



جامعة محمد الخامس بالرباط  
Université Mohammed V de Rabat



Université Mohammed V  
Faculté des Sciences  
Rabat

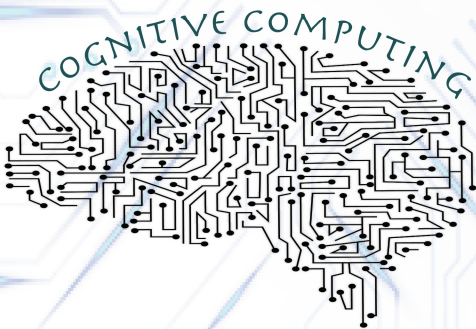
# INTERNATIONAL CONFERENCE ON MODERN INTELLIGENT SYSTEMS CONCEPTS

# Artificial Intelligence

MISC 2018

*COMPLEX SYSTEMS PROCESSING, MODELING,  
SOLVING & OPTIMIZING*

December  
12 & 13, 2018



MOHAMMED V UNIVERSITY IN RABAT, FACULTY OF SCIENCE,  
4 AVENUE IBN BATTOUTA, RABAT, MOROCCO

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Wednesday, December 12<sup>th</sup>, 2018 (Morning)

<b>08:30</b>	<b>Registration and Welcome</b>
<b>09:00</b>	<b>Opening Ceremony</b>
<b>09:05</b>	<b>Pr Abdellah IDRISSE, General Chair</b>
<b>09:20</b>	<b>Pr Mohammed HALIM, Director of Doctoral School, Faculty of Science, Rabat</b>
<b>09:25</b>	<b>Pr Fouzia OMARY, Responsible of IPS Team, Mohammed V University in Rabat</b>

<b>09:30</b>	<b>Keynote Speaker 1 (Amphi BELMAHI)</b>
	<i>Session Chairs: L. Bellatreche + D. Rothman + T. Velin + S. Begum</i>
	<b>Pr. Vincenzo PIURI (Italy).</b> Artificial Intelligence for Industry, Environment, and Ambient Intelligence

**10:30** Coffee break

**11:00** Presentations (15 minutes each)

<b>(Amphi Belmahi)</b>	
	<i>Session Chairs: S. Begum + D. Fuschi + A. Koukam + T. Velin</i>
<b>11:00</b>	Paper 32. Mobyen Uddin Ahmed, Staffan Brickman, Alexander Dengg, Niklas Fash, Marko Mihajlovic and Jacob Norman. A Machine Learning Approach to Classify Pedestrians' Event based on IMU and GPS.
<b>11:15</b>	Paper 69. Manar Abourezq, Abdellah Idrissi and Hajar Rehioui. An amelioration of the Skyline algorithm used in the Cloud Service Research and Selection System.
<b>11:30</b>	Paper 36. Abdelhamid Atassi and Ikram El Azami. Towards a new deep learning algorithm based on GRU and CNN: NGRU
<b>11:45</b>	Paper 38. Abdelmajid El Alami, Abderrahim Mesbah, Aissam Berrahou, Zouhir Lakhili, Hassan Qjida and Hassan Berbia. Improving Pattern Classification by Charlier Moments Convolutional Neural Network Architecture.
<b>12:00</b>	Paper 89. Hajar Rehioui, Abdellah Idrissi, Meriem Khyatti, Amina Ghibid and Nezha Tawfiq. The use of clustering algorithms in medical domain.
<b>12:15</b>	Paper 51. Choumicha El Mazgualdi, Tawfik Masrouf and Ibtissam El Hassani. Artificial Intelligence and Machine Learning to predict and improve efficiency in manufacturing industry.

<b>(Salle des Actes)</b>	
	<i>Session Chairs: I. Hilal + M. Rhanoui + S. Hamida</i>
<b>11:00</b>	Paper 46. Maryem Rhanoui, Siham Yousfi, Mounia Mikram and Hajar Merizak. Forecasting Financial Budget Time Series: ARIMA Random Walk vs LSTM Neural Network.
<b>11:15</b>	Paper 14. El Mehdi El Mastour, Kaoutar El Handri and Abdellah Idrissi. Improved recommendation system based on combining approach using top-k and k-means algorithms.
<b>11:30</b>	Paper 40. Ilias Kamal, Khalid Housni and Youssef Hadi. Online Dictionary Learning for Car Recognition using Sparse Coding and LARS.
<b>11:45</b>	Paper 47. Mounia Mikram, Maryem Rhanoui, Siham Yousfi and Houada Briwa. Optimization of ULD management: predictive analysis of baggage using Machine Learning.
<b>12:00</b>	Paper 147. Siham Yousfi, Maryem Rhanoui and Mounia Mikram. Comparative Study of CNN and RNN For Opinion Mining in Long Text.
<b>12:15</b>	Paper 162. Nawal Ait Aali, Amine Baina, Loubna Echabbi and Mostafa Bellafkih. Analysis of Context variability based Trust Evaluation using Data Mining algorithms.

<b>(Salle Dpt Maths)</b>	
	<i>Session Chairs: A. Ezzahout + M. Marraki + K. Doumi</i>
<b>11:00</b>	Paper 5. Mouad Banane. Comparative & evaluation study of massive RDF data storage approaches.
<b>11:15</b>	Paper 39. Mariya Guerroum, Laurent Deshayes and Mourad Zegrari. MBSE Architecture of rotating machines condition-monitoring.
<b>11:30</b>	Paper 72. Fouad Yakoubi, Noussaima El Khattabi and Mohamed El Marraki. The Reliability of The Recursive Corona Product Network.
<b>11:45</b>	Paper 85. Noussaima El Khattabi, Fouad Yakoubi and Mohamed El Marraki. The Reliability of Network..
<b>12:00</b>	Paper 95. Adnane El Hanjri, Aawatif Hayar and Abdelkrim Haqiq. Features Detection based Blind Handover using Kullback Leibler Distance for 5G HetNets Systems.
<b>12:15</b>	Paper 166. Wissam Abbass, Zineb BAKraouy, Amine Baina, Mostafa Bellafkih. Internet of Things Security Risk Assessment: Security attacks analysis.

<b>(Amphi Institut)</b>	
	<i>Session Chairs: H. Chaoui + S. Ziti + F. Omary</i>
<b>11:00</b>	Paper 159. Zineb Bakraouy, Wissam Abbass, Amine Baina and Mostafa Bellafkih. Fuzzy Multi Agent System For Automatic Classification and Negotiation of QOS in Cloud Computing.
<b>11:15</b>	Paper 11. Nassim Kharmoum, Soumia Ziti, Fouzia Omary and Yassine Rhazali. Automatic transformation method from E3value model to the Data Flow diagram : An MDA approach.
<b>11:30</b>	Paper 12. Karim El Bouchti, Soumia Ziti and Fouzia Omary. A new approach to protect encryption keys in DBMS
<b>11:45</b>	Paper 29. Sofia Najj, Habiba Chaoui and Hicham Elachgar. Classification and Analysis of SCADA and ICS cyber attacks.
<b>12:00</b>	Paper 18. Khalid Ounachad, Mohamed Oualla, Abdelalim Sadiq and Abdelghani Souhar. Facial Emotion Recognition Using Average Face Ratios and Fuzzy Hamming distance.
<b>12:15</b>	Paper 174. Asmae El Kassiri and Fatima-Zahra Belouadha. Semantic Approach Using Unified and Summured Ontologies for Analyzing Data from Social Media.

**12:30** Lunch (90 minutes)

**Wednesday December 12<sup>th</sup>, 2018 (Afternoon)**

**14:00 Keynote Speaker 2 (Amphi BELMAHI)**

Session Chairs: L. Bellatreche + F. Omary + T. Velin + A. Koukam + A. Idrissi + A. Mobyen

**Pr. Denis ROTHMAN (France).** Artificial Intelligence to Increase Productivity in Industries with Deep Learning

**15:00 Presentations (15 minutes each)**

**(Amphi Belmahi)**

Session Chairs: S. Begum + T. Velin + A. Mobyen

<b>15:00</b>	Paper 50. M. Ahmed, M. Altarabichi, S. Begum, F. Ginsberg, R. Glaes, M. Östgren, H. Rahman and M. Sørensen. A Vision based Indoor Navigation System for Individual with Visual Impairment.
<b>15:15</b>	Paper 54. Abdelmoula Khoudou and Tawfik Masrouf, Prediction of Industrial Process Parameters using Artificial Intelligence Algorithms.
<b>15:30</b>	Paper 80. Abdelwahhab Satta, Sihem Mostefai, Zakaria Derouiche and Alaa Eddine Belkacemi. Smart Multifactor Authentication Mechanism for Secure Cloud Infrastructures.
<b>15:45</b>	Paper 56. Ahlem Ben Hassine, Walid Hamdi, Mustapha Es-Sadqi and Abdellah Idrissi. Knowledge based Web Service Composition.

**(Salle des Actes)**

Session Chairs: L. Bellatreche + H. Abdelwahed + A. Berkani

<b>15:00</b>	Paper 65. Er-Rafyq Aicha and Abdellah Idrissi. Review of Recommendation systems and their applications in e-learning.
<b>15:15</b>	Paper 128. Meriem Hafidi, El Hassan Abdelwahed, Rachid Lamrani and Sara Qassimi. Interactions, collective intelligence and collaborative learning within a health community of practice: CIMS Project.
<b>15:30</b>	Paper 24. Stéphane Galland and Sebastian Rodriguez. Transformations from the {SARL} agent-oriented language to the {Java} object-oriented language.
<b>15:45</b>	Paper 58. Yassine Mektoubi, Badreddine Benyacoub and Mohamed Ouzineb. Performance of the mathematical programming approach in credit scoring

**(Salle Dpt Maths)**

Session Chairs: S. Hamida + T. Mastour + N. El Khattabi + F. Omary + R. Yaagoubi + H. Benaboud

<b>15:00</b>	Paper 97. Meryam Zeryouh, Mohamed El Marraki and Mohamed Essalih. Quantifying the Structure of Some Networks by Using a Vertex-Cut Method.
<b>15:15</b>	Paper 101. A. El-Alaoui, M. Guerroum, J. Saadi, L. Deshayes and H. Medromi. Predictive maintenance based on the physical parameters identification of the synchronous machine by least squares approach using the $\delta$ operator.
<b>15:30</b>	Paper 49. Mourad El Belkacemi, Soukaina Bacha and Anouar Riad Solh. Towards an investment strategy in bitcoin using prediction algorithms (machine learning and decision tree).
<b>15:45</b>	Paper 63. El Marouani Mohamed, Boudaa TARIK and Enneya Nourddine. Automatic Error Analysis of English-to-Arabic Machine Translation

**16:00 Coffee Break (+ Posters)**

**Posters (At the Hall of Faculty)**

Session chairs: S. Ziti + H. Benaboud + I. Hilal + M. Abik + A. Ezzahout + A. Ouacha + K. Doumi + A. Berkani

Paper 6. Anas Sadak, Fatima Ezzahra Ziani, Charifa Hanin and Fouzia Omary. LCAHASH-1.1: A New Design of the LCAHASH System for IoT.
Paper 9. Faouzia Zegrari and Abdellah Idrissi. Modeling a dynamic simulator of cloud services at the infrastructure level.
Paper 13. Mohammed Bougrine, Trichni Salima and Omary Fouzia. Improving evolutionary algorithm applied in the ciphering system SEC.
Paper 19. Salima Trichni, Fouzia Omary and Mohammed Bougrine. Security of a new Hybrid Ciphering System.
Paper 42. Houda Abouzid and Otman Chakkor. Signal Speech Reconstruction using Convolutional Denoising Audioencoders with Neural Deep Learning.
Paper 76. Mustapha Es-Sadqi, Abdellah Idrissi, Ahlem Ben Hassine and Karim Doumi. Development of six efficient algorithms to solve redundancy allocation problems.
Paper 84. Midoun Khadidja, Loudini Malik, Hidouci Walid-Khaled and Rezgui Abdelmounaam. LoEM: Improving Load Balancing for MapReduce-based Entity Matching
Paper 86. Mbarek Marwan, Ali Kartit and Hassan Ouahmane. An Efficient Privacy Solution for Electronic Health Records in Cloud Computing.
Paper 91. Mbarek Marwan, Ali Kartit and Hassan Ouahmane. A Proposal to Improve Homomorphic Encryption for Securing Medical Image Processing over Cloud.
Paper 164. Jihane Jellouli, Abdellah Idrissi and Kaoutar Elhandri. Top_k algorithm on Cloud QoS Recommendation system by applying weighted sum.
Paper 169. Barhmi Soukaina and El Fatni Omkaltoume. Hourly wind speed forecasting based on Support Vector Machine and Artificial Neural Networks
Paper 180. M. El Messaoudi & Y. Benhadj. Artificial Intelligence in Education: Integrating Serious Gaming into the Language Class
Paper 181. Barhmi Soukaina and El Fatni Omkaltoume. Hourly wind speed forecasting utilizing hybrid models in Morocco
Paper 182. Mina Elmaallam and Walid Cherif. Data modeling approach for road accident prediction: application to UK traffic accident data.

**17:00 Keynote Speaker 3 (Amphi BELMAHI)**

Session Chairs: H. Bouyakhf + S. Galland + A. Mobyen + S. Begum + H. Benaboud + M. Abik + K. Doumi

**Pr A. KOUKAM (France).** Agent based approach: Distributed problem solving and complex system modeling

**18:00 Visit of Rabat City**

**20:00 Gala Dinner**

Thursday, December 13<sup>th</sup>, 2018 (Morning)

08:30 Registration and Welcome

09:00 Keynote Speaker 5 (**Amphi BELMAHI**)

Session Chairs: S. Galland + S. Hamida + O. Kathir + FZ Belouadha + R Yaagoubi

**Pr L. BELLATRECHE (France)**. Take the Best of Big Data: Focus on Value & Variety

10:00 Coffee Break (+ Posters)

11:00 Presentations (15 minutes each)

**(Amphi Belmahi)**

Session Chairs: S. Begum + L. Bellatreche + D. Rothman

11:00	Paper 17. Hajar Zankadi, Imane Hilal, Daoudi Najima and Abdellah Idrissi. Building an ontology-based user profile for a social learning environment.
11:15	Paper 125. Sara Retal and Abdellah Idrissi. A Survey on Virtual Network Functions Placement Problem in 5G Architecture.
11:30	Paper 168. Mili Redha and Chikhi Salim. Maximize Lifetime Network of MANETs Using Reinforcement Learning.
11:45	Paper 109. Kaoutar El Handri and Abdellah Idrissi. Efficient top-kws recommendation algorithm on synthetics and real Datasets.
12:00	Paper 152. Jihane Jellouli and Abdellah Idrissi. Regularization of Neural Network using Drop Modular.
12:15	Paper 136. Imane Sahmi, Tomader Mazri and Nabil Hmina. A comparative study of MQTT with the applications protocols for IoT.

**(Salle des Actes)**

Session Chairs: FZ. Belouadha + H. Souraya + T. Masrour

11:00	Paper 44. Mohammed Nejja and Abdellah Yousfi. The role of vocabulary management in a Arabic spelling correction system.
11:15	Paper 67. Mourad El Belkacemi, Imane Lasri and Anouar Riad Solh. Cloud-based sentiment analysis for measuring customer' satisfaction in the Moroccan banking sector using Naive Bayes and Stanford NLP.
11:30	Paper 79. Asmae Berhich, Fatima-Zahra Belouadha and Mohammed Issam Kabbaj. Machine Learning based earthquake prediction.
11:45	Paper 170. Manal Elimadi and Abdellah Idrissi. Study Review of Automatic Text Summarization.
12:00	Paper 143. Mouad Riyad, Mohammed Khalil and Abdellah Adib. Convolutional Neural Networks for P300 Signal Detection Applied to Brain Computer Interface.
12:15	Paper 165. Bouchra Lahbabi and Fatima-Zahra Belouadha. Suspected Patterns in Health Care Insurance.

**(Salle Dpt Maths)**

Session Chairs: D. Fuschi + I. Hilal + N. Daoudi + M. Abourezq

11:00	Paper 133. Adil Jounaidi and Mohamed Bahaj. Optimization of Access To An Ontology Based on MapReduce
11:15	Paper 135. Bouchra El Boujdaini and Driss Driouchi. An Efficient Algorithm for Constructing Large Fractional Factorial Designs.
11:30	Paper 141. Ahmed Abatal, Khadija Alaoui and Mohammed Bahaj. RETRO + : SQL to SPARQL improvement of the RETRO Framework.
11:45	Paper 106. Ismail Nadim. Towards An IoT-based Smart Campus: A Geospatial Indexing Method.
12:00	Paper 114. Chahinaze Ameer, Sanaa Faquir and Yahyaouy Ali. Optimization and intelligent management of renewable energy system using multi-agents.
12:15	Paper 179. Salima Trichni, Omary Fouzia, Mohammed Bougrine, Manar Abourezq and Abdellah Idrissi. Intelligent strategy for encryption decisional support system

**(Amphi Institut)**

Session Chairs: M. Abik + K. Doumi + A. Mobyen + F. Benabbou

11:00	Paper 87. Abir Mouannis. A Novel Semi-Supervised Approach for Depression Detection and Monitoring Over Time.
11:15	Paper 129. Hambli El Mostafa and Benabbou Faouzia. A System for Detection of Plagiarism of Ideas: state of art.
11:30	Paper 64. Randa Zarnoufi, Mehdi Boutbi and Mounia Abik. Cyber-violence: Harmful Behavior Detection in Social Media.
11:45	Paper 52. Chaymae Ziani and Abdel Alim Sadiq. A Face Sketch Recognition System based on Shearlets.
12:00	Paper 90. Khaoula Mrhar, Otmane Douimi and Mounia Abik. A dropout predictor system in MOOCs based on Neural Networks.
12:15	Paper 173. Khaoula Mrhar, Otmane Douimi, Naoual Chaouni Benabdellah and Mounia Abik. Towards a semantic integration of data from learning platforms

12:30 Lunch (90 minutes)



**Thursday December 13<sup>th</sup>, 2018 (Afternoon)**

**14:00 Keynote Speaker 4 (Amphi BELMAHI)**

Session Chairs: R. Yaagoubi + I. Benmiloud + F. Omary + S. Ziti + A. Ezzahout + A. Ouacha

**Pr. K. MACHCHATE**, Artificial Intelligence & IoT: An Intelligent Connected World

**15:00 Presentations (15 minutes each)**

**(Amphi Belmahi)**

Session Chairs: R. Yaagoubi + M. Mellahi + A. Ezzahout

<b>15:00</b>	Paper 142. Nihal Elkhaldi, Faouzia Benabbou and Nawal Sael. Multi-Agent Smart Parking Management System.
<b>15:15</b>	Paper 21. Abderrahmane Ez-Zahout, Youssef Hadi and Rachid Oulad Haj Thami. Intelligent Video Surveillance: People Re-identification Based on Principal Components Analysis Attributes.
<b>15:30</b>	Paper 25. Awatif Ragmani, Amina El Omri, Noredine Abghour, Khalid Moussaïd and Mohammed Rida. Predictive Fault-Tolerance Architecture in Cloud Computing based Machine Learning Algorithm.
<b>15:45</b>	Paper 81. Souraya Hamida, Okba Kazar and Khadija Abid. Formal approach based on petri nets using agent paradigm for service discovery and execution in mobile cloud computing.

**(Salle des Actes)**

Session Chairs: K. Doumi + A. Ouacha

<b>15:00</b>	Paper 66. Reda Yaagoubi, Yehia Miky and Hicham Hajji. Toward a combined GIS-ABM approach for simulation of pilgrims' movement during Hajj days in Makkah.
<b>15:15</b>	Paper 16. Wissal Daoudi, Karim Doumi and Laïla Kjiri. Adaptive Enterprise Architecture: comparison of approaches.
<b>15:30</b>	Paper 108. Zakrani Abdelali, Hain Mustapha and Idrî Ali. Estimating Software Development Effort using Support Vector Regression and Feature Selection.
<b>15:45</b>	Paper 98. Manal Amraoui, Najima Daoudi and Imane Hilal. A model, based on ML techniques, allowing to predict the incidents (FP).

**(Salle Dpt Maths)**

Session Chairs: H. Benaboud + A. Mahmoudi + N. Daoudi

<b>15:00</b>	Paper 111. Ali Kartit and Farida Jaha. Keystroke biometric system: Efficiency issue and improving implementation.
<b>15:15</b>	Paper 126. Sara Mifrah, Oumaima Hourrane, El Habib Ben Lahmar, Nadia Bouhriz and Mohamed Rachdi. Sentiment Analysis of Scientific Citations between Lexical Methods and Statistical Methods.
<b>15:30</b>	Paper 150. Abdenaby Lamiri, Kamal Gueraoui and Gamal Zeggwagh, Bitcoin Center of Gravity Analysis.
<b>15:45</b>	Paper 116. Yasser Lamalem and Khalid Housni. Enumeration of the Minimal Nodes Cutsets Based on Necessary Minimal Paths

**(Amphi Institut)**

Chair : F. Omary + H. Chaoui + T. Masrour

<b>15:00</b>	Paper 82. Moukrim Chouaib, Tragha Abderrahim, Benlahmer El Habib and Almalki Tarik. The correction of the grammatical case endings errors in Arabic language.
<b>15:15</b>	Paper 119. Mohamed Saad Bajjou and Anas Chafi. The Critical Barriers of a Successful Lean Construction Implementation
<b>15:30</b>	Paper 167. Abdallah Abouchouar, Fouzia Omary and Khadija Achkoun. New concept for cryptographic construction design based on noniterative behavior.
<b>15:45</b>	Paper 171. Youness Choubik, Abdelhak Mahmoudi, Mohammed Majid Himmi and Lahcen El Moudnib. STA/LTA trigger algorithm implementation on a seismological dataset using Hadoop MapReduce.

**16:00 Coffee Break (+ Posters)**

**17:00 Round Table 1 (Salle des Actes)**

Session Chairs: R. Yaagoubi + A. Benhassine + A. Koukam + T. Masrour

**K. El Asnaoui**, Deep Learning Methods for Computer Vision and Image Processing Problems.

**17:30 Round Table 2 (Salle des Actes)**

Session Chairs: R. Yaagoubi + A. Mobyen + S. Hamida + F. Omary + I. Hilal

**M. El Messaoudi & Y. Benhadj**, Artificial Intelligence in Education: Integrating Serious Gaming into the Language Class.

**18:00 Networking & End of the Conference**