EL METOUI MUSTAPHA WEDNESDAY, JULY 10 - 2019 (16H00 TO 19H30)			
16H00	Mohamed Anass El Yamani and Saiida Lazaar	Conditional assessment of uncertain parameters using Palm probabilistic approach and Kriging interpolation	16H15
16H15	Hamid Aksasse, Brahim Aksasse and Mohammed Ouanan	Human Activity Classification Using Convolutional Neural Networks	16H30
16H30	Hicham Hajoui Mouane, Rachid Allaoui, Aimad Elmourabit and Abdelhak Ezzine	FPGA-based system for road signs color segmentation	16H45
16H45	Abdelmajid Boussselham, Omar Bouattane, Mohamed Youssfi and Abdelhadi Raihani	Ischemic stroke lesion segmentation based on thermal analysis model using U-Net fully convolutional neural networks on GPUs	17H00
17H00	Rachid Allaoui, Hicham Hajoui Mouane, Abdelhak Ezzine and Aimad Elmourabit	FPGA-based implementation of Optical flow for object detection	17H15
17H15	Myriem Alijo, Otman Abdoun and Amal Bergam	Pity Beetle Algorithm to solve VRP variants	17H30
17H30	Abdelhamid Bouzidi and Mohammed Essaidi Riffi	CSO to Solve the Shop Scheduling Problem: Survey	17H45
17H45	Fatima Lakrami, Najib El Kamoun, Ouidad Labouidya and Khalid Zine-Dine	Analysis and evaluation of Cooperative Trust models in Ad Hoc networks: Application to OLSR Routing Protocol	18H00
18H00	Abdelmajid Boussselham, Omar Bouattane, Mohamed Youssfi and Abdelhadi Raihani	Improved brain tumor segmentation in MRI images based on thermal analysis model using U-Net and GPUs	18H15

SESSION 27:

TOPIC K ADVANCED INTELLIGENT SYSTEMS FOR COMPUTATIONAL WEB AND BIG DATA ANALYTICS SESSION CHAIRS: HAJAR MOUSANNIF, LOUBNA CHERRAT WEDNESDAY, JULY 10 - 2019 (16H00 TO 19H30)			
16H00	Salima Lamsiyah, Abdelkader El Mahdaouy, Said Ouatik El Alaoui and Bernard Espinasse	A Supervised Method for Extractive Single Document Summarization based on Sentence Embeddings and Neural Networks	16H15
16H15	Khadija Alaoui and Mohamed Bahaj	Semantic Oriented Data Modeling Based on RDF, RDFS and OWL	16H30
16H30	Khaoula Addakiri, Hajar Khallouki and Mohamed Bahaj	Big Data for Context-Aware Computing	16H45
16H45	Youness Khourdifi and Bahaj Mohamed	Analyzing social media opinions using hybrid Machine Learning model based on Artificial Neural Network optimized by Particle Swarm Optimization	17H00
17H00	Khaoula Addakiri, Hajar Khallouki and Bahaj Mohamed	Intelligent Urban Transport Decision Analysis System Based on Mining in Big data Analytics and Data Warehouse	17H15
17H15	ABDELAH El Mamoun , YASSIN Laaziz	Agriculture analytics in the era of big data	17H30



SESSION 28:

TOPIC M ADVANCED INTELLIGENT SYSTEMS FOR GIS AND SPATIAL DATA SESSION CHAIRS: HADJ BARAKA IBRAHIM, HOUDA EL AYADI WEDNESDAY, JULY 10 - 2019 (16H00 TO 19H30)			
16H00	Mohamed Byari, Abdes Samed Bernoussi and Mina Amharref	The development of a three-dimensional cellular automata model for wind flow	16H15
16H15	Heba Amin, Hadeer Saleh, Mohamed Omar, Alaa Mostafa and Younis Ebrahim	Spatial Distribution and Assessment of Heavy Metals Pollution in Sediments of Tobrok Bay (Libya)	16H30
16H30	Hafssa Aggour and Aziz Mabrouk	Distributed Spatio-Temporal Vorono Diagrams: State of the Art and Application to the Measurement of Spatial Accessibility in Urban Spaces	16H45
16H45	Elhassane Nassif, Hicham Hajji, Reda Yaagoubi and Hassan Badir	Assessing NoSql Approaches for Spatial Big Data Management	17H00
17H00	Miriam Wahbi, Hakim Boulaassal, Mustapha Maatouk, Omar El Kharki and Otmane Yazidi Alaoui	Monitoring the urban sprawl of the city of Tangier from Spot and Sentinel2 images	17H15

POSTER SESSIONS

SESSION CHAIRS: ABDALI ABDELMOUNAIM , SAIIDA LAZAAR ,EL FELSOUI ZOUBIR WEDNESDAY, JULY 10- 2019 (17H00 TO 19H30)			
	Mouaz Bezoui, Abderrahim Beni-Hssane and Abdelmajid El Moutaouakkil	Real-Time Speech Sentiment Analysis for Moroccan Dialect Dialogue	
	Ilham Dhaoui, Mostafa Ezziyyani and Mohamed Khaldi	New approach for managing profiles in the MOOC system	
	Khadija Naji and Ibriz Abdelali	Adaptive MOOC supports the elicitation of learners' preferences	
	Tarik Elamrani, Mustapha Ouardouz, Mina Amharref and Abdessamed Bernoussi	Toward a smart vulnerability assessment tool: case of project management in automotive industries	
	Najoua Fellah, Sara Arezki and Taoufiq Gadi	Smart learning concepts, strategies and approaches	
	Marieme Bougar and El Houssaine Ziyati	Addressing Stemming Algorithm for Arabic text using Spark over Hadoop	
	Mohammed Ezziyyani, Ahlem Hamdache and Imad Krikech	Study of marine macroalgae: production of extracts and perspectives of applications in the Biological control of phytopathogens	
	Hamza Belbsir, Khalil El Hami and Hamid Mazouz	Study of the rheological behavior of phosphate slurry and its derivatives products	
	Youness Khourdifi and Bahaj Mohamed	The Way Forward to Breast Cancer detection using Deep Learning approach	

		Ayoub El Hamiani, Fatima Zohra Ramman, Ahlem Hamdache, Mostafa Ezziyyani and Mohammed Ezziyyani	Epidemiological study and data processing analysis of diabetes in the El-ksar El kebir population with R		
		Inass Zayani, Karima Bouhafa, Mohammed Ammari and Laïla Ben Allal	Agroforestry: Smart Practice for Sustainable Agricultural Development		
		Ahlem Hamdache, Mohammed Ezziyyani and Ahmed Lamarti	Evaluation of Strawberry seed Treatments with Biological control Agents Bacillus amyloliquefaciens		
		Khalil El-Hami, Zakaria Kbir and Bouazza Tbib	Geotechnical investigation of clay under heat treatment		
		Moussa El Jarroudi, Rachid Lahlali, Haifa El Jarroudi, Bernard Tychon, Alexandre Belleflamme, Mustapha El Jarroudi and Louis Kouadio	Employing weather-based disease model and machine learning techniques for optimal control of wheat stripe rust in Morocco		
		Imane El Alaoui, Maria Benbouzid, Souad El Hajjaji, Fatma Benmessaoud and Touria Ould Bellahcen	Potential impact of the latest developments in the Bouregreg estuary		
		Hajar Nourredine, Nihad Chakri, Btissam Elamrani, Faouzi Berrada and Toufik Remmal	Study of the clogging of a pozzolanic packing plant filter for wastewater treatment		
		Abdesselam Ammari, Mohammed Ammari and Laila Ben Allal	Rehabilitation of drinking water system: optimization by phasing of installation		
		Ayoub El Mejdoub, Abdeljabar Cherkaoui and Kamal Chebbaki	Fish Farming in Enclosure System for the Production of Juveniles Atlantic Bluefin Tuna (Thunnus thynnus)		
		Nabil Sadki and Abdeslam Taleb	CHARACTERIZATION OF ORGANIC WASTE: A PRIMORDIAL STEP FOR EFFICIENT VALORIZATION BY ANAEROBIC DIGESTION		
		Maria Benbouzid, Imane Elalaoui, Souad Elhajjaji, Mahmoud Hafsi and Chistel Causserand	Analyze and optimization of reverse osmosis desalination system in khenifra		
		Ouafae Ben Hardouz and Brahim Damnati	Quantification of soil erosion rates using the model SWAT in El Hachef watershed (North-Western Morocco)		
		Youssra El Hamdouni, Lina Hermouche, Khaoula Abbi, Souad El Hajjaji and Najoua Labjar	Carbon paste electrodes modified with Bismuth film and organic activated carbon for the detection of lead in wastewater		



	Imad El Fellah, Mohammed Ammari and Laila Ben Allal	A Review of Research on the Treatment of Metallic Pollution by using a Green Construction Material	
	Youssef Gharmane, Said Hinaje and Samir Amrani	Synsedimentary tectonics and Paleostress of Ordovician Middle-Upper and Carboniferous (Viseo-Namurian) age in the Hercynian Massif of Tazekka (Eastern Morocco)	
	Imad Krikech, Gaël Le Pennec and Mohammed Ezziyyani	Marine sponges as a potential Bioindicator species of Environmental Stress in the western Mediterranean coast, Morocco	
	Khadija Ouaisa	Effects of Two different Formulations on Growth, Digestibility, Excretion of Phosphorus and Nitrogen in Rainbow Trout (<i>Oncorhynchus Mykiss</i> Walbaum, 1792)	
	Chaimae Bouizargan and Abderrahim Tahiri	Home design for flood prevention	
	Mohammed Amine Ben Taher, Tarik Kousksou, Mohammed Ahachad and Mustapha Mahdaoui	Numerical study of a non-isothermal refrigerated truck	
	Achraf Bakkali Yedri, Mohammed Ammari and Laila Ben Allal	Assessment of mechanical and thermal performances of a ceramic product incorporating an industrial waste.	
	Soukaina Dyoury and Hassan Azdimousa	Sales manager-coach: literature review	
	Rachid Boukbech and Ahmed Bousselhami	Impact de la décentralisation fiscale sur le niveau de développement au niveau local au Maroc : Une analyse empirique à l'aide l'approche ARDL en series chronologiques	
	Monsif Ben Messaoud Layti, Abdellatif Medouri, Mohammed Rajaa and Ouail El Imrani	Logistics information systems and traceability of pharmaceutical products in public hospitals in Morocco: what solutions to improve the supply chain?	



		Rachdi Youssef, El Felsoufi Zoubir, Nassiri Khalid and Sefiani Naoufal	The ERP, for effective governance of the tourism sector		
		Safaa Mahrach and Abdelkrim Haqiq	DDoS defense in SDN-based Cloud		
		Baba Mbaye	Recommendation system combined with unsupervised machine learning for decision making in polls		
		Zainab Fajri, Khadija Aboumaria, Saiida Lazaar and Mohamed Najib Zaghloul	Simulation of the Tsunami risk in the Moroccan coastline: Preliminary results		
		Wafa Mellouk and Wahida Handouzi	A proposal for a multimodal emotion recognition system using deep learning		
		Israe Ezznati, Loubna Cherrat and Mostafa Ezziyyani	Intelligent Observatory System on Information Technologies, Social Networks and Infrared to Analyze and Predict Social Mutations		
		Mouad El Khoudri, Mohammed Ammari and Laïla Ben Allal	Seismic vulnerability assessment of reinforced concrete buildings and establishment of fragility curves as a structural damage prevention criterion for the Moroccan real estate		
		Youssef En-Nattouh, Jamal Riffi, Ali Yahyaouy and Hamid Tairi	The optimization of resources within the implementation of a big data solution.		

	Hafssa Benaboud and Sara Bakkali	QoS-CM: An Enhanced Version of QoS-CMS and Its Intergration in BGP For an End to End Quality of Service	
	Salima Bourougaa-Tria	A context Ontology for Semantic IOT Representation.	
	Ismail Chahid and Abderrahim Marzouk	Cloudification of IoT: Security Issues and Challenges	
	Toufik Ghrib and Hocine Merabti	An Improved Swarm Intelligence Algorithm based big data analytics for IoT devices	
	Ghrib Toufik, Mohamed Benmohammed and Med Radouane Kafi	Protection of the Internet of Things devices based on TPM technology	
	Mustapha Elouaddany and Mohammed Karim Ben Hachmi	REMOTE SENSING GIS FOR INTEGRATED WATER RESOURCE MANAGEMENT IN DOUKKALA ABDA	
	Amal Sbai and Mohammed Karim Benhachmi	Decision support system for water resources management in the West Mediterranean area - Morocco	
	Echlouchi Khalid, Mustapha Ouardouz, Bernoussi Abdes-Samed and Boulaassal Hakim	Smart Geoportal for efficient governance: a case study municipality of M'diq	
	Sara Baghdadi, Noureddine Aboutabit and Hajar Baghdadi	Ambulance Detection System	
	Izarab Elouazzani-Chahdi, Salma Sraidi and Mohamed Maaroufi	On the integration of dynamic inductive charging in the electrical network	
	Khalil El-Hami and Rachid Abdia	Temperature-electrical resistivity dependence of CdAs2 in view of variable range Hopping mofels	
	Khaoula Abbi, Lina Hermouche, El Moustapha Lotfi, Mohammed El Mahi, Souad El Hajjaji, Abdelmajid Skalli, Najoua Labjar and Youssra Elhamdouni	Electrochemical Determination of cadmium (II) using carbon paste electrode modified by an organic coal	



Ilias Glilah, Ibrahim Hadj Baraka and Benaissa Amami	INTRODUCE ARTIFICIAL INTELLIGENCE IN CONTROLLING A SOLAR TRACKER
Cherrat Lamia, Borges Frédéric., Revol-Junelles Anne Marie.	Valorisation de souches de Carnobacterium en Biopreservation : Application dans l'inhibition anti-Listeria dans des produits fromagères.
Othmane Salama, Mohamed Benchagra and Abdelmoumen Tabyaoui	Power Quality Improvement of Grid Connected PV Systems with Non Linear Controller
Hadj Baraka Ibrahim, Ilias Glilah, Oussama Aiadi and Benaissa Amami	DSP based Emulator of permanent magnet synchronous motor used in electric mobility
Ayoub Oubourhim and Khalil El-Hami	Efficiency energy standards and labelling for residential appliances in Morocco
Zakaria El Malki, Anass El Karkri, Mohamed Bouachrine and Francoise-Serein Spirau	Theoretical study of New Compounds (D1-BT-EDOT-BT-D2-A) based on (3, 4-Ethylenedioxythiophene) (EDOT) and Benzothiadiazole (BT) for dye sensitized solar cells
Elamim Abderrazzak, Hartiti Bouchaib, Lfakir Abderazzak, Haibaoui Amine and Thevenin Philippe	GENERATION OF Photovoltaic output power forecast using artificial neural networks.
Aziza Benaboud and Hafssa Benaboud	A Special Application of Power Electronics to the Field of Photovoltaics



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