8th International Conference on Model and Data Engineering (MEDI 2018)
24 - 26 October 2018, Marrakesh, Morocco

MEDI 2018
Conference Program & Events
Tuesday October 23, 2018

14h00-21h00: Welcome reception and Registration

Wednesday October 24, 2018

08:30  Welcome reception and Registration

08:30 - 09:00  Opening Conference  (Room I)

09:00 - 10:00  Keynote: Professor Georg Gottlob, Oxford University, UK  (Room I)
[Session Chair: Prof. Ladjel Bellatreche, ISAE-ENSMA, Poitiers, France]

Data Science with Vadalog: Bridging Machine Learning and Reasoning
Luigi Bellomarini, Ruslan Fayzrakhmanov, Georg Gottlob, Andrey Kravchenko, Eleonora Laurenza, Yavor Nenov, St´ephane Reissfelder, Emanuel Sallinger, Evgeny Sherkhonov and Lianlong Wu

10:00 – 10:30  Coffee Break

10:30 - 12:30  MEDI – Session 1  (chair: PDA)  (Room I)
Communication and Information Technologies
A Gamification and Objectivity based Approach to Improve Users Motivation in Mobile Crowd Sensing
Hasna Elalaoui Elabdallaoui, Abdelaziz El Fazziki, Fatima Zohra Ennaji and Mohamed Sadgal

Modeling and Evaluating Cross-Layer Elasticity Strategies in Cloud Systems
Khaled Khebbeb, Nabil Hameurlain and Faiza Belala

Thing Federation as a Service: Foundations and Demonstration
Zakaria Maamar, Khouloud Boukadi, Emir Ugljanin, Thar Baker, Muhammad Asim, Mohammed Al-Khafajiy and Djamal Benslimane

Formalizing Reusable Communication Models for Distributed Systems Architecture
Quentin Rouland, Brahim Hamid and Jason Jaskolka

12:30 – 14:00  Lunch Break

14:00 - 15:30  MEDI – Session 2  (chair: PDA)  (Room I)
Databases
NoSQL Databases – Seek for a Design Methodology
Chaimae Asaad and Karim Ba’ina

Mortadelo: A Model-Driven Framework for NoSQL Database Design
Alfonso de La Vega, Diego García-Saiz, Carlos Blanco, Marta Zorrilla and Pablo Sanchez

Towards OntoUML for Software Engineering: Experimental Evaluation of Exclusivity Constraints in Relational Databases
Zdenek Rybola and Michal Valenta

15:30 – 16:00  Coffee Break
16:00 - 18:30  MEDI – Session 3  (chair: PDA)  (Room I)

Algorithmic and Text Processing

Voronoi-Diagram based partitioning for distance join query processing in SpatialHadoop
Francisco Garcia-Garcia, Antonio Corral, Luis Iribarne and Michael Vassilakopoulos

Graph Pattern Matching Preserving Label-Repetition Constraints
Houari Mahfoud

Standard and Dialectal Arabic Text Classification for Sentiment Analysis
Mohcine Maghfour and Abdeljalil Elouardighi

Spatial Batch-Queries Processing using xBR+-trees in Solid-State Drives
George Roumelis, Michael Vassilakopoulos, Antonio Corral, Athanasios Fevgas and Yannis Manolopoulos

(Short Paper)  A graph-based model for tag recommendations in clinical decision support system
Sara Qassimi, El Hassan Abdelwahed, Meriem Hafidi and Rachid Lamrani

19:00 - …  Social Event around Marrakech & Dinner
09:00 - 10:00  Keynote: Professor Mohamed Mosbah, Institut Polytechnique de Bordeaux (ENSEIRB-MATMECA), France  
(Room I)  
[Session Chair: Prof. Dominique Mery, LORIA, Nancy, France]  
Modeling Distributed Algorithms by Local Computations with Applications  
Mohamed Mosbah  

10:00 - 11:00  MEDI – Session 4  (chair: PDA)  
(Room I)  
Data fusion, Classification and Learning  
A new way of handling missing data in multi-source classification based on adaptive imputation  
Ikram Abdelkhalek, Afef Ben Brahim and Nadia Essoussi  

Feedback-Oriented Assessor Model. Application: Allocation of Submissions in Online Peer Assessment  
Mohamed-Amine Abrache, Khalid Megder and Chihab Cherkaoui  

11:00 – 11:30  Coffee Break  

11:30 - 12:30  MEDI – Session 5  (chair: PDA)  
(Room I)  
Safety and Security  
A Valid BPMN Extension for Supporting Security Requirements Based On Cyber Security Ontology  
Mohamed El Amine Chergui and Sidi Mohamed Benslimane  

A Correct-by-construction model for Attribute-Based Access Control  
Hania Gadouche, Zoubeyr Farah and Abdelkamel Tari  

12:30 – 14:00  Lunch Break  

14:00 - 15:30  MEDI – Session 6  (chair: PDA)  
(Room I)  
Ontology and Model Driven Engineering  
Adaptive Algorithms for Computing Ontologies Metrics through Processing of RDF Graphs  
Jean Vincent Fonou Dombeu and Yannick Kazela Kazadi  

CRank: A Novel Framework For Ranking Semantic Web Ontologies  
Jean Vincent Fonou Dombeu and Serestina Viriri  
(Short Paper)  

Scrum and V lifecycle combined with Model-Based Testing and Model Driven Architecture to deal with Evolutionary System Issues  
Imane Essebaa and Salima Chantit  

15:30 – 16:00  Coffee Break  

16:00 - 17:30  MEDI – Session 7  (chair: PDA)  
(Room I)  
Specification, Verification and Validation (I)  
Mechanizing the denotational semantics of the Clock Constraint Synchronization Language  
Mathieu Montin and Marc Pantel  

Ensuring the Functional Correctness of IoT through Formal Modeling & Verification  
Samir Ouchani  
(Short Paper)  

Formalizing Railway Signaling System ERTMS/ETCS Using UML/Event-B  
Abderrahim Ait Wakrime, Rahma Ben Ayed, Simon Collart-Duteilleul, Yves Ledru and Akram Idani
17:30 - 19:00  **MEDI4SG**  (chair: PDA)  *(Room I)*
Gamification and serious games based learning for early childhood in rural areas
Rachid Lamrani, El Hassan Abdelwahed, Souad Chraibi, Sara Qassimi and Meriem Hafidi

**Context-Based Sentiment Analysis: A survey**
Oumayma El Ansari, Jihad Zahir and Hajar Mousannif

**A Multi-Agent System-Based Distributed Intrusion Detection System for a Cloud Environment**
Omar Achbarou, My Ahmed El Kiram, Outmane Bourkoukou and Salim Elbouanani

19:30 - ...  **Social Event & Gala Dinner “Riad Dar Salam”**
Friday October 26, 2018

09:00 - 10:30 MEDI – Session 8 (chair: PDA)  
**Specification, Verification and Validation (II)**  
A Dynamic Analysis for Reverse Engineering of Sequence Diagram Using CPN  
Chafik Baidada, El Mahi Bouziane and Abdeslam Jakimi

**Domain-oriented Verification Management**  
Vincent Leilde, Vincent Ribaud, Ciprian Teodorov and Philippe Dhaussy

A Formal Model for Interaction Specification and Analysis in IoT Applications  
Souad Marir, Faiza Belala and Nabil Hameurlain

10:30 – 11:00 Coffee Break

11:00 - 12:00 MEDI – Session 9 (chair: PDA)  
**Specification, Verification and Validation (III)**  
Three Extensions to Hybrid Event-B to Support Rigorous Development of Cyber-Physical Systems  
Klaus-Dieter Schewe

(Short Paper) A Formalized Procedure for Database Horizontal Fragmentation In Isabelle/HOL  
Salmi Cheikh, Chaabani Mohamed and Mezghiche Mohamed

12:00 Closure

12:30 – 14:30 Lunch Break
# Conference Schedule and Events

<table>
<thead>
<tr>
<th>Tuesday October 23, 2018</th>
<th>Wednesday October 24, 2018</th>
<th>Thursday October 25, 2018</th>
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<td>08H30-09H00 Welcome Reception - Opening</td>
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<td>Keynote Professor Mohamed Mosbah Room I</td>
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