

تحت الرعاية السامية لصاحب الجلالة الملك محمد السادس

UNDER THE HIGH PATRONAGE OF HIS MAJESTY THE KING OF MOROCCO, MOHAMMED VI



# IEEE CiSt'16

## FULL PROGRAM

### 4<sup>TH</sup> INTERNATIONAL COLLOQUIUM ON INFORMATION SCIENCE AND TECHNOLOGY

TANGIER-ASSILAH, MOROCCO | 24-26 OCTOBER 2016



Saturday October 22<sup>nd</sup>

15:00

19:00

Welcoming and Registration of participants

Sunday October 23<sup>rd</sup>

08:00

18:00

Visit of the historical Hercules site in Tangier

Trip to the City of Assilah :

- Visit to the old city
- Lunch
- 10<sup>th</sup> IEEE Morocco Section Founding Anniversary Celebration

19:30

22:30

Welcoming and Registration of participants

08:00	08:30	Welcoming and Registration of participants
08:30	09:30	Keynote Talk: Complex System of Systems and Decision-making in presence of uncertainties Prof. Abdelkhalak El Hami, INSA Rouen, Normandy University, France Chair: Prof. Mohammad Essaaidi Room: Main CiSt
9:30	12:30	Oral Session CiSt1 : Enterprise Architecture Chair: Prof. Abdul Rahman Bin Ahmad Dahlan Room : CiSt - A
		Oral Session CiSt2: Datawarehouse Modeling and Applications Chair: Prof. Nasser Assem Room: CiSt - B
		Networking & Coffee Break
		Oral Session IMP1: Image Processing Chair: Prof. Mohamed El Far Room: IMP
		Oral Session ESYS1 : E-Systems and Algorithms Chair: Prof. Abdelkhalak El Hami/Prof. Bouchaib Radi Room: ESYS
13:00	14:00	Oral Session OMCS1 : Optimization Models and Algorithms Chairs: Prof. Norelislam El Hami Room : OMCS
		Networking & Lunch Break
14:00	15:00	Keynote Talk : The Role of Cloud Computing in Science and Enterprise-Issues, Problems and Solutions Prof. Eleni Karatza, Department of Informatics, Aristotle University of Thessaloniki, Greece Chair: Prof. Nabil Hmina Room : Main CiSt
14:00	17:00	Oral Session ESYS2 : E-Systems and Interoperability Chair: Prof. Abdellah El Moudni Room: ESYS
		Oral Session OMCS2 : Multidisciplinary Design Optimization Chair: Prof. Nabil Hmina /Prof. Chaoui Habiba Room: OMCS
15:00	17:00	Oral Session CiSt3 : XML Technology, Algorithms and Applications Chair: Prof. Ahmed Zinedine Room : CiSt – A
		Oral Session CiSt4 : Algorithms and Data Analytics Chair: Prof. Mohammed Chahhou Room: CiSt – B
		Oral Session IMP2 : Algorithms for Image Segmentation Chair: Prof. Aرسالane Zarghili Room : IMP
18:00	20:00	Official Opening Ceremony & Award Ceremony & Cocktail Reception

Tuesday October 25<sup>TH</sup>

08:30	09:30	<p>Keynote Talk : Designing Business Models Options for "University of the Future"</p> <p>Prof. Jamaludin Bin Ibrahim, Kulliyyah of Information &amp; Communication Technology, IIUM, Malaysia</p> <p>Chair: Prof. Ahmed Aboutajeddine</p> <p>Room: Main CiSt</p>	<p>Keynote Talk : Community of Practice, Social Network and Mobility for social learning. What the university of tomorrow might become?</p> <p>Prof. Ahlame Begdouri, FST Fez, Morocco</p> <p>Chair: Prof. Abdellatif Medouri</p> <p>Room: ELED</p>	<p>Keynote Talk : Investment Attraction Strategy: How to attract investors for your innovation?</p> <p>Mr. Mohamed Kayyali, CEO 4D Business Consulting</p> <p>Chair: Prof. Badreddine El Mohajir</p> <p>Room: SCIS</p>
9:30	12:30	<p>Oral Session CiSt8 : Algorithms for Systems Modeling</p> <p>Chair: Prof. Mohammed Al Achhab</p> <p>Room: CiSt - A</p>		
		<p>Oral Session CiSt9 : Databases and Information Systems</p> <p>Chair: Prof. Zuraini Ismail</p> <p>Room: CiSt - B</p>		
		<p>Networking &amp; Coffee Break</p>		
		<p>Oral Session ELED3 : Assessment &amp; Study of E-learning Platforms</p> <p>Chair: Prof. Mohamed Ghailani</p> <p>Room: ELED</p>		
		<p>Oral Session SCIS3 : Ambient Intelligence</p> <p>Chair: Prof. Mohamed Ben Ahmed</p> <p>Room: SCIS – A</p>		
13:00	15:00	<p>Oral Session SCIS4 : Sensing and Smart Environments</p> <p>Chair: Prof. Arioua Mounir</p> <p>Room: SCIS – B</p>		
		<p>Networking Lunch Break &amp; Closing Ceremony</p>		
15:00	18:00	<p>Visit to the Tanger - Med international port</p>		

Monday October 24<sup>TH</sup>

**SESSION CiSt 1: Enterprise Architecture**  
**CHAIR: Prof. Abdul Rahman Bin Ahmad Dahlan**

**09:30 – 12:30**  
**ROOM: CiSt - A**

**32 - Enterprise Architecture Implementation Model: Measurement From Experts And Practitioner Perspectives**

Nur Azaliah Abu Bakar, Harihodin Selamat  
 Universiti Teknologi, Malaysia

**27 - Enterprise Knowledge Finance Platform Based on Ontology: A Moroccan SME case study**

Hicham Rachidi and Mohammed El Mohajir  
 FSDM, USMBA, Fez, Morocco

**137 - Comparative Analysis of Drug Supply and Inventory Management Methods**

Sara Jebbor, Abdellatif El Afia, Raddouane Chiheb and Fatima Ouzayd  
 ENSIAS Rabat, Morocco

**34 - Healthcare logistics and Lean maintenance: Reduced costs of maintenance of medical devices**

Driss Serrou, Khaoula Khlie, Abdellah Abouabdellah  
 ENSA Kenitra, Morocco

**117 - Factors Affecting Adoption of FLOSS ERP System by SMEs' Directors and Managers in Developing Countries Using UTAUT2, SEM and R**

Aminearrahmane Achargui, Abdellah Zaouia and Fatima Jalil  
 INPT, Rabat, Morocco

**85 - Overview on technology of vertical handover and MIH architecture [Poster presentation]**

Imane Chattate, Jamila Bakkoury, Azeddine Khiat and Mohamed El Khaili  
 ENSET Mohammedia, Morocco

**90 - The implementation Trends of Intelligence E-CRM in Business process [Poster presentation]**

Bashar Ahmed, Fadi Amrouch and Mohammed Ben Maati  
 University Abdelmalek Essaadi, Tetouan, Morocco

**95 - Toward a new Multi-agents architecture for the adoption of ITIL framework by small and medium-sized Enterprises [Poster presentation]**

Abir El Yamami, Khalifa Mansouri, Mohammed Qbadou and Elhossein Illoussamen  
 ENSET, University Hassan II in Casablanca, Morocco

Monday October 24<sup>TH</sup>

**SESSION CiSt2 - Datawarehouse Modeling and Applications**  
**CHAIR:** Prof. Nasser Assem

**09:30 – 12:30**  
**ROOM:** CiSt - B

**43 - A Measurement Model for Factors Influencing Data Quality in Data Warehouse**

Nouha Zellal and Abdellah Zaouia  
 INPT, Rabat, Morocco

**138 - A Datawarehouse for Local Governance Monitoring and Assessment - Case Study of Local Registry Office in Morocco**

Houda Chakiri and Mohammed El Mohajir  
 Sidi Mohammed Ben Abdellah University, Fez, Morocco

**134 - Dynamic management of data warehouse security levels based on user profiles**

Amina El Ouazzani, Sara Rhazlane, Nouria Harbi and Hassan Badir  
 ENSA Tangier, Morocco

**15 - Automatic generation of TestNG tests cases from UML sequence diagrams in Scrum process**

Meryem Elallaoui, Khalid Nafil and Raja Touahni  
 Ibn Tofail University, Kenitra, Morocco

**40 - Designing A Health Data Management System Based Hadoop-Agent [Poster presentation]**

Fadoua Khennou, Youness Idrissi Khamlichi and Nour El Houda Chaoui  
 Sidi Mohamed Ben Abdellah University, Fez, Morocco

**71 - Data Mining For Healthcare [Poster presentation]**

Zoubida Alaoui Mdaghri, Mourad El Yadari, Abdelillah Benyoussef and Abdellah El Kenz  
 FS Rabat, Morocco

**124 - A Model-Driven Approach for Generating RIA Interfaces using IFML and Ontologies [Poster presentation]**

Naziha Laaz and Samir Mbarki  
 Ibn Tofail University, Kenitra, Morocco



Monday October 24<sup>TH</sup>

SESSION IMP 1: Image Processing

CHAIR: Prof. Mohamed El Far

09:30 – 12:30

ROOM: IMP

**14 - High Security Data Hiding Using Image Cropping and LSB Least Significant Bit Steganography**

Khalid Alafandy, El-Sayed El-Rabaie, Osama Faragallah, Ahmed Elmhawwy and Ghada El-Banby  
Faculty of Electronic Engineering, Menoufia University, Egypt

**16 - An Improved Breast Tissue Density Classification Framework Using Bag of Features Model**

Hiba Chougrad, Hamid Zouaki and Omar Alheyane  
Chouaib Doukkali University, El Jadida, Morocco

**26 - New evaluation method using sampling theory to evaluate 3D segmentation algorithms**

Khadija Arhid, Mohcine Bouksim, Fatima Rafii Zakani, Mohamed Aboulfatah and Taoufiq Gadi  
LIIMSC, LASTI, FST University Hassan 1<sup>st</sup>, Settat, Morocco

**24 - New Measure for Objective Evaluation of Mesh Segmentation Algorithms**

Fatima Rafii Zakani, Khadija Arhid, Mohcine Bouksim, Mohamed Aboulfatah and Taoufiq Gadi  
LIIMSC, LASTI, FST University Hassan 1<sup>st</sup>, Settat, Morocco

**37 - Efficient image denoising method based on mathematical morphology reconstruction and the Non-Local Means filter for the MRI of the head**

Abdelhamid El Hassani and Aicha Majda  
SIA laboratory, Faculty of Sciences and Technologies, Fez, Morocco

**34 - Face sketch recognition system a content based image retrieval approach [Poster presentation]**

Salah Eddine Lahlali, Abdelalim Sadiq and Samir Mbarki  
Ibn Tofail University, Kenitra, Morocco

**40 - Fingerprints indexing algorithms based on multiple Characteristics [Poster presentation]**

Meryam Elmouhtadi, Sanaa El Fkihi and Driss Aboutajdine  
FS, ENSIAS Rabat, Morocco



Monday October 24<sup>TH</sup>

**SESSION ESYS1: E-Systems and Algorithms**

**09:30 – 12:30**

**CHAIR:** Prof. Abdelkhalak El Hami/ Prof. Bouchaib Radi

**ROOM:** ESYS

**25 - A New Approach of PHM as a Service in Cloud Computing**

Labib Sadek Terrissa, Safa Meraghni, Zahra Bouzidi and Nouredine Zerhouni  
LINFI Laboratory, University of Biskra, Algeria

**12 - A Security Scheme for Mobile Cloud using multi-agent system**

Abdellaoui Abderrahim and Habiba Chaoui  
ENSA Kenitra, Morocco

**26 - Skeleton of a Generic Approach for the generation of Health Indicators of Physical Systems**

Mohammed Chakib Sekkal, N. Berrached, Kamal Medjaher and Christophe Varnier  
LARES1 – laboratory, Electronics department USTO-MB University, Algeria

**8 - A Cloud Services Composition Approach Based on Customer's Models and Cloud Services Vendor's Rules and Specifications**

Ouadī Belmokhtar and Dalila Chiadmi  
Mohammadia School of Engineering (EMI), Rabat, Morocco

**19 - A security approach for social networks based on honeypots**

Younes El Bouzekri El Idrissi, Fatna El Mendili and Nisrine Maqrane  
ENSA Kenitra, Morocco

**1 – OMCS – Microfinance Risk Analysis Using the Business Intelligence**

Hajji Tarik, El Miloud Jaara, Sidi Yasser El Jasouli and Jamal Mbarki  
Private University of Fez, Morocco

Monday October 24<sup>TH</sup>

**SESSION OMCS1: Optimization Models and Algorithms**

**CHAIRS:** Prof. Norelislam El Hami

**09:30 – 12:30**

**ROOM:** OMCS

**39 - A MAS model for O&M Cost simulation and optimization : case of a wind power operator**

Mhamed Itmi and Miguel Kpakpo

INSA Rouen, France

**31- Backtracking Search Optimization Algorithm for fluid-structure interaction problems**

Rabii El Maani, Ahmed Tchvaghha Zeine, Bouchaïb Radi and Abdelkhalak El Hami

INSA Rouen, France

**28 - Sequencing optimization of products with High diversity**

Asmae Akhrif, Abdelouahid Lyhyaoui and Abdelfettah Sedqui, ENSA, Tanger, Morocco

**14 - Evolutionary Algorithm for Dynamic Spectrum Allocation in Cognitive Radio System**

Elhachmi Jamal

Mohammadia School of Engineers (EMI) Rabat, Morocco

**17 - An Improved Swarm Optimization Algorithm for Vehicle Path Planning Problem**

Elgarej Mouhcine, Khalifa Mansouri and Youssefi Mohamed

ENSET University Hassan II Mohammedia, Morocco

**8- Study of optimizing a tube hydroforming**

Nassraoui Mohammed and Radi Bouchaib

F.S.T Settati, Morocco

Monday October 24<sup>TH</sup>

**SESSION CiSt3: XML Technology, Algorithms and Applications**

**15:00 – 17:00**

**CHAIR:** Prof Ahmed Zinedine

**ROOM:** CiSt - A

**8 - Using XML Technology in the Development Process of Web Applications**

Marouane Sayih and Anne Brüggemann-Klein

Technical University of Munich (TUM), Germany

**12 - Towards XML Schema Extraction from Deep Web**

Yasser Saissi, Zellou Ahmed and Idri Ali

Mohammed V University Rabat, Morocco

**128 - Robustness study in closed social networks using spanning tree approach**

Hajar Sahbani and Mohamed El Marraki

Faculty of Sciences Rabat, Morocco

**26 - A New Parallel Approach Of Optimization Based on PSO Algorithm**

Maria Zemzami, Mhamed Itmi, Nabil Hmina and Norelislam Elhami

ENSA Kenitra, Morocco

**73 - Influentials identification for community detection in complex networks**

Sara Ahajjam, Hassan Badir and Mohamed Elhaddad

ENSA Tangier, Morocco

**135 - A Model Transformation in MDA from CIM to PIM Represented by web models through SoaML and IFML**

Yassine Rhazali, Youssef Hadi and Abdelaziz Mouloudi

Ibn Tofail University, Kenitra, Morocco

Monday October 24<sup>TH</sup>

**SESSION CIST4: Algorithms and Data Analytics**

**CHAIR:** Prof. Chahhou Mohammed

**15:00 – 17:00**

**ROOM:** CiSt - B

**49 - Coordination by Sharing Demand Forecasts in a Supply Chain Using Game Theoretic Approach**

Ilham Slimani, Ilhame El Farissi and Said Achchab  
ENSIAS, Mohammed 5th University, Rabat, Morocco

**74 - A-probabilistic method for business process verification reachability liveness and deadlock detection**

Mohamed Naoum, Elhichami Outman, Al Achhab Mohammed, El Mohajir Badr Eddine  
FS Tetouan, Morocco

**29 - New Model Of Intrusion Detection Based On Multi Agent Systems And CBR Paradigm**

Mohssine El Ajjouri, Siham Benhadou and Hicham Medromi  
ENSEM Casablanca, Morocco

**94 - Handling Alerts for Intrusion Detection System Using Stateful Pattern Matching**

El Mostapha Chakir, Youness Idrissi Khamlichi and Mohamed Moughit  
Faculty of Science and Technology University Hassan First Settati, Morocco

**44 - The analysis performance of an Intrusion Detection Systems based on Neural Network**

Ilhame El Farissi, Mohammed Saber, Sara Chadli, Mohamed Emharraf and Mohammed Ghaouth Belkasmi  
LSE2I, ENSA, First Mohammed University, Oujda, Morocco

**21 - Big Incremental Dynamic Case-Based Reasoning-Multi-Agents System (BIDCBR-MAS) based on Cloud Computing**

Abdelhamid Zouhair and El Mokhtar En-Naimi  
FST Tanger, Morocco

Monday October 24<sup>TH</sup>

**SESSION IMP2: Algorithms for Image Segmentation**

**CHAIR:** Prof. Aarsalane Zarghili

**15:00 – 17:00**

**ROOM:** IMP

**25 - New Evaluation Method for 3D Mesh Segmentation**

Mohcine Bouksim, Fatima Rafii Zakani, Khadija Arhid, Mohamed Aboulfatah and Taoufiq Gadi  
LIIMSC, LASTI, FST University Hassan 1st Settat, Morocco

**17 - A Hybrid Scheme for Robust Color Image Watermarking Using DSWT in DCT Domain**

Khalid Alafandy, El-Sayed El-Rabaie, Fathi Abd El-Samie, Osama Faragallah and Ahmed Elmhawy  
Faculty of Electronic Engineering, Menoufia University, Egypt

**12 - Automatic estimation of clusters number for K-means**

Ennoui Assia, Sabri My Abdelouahed and Aarab Abdellah  
USMBA, FSDM, LIAN, LESSI, Fez, Morocco

**28 - Polyps's Region of Interest Detection in Colonoscopy Images by Using Clustering Segmentation and Region Growing**

Tarik Ghannam, Khalid Abbad, Jamal Kharroubi and Dafr Allah Benajah  
Faculty of Science and Technologies Fez, Morocco

**35 - GPU based Implementation of Spatial Fuzzy c-means Algorithm for Image Segmentation**

Noureddine Ait Ali, Bouchaib Cherradi, Ahmed El Abbassi, Omar Bouattane and Mohamed Youssfi  
SSDIA, ENSET, Hassan II University, Mohammedia, Morocco

Monday October 24<sup>TH</sup>

**SESSION ESYS2: E-Systems and Interoperability**

**CHAIR:** Prof. Abdellah El Moudni

**14:00 – 17:00**

**ROOM:** ESYS

**11 - Thermal characterization of a QFN electronic Package accompanied by a reliability study based on a response surface approach**

Omar Bendaou, Othmane Bendaou and Abdelkhalak El Hami  
Mohammadia School of Engineering (EMI), Rabat, Morocco

**13 - Toward the Development of a hybrid model of ontological database for the interoperability of several information systems**

Meryem Fakhouri Amr, Khalifa Mansouri and Abdelwahab Naji  
ENSET Mohammedia, Morocco

**9 - Proposition of Improvement Areas in most Heavy and Light Stemmer Algorithms Novel Stemmer : EST.Stemmer**

Hanane El Manssouri, Soufiane Farrah, El Houssaine Ziyati and Mohammed Ouzzif  
ENSEM, Casablanca, Morocco

**5 - Applying Homomorphic Encryption For Securing Cloud Database**

Mbarek Marwan, Ali Kartit and Hassan Ouahmane  
ENSAJ, El Jadida, Morocco

**7 - A novel approach IMA of interoperability measurement**

Aicha Koulou, Abir Elmir, Norelislam El Hami, Nabil Hmina and Bouchaib Bounabat  
ENSA de Kenitra, Morocco

**15 - Uncertainty analysis of one stage gear system using interval analysis method**

Ahmed Guerine and Abdelkhalak El Hami  
INSA Rouen, France

Monday October 24<sup>TH</sup>

**SESSION OMCS2: Multidisciplinary Design Optimization**

**14:00 – 17:00**

**CHAIR:** Prof. Nabil Hmina / Prof. Chaoui Habiba

**ROOM:** OMCS

**10 - Design and Deployment of the Model 'TSI' for Modeling the Processes of the IRFT Chain between Morocco and Spain**

Kawtar Akoudad and Fouad Jawab

University sidi mohamed ben abdellah College of Technology Fez, Morocco

**34 - Optimising liquidity with Modified Particle Swarm Optimization Application: case of Casablanca stock exchange**

Norelislam El Hami and Mustapha Bouchekourte

University Hassan II, Casablanca, Morocco

**20 - Modal and Probabilistic Analysis of Wind Turbine Blade Under Air-Flow**

Ismail Sossey-Alaoui and Bouchaïb Radi

FST Settati, Morocco

**23 - Comparative Study between Identity Management Systems: Laws of Identity for Models' Evaluation**

Hasnae L'Amrani, Badr Eddine Berroukech, Younès El Bouzekri El Idrissi and Rachida Ajhoun

ENSIAS Rabat, Morocco

**35 - State of Art of Optimisation and Meta heuristic A Comparative Study of the Harmony Search Algorithm**

Aarich Mounia, Hachimi Hanaa and Hmina Nabil

ENSA, University Ibn Tofail, Kenitra, Morocco

**16 - From modeling to logistic KPI: use of SCOR Model and ARIS to build a dashboard to manage medicines supply chain in public hospital**

Ibn El Farouk Imane, Jawab Fouad and Talbi Abdennebi

ENCG El Jadida, Morocco

**2 - A new approximate proximal-extragradient type method for system of monotone variational inequalities**

Ou-yassine Ali, Bnouhachem Abdellah and Benssi Fatimazahra

Laboratoire d'Ingénierie des Systèmes et Technologies de l'Information, ENSA Agadir, Morocco



Tuesday October 25<sup>TH</sup>

**SESSION CIST5: Business Process Management**

**CHAIR:** Dr. Marouane Sayih

**09:30 – 12:30**

**ROOM:** CiSt - A

**88 - Towards Designing EA Readiness Instrument: A Systematic Review**

Surya Sumarni Hussein and Zuraini Ismail

UTM Advanced Informatics School, Malaysia

**92 - Towards New Hybrid Approach of the Reverse Engineering of UML Sequence Diagram**

Chafik Baidada and Abdeslam Jakimi

FST Errachidia, Morocco

**91 - Detecting and Fixing UML Model Inconsistencies using Constraints**

Driss Allaki, Mohamed Dahchour and Abdeslam En-Nouaary

INPT, Rabat, Morocco

**36 - Converting Strangers to Clients Using Web Mining Techniques**

Meryem Boufim and Hafid Barka

INPT, Rabat, Morocco

**111 - Meta-analysis of Lean case studies for the business process improvement**

Younes Tiamaz and Nissrine Souissi

Université Mohammed V, Rabat, Morocco

**45 - Improvement of Information System Security Risk Management**

Wissam Abbass, Amine Baina and Mostafa Bellafkih

INPT, Rabat, Morocco

Tuesday October 25<sup>TH</sup>

SESSION ANLP1: Information retrieval for Arabic

CHAIR: PhD. Ouafae Nahli

09:30 – 12:30

ROOM: ANLP

**24 - Classical Dictionary Al-Qamus in lemon**

Mustapha Khalfi, Ouafae Nahli and Aarsalane Zarghili

FST Fez, Morocco

**13 - Lexical Differences and Similarities between Moroccan Dialect and Arabic**

Tachicart Ridouane, Bouzoubaa Karim and Jaafar Hamid

Mohammadia school of Engineers Rabat, Morocco

**7 - An Enhanced Feature Extraction Technique for Improving Sentiment Analysis in Arabic Language** [Poster presentation]

Fahd Al Qasemi, Amira Abdelwahab and Hatem Abdelkader

Menoufia University, Egypt

**12 - Impact of stemming on Arabic text summarization** [Poster presentation]

Nabil Alami, Meknassi Mohammed, Said Ouatik El Alaoui and Nouredine En-Nahnahi

USMBA-FSDM Fez, Morocco

**16 - Integration of data sources in an automatic corrector of Arabic texts** [Poster presentation]

Jaouad Outifa, Si Lhoussain Aouragh and Said Alaoui Ouatik

USMBA-FSDM Fez, Morocco

**18 - Development of a Bilingual Corpus of Arabic and Arabic Sign Language based on a Signed Content** [Poster presentation]

Zakaria El Maazouzi, El Mohajir Badr Eddine, Mohammed Al Achhab and Adnan Sour

FS / ENSA University Abdelmalek Essaadi Tetouan, Morocco

**21 - Lahajat: A Rule-Based Converter of Standard Arabic Lexical Databases into Spoken Arabic Forms** [Poster presentation]

Giuliano Lancioni, Elisa Gugliotta and Valeria Pettinari

Sapienza University of Rome, Roma Tre University, Italy

Tuesday October 25<sup>TH</sup>

**SESSION ELED1: MAS & Adaptive Learning Systems**

**CHAIR:** Prof. Jaber El Bouhdidi

**09:30 – 12:30**

**ROOM: ELED**

**22 - ALS\_CORR[LP] : An Adaptive Learning System Based on the Learning Styles of Felder-Silverman and a Bayesian Network**  
Yassine Zaoui Seghroucheni, Nihad El Ghouch, El Mohajir Badr Eddine, En-Naimi El Mokhtar and Al Achhab Mohammed  
FS Tetouan, FST Tangier, Morocco

**14 - A MAS Model for Virtual Labs based on Cloud Computing**

Naoual Boukil

Faculty of Science and Technology, Fez, Morocco

**31 - An Adaptive Learning System based on a Job Model, the Differentiated Pedagogy and Felder and Silverman's Learning Styles Model**

Aymane Qodad, Yassine Seghroucheni, Mohammed Al Achhab, Mourad El Yadari, Abdelillah Benyoussef and Abdellah El Kenz  
FS Rabat, Morocco

**11 - Towards a Collaborative E-learning Platform Based on a Multi-Agents System**

Abderrahim El Mhouti, Azeddine Nasseh, Mohamed Erradi and Jose Marfa Vasqu  z

(LIROSA) Universit   Abdelmalek Essa  di, Faculty of Science, Tetouan, Morocco

**25 - Evaluating usability of brain signals for content adaptation in intelligent tutoring systems**

Amin Zammouri, Sanae Zrigui and Abdelaziz Ait Moussa

Faculty of Sciences, Mohammed First University, Oujda, Morocco

**21 - Modeling of a Learning Scenario adopting Case Study Strategy with Recursive Entity Modeling Method**

Amal Rifai, Abdelalim Sadiq and M'Hamed Bakrim

Regional Center for the Professions of Education and Training (RCPET), Cadi Ayyad University, Marrakech, Morocco

Tuesday October 25<sup>TH</sup>

**SESSION IMP3: Image Processing**

**CHAIR:** Prof. Mohamed Chahhou

**09:30 – 12:30**

**ROOM:** IMP

**15 - Robust approach for textured image clustering**

Ennoui Assia, Sabri My Abdelouahed, Aarab Abdellah and Senhaji Saloua  
USMBA, FSDM, LIAN, LESSI, Fez, Morocco

**30 - Rotated Asymetrique Haar Features for face detection**

Mohamed Oualla and Sadiq Abdelalim  
Faculty of sciences, Ibn Tofail university, Kenitra, Morocco

**20 - Optical Approach for Iris Segmentation and Tracking**

Elhoussaine Ouabida, Abdelaziz Essadike and Abdenbi Bouzid  
Physics Department, Faculty of science, Moulay Ismail University, Meknes, Morocco

**27 - An automatic framework for 3D objects-parts learning**

Omar Herouane, Lahcen Moumoun, Mohamed Chahhou and Taoufiq Gadi  
IIMSC, Univ. Hassan 1st, Settat, Morocco

**10 - Facial Landmark Localization: Where we are, and what next ?**

Hamid Ouanan  
FST, Moulay Ismail University, Meknes, Morocco

Tuesday October 25<sup>TH</sup>

**SESSION OMCS3: Reliability and optimization**

**09:30 – 12:30**

**CHAIR:** Prof. Mhamed ITMI/ Prof. Bouchaib Radi

**ROOM:** OMCS

**3 - An Overview of Traceability: Definitions and Techniques**

Kamal Souali, Othmane Rahmaoui and Ouzzif Mohammed

ENSEM, Hassan II University, Casablanca, Morocco

**6 - probabilistic study an embedded system**

Saadoune Nadia and Radi Bouchaib

FST Settat, Morocco

**7 - Toward an efficient brain tumor extraction using level set method and Pennes bioheat equation**

Abdelmajid Bousselham, Omar Bouattane, Mohamed Youssfi and Abdelhadi Raihani

ENSET Mohammedia, Morocco

**12 - Solving the Max-Cut Problem using Semidefinite Optimization**

Derkaoui Orkia and Ahmed Lehireche

UDL University of sidi belabbes, Algeria

**26 - Scheduling Meeting by Neural Network and Min-Conflict Heuristic**

Bouhouch Adil, Loqman Chakir and Abderrahim El Qadi

Université Moulay Ismail, Meknes Morocco

**30 - Collaboration decision making based on AHP method in Tr-OrBAC model: Case Study**

Nawal Ait Aali, Younes El Bouzekri El Idrissi, Amine Baina and Loubna Echabbi

INPT, Rabat, Morocco

Tuesday October 25<sup>TH</sup>

**SESSION ESYS3: E-Systems and Algorithms**

**09:30 – 12:30**

**CHAIR:** Prof. Abdelkhalak El Hami/ Prof. Nouredine ZERHOUNI

**ROOM:** ESYS-OMCS

**3 - Comparing Dynamic Programming Based Algorithms in Traffic Signal Control System**

Biao Yin, Mahjoub Dridi and Abdellah El Moudni  
UTBM, Belfort-Montbéliard, France

**9 - A new approach based a genetic algorithm for the selective travelling salesman problem**

Bochar Laarrabi and Bouchaib Radi  
F.S.T Settât, Morocco

**10–A New Access Control Scheme based on ABAC for processing Big Data cluster**

Habiba Chaoui  
ENSA Kenitra, Ibn Tofail University, Morocco

**2 – A cooperative traffic control for the vehicles in the intersection based on the Genetic Algorithm**

Jinjian Li, Mahjoub Dridi and Abdellah El-Moudni  
Université de technologie Belfort-Montbéliard, France

**15 – OMCS – Intrusion Detection System based Interaction on Mobile Agents and Clust-density Algorithm “IDS-AM-Clust”**

Chaimae Saadi and Habiba Chaoui  
ENSA Kenitra, Morocco

**19 – Numerical results for decomposed topology optimization based bilevel analysis**

Makrizi Abdelilah and Radi Bouchaib  
CRMEF Khouribga, FST Settât Morocco

Tuesday October 25<sup>TH</sup>

**SESSION CIST6: Automation and Management Systems**  
**CHAIR:** Prof. Ismail Jellouli

**15:00 – 19:00**  
**ROOM:** CiSt - A

**46 - Conformity Testing by Optimal Constraints for Object Oriented Programs**

Khadija Louzaoui, Khalid Benlhachmi and Jihane Alami Chentoufi  
 Faculty of sciences , Ibn-Tofail University, Kenitra, Morocco

**97 - Detection and Elimination of Class Noise in Large Datasets using Partitioning Filter Technique**

Btissam Zerhari, Ayoub Ait Lahcen and Salma Mouline  
 Mohammed V University Rabat, Morocco

**14 - Automation in code Generation: Tertiary and Systematic Mapping Review**

Zouhair Ibn Batouta, Rachid Dehbi, Mohamed Talea and Omar Hajoui  
 University of Hassan II, Faculty of Sciences Ben M'sik, Casablanca, Morocco

**22 - A Memetic Hunting Search Algorithm for the Traveling Salesman Problem**

Amine Agharghor, Mohammed Essaid Riffi and Fayçal Chebihi  
 Chouaïb Doukkali University, El Jadida, Morocco

**123 - Towards a generic Framework for Requirements Traceability management for sysml language**

Adil Anwar, Saida Haidrar and Ounsa Roudies  
 Ecole Mohammadia d'Ingénieurs- Univ Mohammed V-Rabat, Morocco

**57 - Permanent Participatory Data Security in a Cloud Computing Environment [Poster presentation]**

Sara Ibn El Ahrache, Hassan Badir, Abderrahmane Sbihi and Parisa Ghodous  
 ENSA Tanger, Morocco



Tuesday October 25<sup>TH</sup>

**SESSION CIST7: Enterprise Architecture**  
**CHAIR: Prof. Mostafa Harti**

**15:00 – 19:00**  
**ROOM: CiSt - B**

**54 - Modeling and Creating KPIs in MDA Approach**

Letrache Khadija, El Beggar Omar and Ramdani Mohamed  
 Faculty of Sciences and Techniques of Mohammedia, University Hassan II, Morocco

**50 - An approach based on ontology for discovering data impacting the execution of a business process**

Pierre-Aymeric Masse, Nassim Laga, Jacques Simonin and Mohammed Oussama Kherbouche  
 Orange Labs, France

**67 - Project Portfolio Management Information Systems (PPMIS) : Information Entropy Based Approach to Prioritize PPMIS**

Driss El Hannach, Rabia Marghoubi and Mohamed Dahchour  
 INPT, Rabat, Morocco

**86 - Evolution of Inter-Organizational Workflows: The Case-Transfer Pattern**

Boukhedouma Saida, Alimazighi Zaia and Oussalah Mourad  
 USTHB university, Algeria

**69 - State of the Art and Trends of the Research on XBRL: Bibliometric Analysis from 2000-2014**

Mohssen El Ansary and Mourad Oubrich  
 INPT, Rabat, Morocco

**122 - GUI Structure and Behavior from Java Source Code Analysis**

Zineb Gotti and Samir Mbarki  
 Ibn Tofail University, Kenitra, Morocco

Tuesday October 25<sup>TH</sup>

**SESSION ELED2: Intelligent Systems and MOOC**

**CHAIRS:** Prof. Anouar Abtoy

**15:00 – 19:00**

**ROOM: ELED**

**24 - Classification System of learners engagement within Massive Open Online Courses**

Hind Hayati, Jihane Sophia Tahiri, Mohammed Khalidi Idrissi and Samir Bennani

Mohammadia School of Engineering, Rabat, Morocco

**36 - DATA MINING IN EDUCATION: MOOCs ANALYSIS USING DATA MINING TECHNIQUES**

El Harrak Othman, El Bouhdidi Jaber and Slimani Abdelali

FST Tangier, Morocco

**28 - Recommender system for ubiquitous learning based on decision tree**

Inssaf El Guabassi, Mohammed Al Achhab, Ismail Jellouli and Badr Eddine El Mohajir

Faculty of Sciences - ENSA, Tetouan, Morocco

**4 - Personalized search and recommendation in a digital educational resources repository: the case of ORI-OAI**

H. SLIMANI, N. EL FADDOULI, R. BENSLIMANE, S. BENNANI

Mohammadia School of Engineers, Mohammed V University, Rabat, Morocco

**29 - A Novel Approach For Smart Curriculum Sequencing Based On HSA Evolutionary Computation**

Meriem Hnida, Mohammed Khalidi Idrissi and Samir Bennani

Mohammadia School of Engineering, Rabat, Morocco

**30 - Metacognitive Learning Management System supporting Self-Regulated Learning**

Mohamed Yassine Zarouk and Mohamed Khaldi

Faculty of Sciences, Tetouan, Morocco

**37 - CBR approach for knowledge reuse in a Community of Practice for university students**

Oumayma Chergui, Ahlame Begdouri and Dominique Groux-Leclet

Sidi Mohammed Ben Abdellah University, Fez, Morocco

**35 - An experimental study of software engineering learning using IDE 2.0**

Zakaria Itahriouan

Private University of Fez, Morocco

Tuesday October 25<sup>TH</sup>

**SESSION ANLP2: Semantic Extraction for Arabic**  
**CHAIR:** Prof. Vito Pirrelli

**15:00 – 19:00**  
**ROOM:** ANLP

**6 - Arabic Text Classification Methods: Systematic Literature Review of Primary Studies**

Waleed Alabbas, Haider Al-Khateeb and Ali Mansour  
 UNIVERSITY OF BEDFORDSHIRE, United Kingdom

**9 - Using Domain Knowledge and Bilingual Resources for facing Community Question Answering for Arabic**

Yassine El Adlouni, Imane Lahbari, Horacio Rodriguez, Mohammed Meknassi, Said Ouatiq El Alaoui and Nouredine Ennahnahi  
 USMBA, Fez, Morocco

**14 - An Application of Distributional Semantics for the Analysis of the Holy Quran**

Giulia Benotto, Emiliano Giovannetti and Ouafae Nahli  
 ILC - CNR, Pisa, Italy

**22 - The Self-Similar Qur'an Project: Automatic Detection of Internal Similarity in Classical Arabic Texts**

Giuliano Lancioni, Raoul Villano and Francesca Romana Romani  
 Sapienza University of Rome, Roma Tre University, Italy

**10 - Semantically Enhanced Term Frequency based on Word Embeddings for Arabic Information Retrieval**

Abdelkader El Mahdaoui, Said El Alaoui Ouatiq and Eric Gaussier  
 USMBA, Fez, Morocco

Tuesday October 25<sup>TH</sup>

SESSION SCIS1: Transportation Systems and Smart Mobility

15:00 – 19:00

CHAIR: Prof. Boudhir Anouar Abdelhakim

ROOM: SCIS - A

**47 - Visual Sentiment Prediction with Transfer Learning for Smart Cities**

Kaoutar Ben Ahmed, Bouhorma Mohammed and Mohamed Ben Ahmed  
FST Tangier, Morocco

**2 - A robust low cost approach for real time car positioning in a smart city using Extended Kalman Filter and Evolutionary Machine Learning**

Ikram Belhajem, Yann Ben Maissa and Ahmed Tamtaoui  
INPT, Rabat, Morocco

**44 - Indoor localization by particle map matching**

Karim El Mokhtari, Serge Reboul, Benaissa Amami, Jean-Bernard Choquel and Mohammed Benjelloun  
FST Tangier, Morocco

**24 - Activity recognition using back-propagation algorithm and minimum redundancy feature selection method**

Nadia Oukrich, Abdelilah Maach, Elmehdi Sabri, Elmehdi Mabrouk and Kevin Bouchard  
Mohammedia Engineering School, Rabat, Morocco

**31 – An Approaches' based on Intelligent Transportation Systems to Dissect Driver Behavior and Smart Mobility in Smart City**

Yassine Hernafi, Ben Ahmed Mohamed and Mohammed Bouhorma  
FST Tangier, Morocco

**1 - Approach to the Garbage Collection in the "Smart Clean City" Project [Poster presentation]**

Olga Dolinina, Vitaly Pechenkin and Andrei Borozdukhin  
Yury Gagarin State Technical University, Russia

**10 - Benchmarking study on Smart City Data Analytics [Poster presentation]**

Saida El Mendili, Younes El Bouzekri El Idrissi and Nabil Hmina  
ENSA Kenitra, Morocco

Tuesday October 25<sup>TH</sup>

**SESSION SCIS2: Vehicular Networks and Wireless Connectivity** 15:00 – 19:00  
**CHAIR:** Prof. Mostafa Ezziyani **ROOM:** SCIS - B

**22 - Q-Learning based Intelligent Multi-Objective Particle Swarm Optimization of Light Control for Traffic Urban Congestion Management**

Chaimae El Hatri and Jaouad Boumhidi  
 LIAN laboratory, Faculty of Sciences Dhar-Mahraz, Fez, Morocco

**42 - Power-Optimized Vertical Handover Scheme for 4th Generation Heterogeneous Wireless Network**

Imad El Fachtali, Rachid Saadane and Mohammed El Koutbi  
 ENSIAS Rabat, Morocco

**30 - The Influence of The Opportunistic Vehicular Networks on Smart Cities Management: Study Case on Agdal District in Rabat City**

Ayoub Bouroumine, Mustapha Zekraoui and Abdelilah Maach  
 EMI- University Mohammed V Rabat, Morocco

**32 - Smart City: Recommendation of personalized services in Patrimony Tourism**

Chaymae Benfares, Younes El Bouzekri El Idrissi and Aouatif Amine  
 National School of Applied Sciences, Ibn Tofail, Kenitra, University

**34 - Ranking models of Smart Cities**

Badr Benamrou, Mohamed Benahmed, Mustapha Ouardouz and Abdes-Samed Bernoussi  
 FST Tangier, Morocco

**48 - Vehicular Navigation Spoofing Detection based on V2I Calibration** [*Poster presentation*]

Boudhir Anouar Abdelhakim, Ben Ahmed Mohammed, Ghadi Abderrahim and Bouhorma Mohammed  
 FST Tangier, Morocco

Wednesday October 26<sup>TH</sup>

**SESSION CIST8: Algorithms for Systems Modeling**

**CHAIR:** Prof. Mohammed Al Achhab

**09:30 – 12:30**

**ROOM:** CiSt - A

**115 - A comparative study of some algorithms for detecting communities in social networks**

Elyazid Akachar, Brahim Ouhbi and Bouchra Frikh

ENSAM-Meknes, Morocco

**93 - A Web Based Crowdsourcing Framework: Lost Child Case**

Hasna El Alaoui El Abdallaoui, Abdelaziz El Fazziki, Abderrahmane Sadiq, Fatima Zohra Ennaji and Mohamed Sadgal

Cadi Ayyad University-Faculty of Sciences Semailia, Marrakech, Morocco

**60 - Towards the conception of a new approach for modeling interdependencies in Critical Infrastructures**

Lamiaie Chtioui, Amine Baina and Mostafa Bellafkih

INPT, Rabat, Morocco

**104 - CCSD and TOPSIS Methodology for selecting supplier in a Paper Company**

Hanane Assellaou, Brahim Ouhbi and Bouchra Frikh

ENSAM-Meknes, Morocco

**87 - Interactive Approach of Enrichment of Queries based on Ontologies**

Mohamed Rachdi, El Habib Ben Lahmar and El Houssine Labriji

Faculty of Computer Sciences, Ben M'Sik Casablanca, Morocco

Wednesday October 26<sup>TH</sup>

**SESSION CIST9: Databases and Information Systems**  
**CHAIR:** Prof. Zuraini Ismail

**09:30 – 12:30**  
**ROOM:** CiSt - B

**114 - A novel Approach for mining frequent itemsets: AprioriMin**

Houda Essalmi, Mohamed El Far, Mohammed El Mohajir and Mohamed Chahhou  
 FSDM, USMBA, FEZ Morocco

**70 - Optimizing Stock Market Price Prediction using a Hybrid Approach Based on HP Filter and Support Vector Regression**

Meryem Ouahilal, Mohammed El Mohajir, Mohamed Chahhou and Badr Eddine El Mohajir  
 FS Tetouan, Morocco

**118 - Classification of Association Rules based on K-means Algorithm**

Azzeddine Dahbi, Mohamed Mouhir, Youssef Balouki and Toufiq Gadi  
 Faculty of Sciences and Techniques, Hassan 1st University Settat, Morocco

**107 - Automatic Keyphrase Extraction : An Overview Of The State Of The Art**

Zakariae Alami Merrouni, Bouchra Frikh and Ouhbi Brahim  
 Sidi Mohamed Ben Abdellah University Fez , Morocco

**83 - Timed Distributed Testing Rules for the Distributed Test Architecture**

My El Hassan Charaf and Salma Azzouzi  
 Ibnou Tofail University, Kenitra, Morocco



Wednesday October 26<sup>TH</sup>

SESSION ELED3 - Assessment & Study of E-learning Platforms

09:30 – 12:30

CHAIR: Prof. Mohamed Ghailani

ROOM: ELED

**7 - Hybrid assessment method for programming assignments**

Soundous Zougari, Mariam Tanana and Abdelouahid Lyhyaoui  
ENSA Tangier, Morocco

**2 - Collection and transformation of Moodle traces**

Sanae Chehbi, Rachid Elouahbi and Fatima El Khoukhi  
Faculté des Sciences Université Moulay Ismail, Meknes, Morocco

**9 - Implementing Cluster Analysis Tool for the Identification of Students Typologies**

Lotfi Najdi  
ENSA Agadir, Morocco

**32 - Studying and Comparing the Free E-learning Platforms**

Mohammed Ouadoud, Mohamed Yassin Chkouri, Amel Nejjari and Kamal Eddine El Kadiri  
FS - ENSA Tetouan, Morocco

**33 - Automated fault localizing and correction in dynamically analyzed programs**

Sara Mernissi Arifi, Ismail Nait Abdellah Ouali, Rachid Benabbou and Azeddine Zahi  
USMBA Fez, Morocco

Wednesday October 26<sup>TH</sup>

**SESSION SCIS3: Ambient Intelligence**  
**CHAIR: Prof. Mohamed Ben Ahmed**

**09:30 – 12:30**  
**ROOM: SCIS - A**

**5 - Round time adaptation for image transferring over wireless sensor networks**

Bennani Mohammed Taj and Ait Kbir M'Hammed  
FST Tangier, Morocco

**45 - Developpement of an Alert Message Dissemination Protocol based on LEACH protocol to Improve VANET Road Safety**

Hamid Barkouk and El Mokhtar En-Naimi  
FST Tangier, Morocco

**12 - High speed efficient FPGA implementation of pipelined AES S-Box**

Soufiane Oukili, Seddik Bri and A.V. Senthil Kumar  
High School of Technology, Moulay Ismail University, Meknes, Morocco

**11 - Modeling of context Information for disaster emergency system Application: Flood**

Soumaya El Mamoune and Mostafa Ezziyyani  
FST Tangier, Morocco

**29 - Multi-zonal approach Clustering based on Stable Election Protocol in Heterogeneous Wireless Sensor Networks**

Aziz Mahboub, Mounir Arioua, El Mokhtar En-Naimi, Imad Ez-Zazi and Ahmed El Oualkadi  
FST Tangier, Morocco

Wednesday October 26<sup>TH</sup>

**SESSION SCIS4: Sensing and Smart Environments**  
**CHAIR: Prof. Arioua Mounir**

**09:30 – 12:30**  
**ROOM: SCIS - B**

**13 - 2-D DOA estimation Using MUSIC algorithm with Uniform Circular Array**

Mohammed Amine Ihedrane and Seddik Bri

High school of technology ESTM, Moulay Ismail University Meknes, Morocco

**26 - Smart Grid Architecture and Impact Analysis of a Residential Microgrid**

Imane Worighi, Abdelilah Maach and Hakim Abdelhakim

Ecole Mohammadia d'ingenieurs, Rabat, Morocco

**17 - Protection Mechanisms for Signaling DoS Attacks on 3G mobile networks: comparative study and future perspectives**

Raja Et-Tiane, Rachid El Kouch and Abdelaali Chaoub

INPT, Rabat, Morocco

**27 - Influence of failure modes and effects analysis on the average probability of failure on demand calculation for a safety instremented system**

Fatima Ezzahra Nadir, Ibrahim Hadj Baraka, Mohammed Bsis and Benaissa Amami

FST Tangier, Morocco

**49 - New Routing Process in VANET**

My Driss Laanaoui and Said Raghay

University Cadi Ayyad FST Marrakech, Morocco

