

# Contents

## Keynotes

Advances in Modeling Language Engineering. . . . .	3
<i>Katrin Hölldobler, Alexander Roth, Bernhard Rumpe, and Andreas Wortmann</i>	
Schema Evolution and Gravitation to Rigidity: A Tale of Calmness in the Lives of Structured Data. . . . .	18
<i>Panos Vassiliadis</i>	

## Domain Specific Languages

A Model-Driven Ecosystem for the Definition of Data Mining Domain-Specific Languages . . . . .	27
<i>Alfonso de la Vega, Diego García-Saiz, Marta Zorrilla, and Pablo Sánchez</i>	
Continuous Process Compliance Using Model Driven Engineering . . . . .	42
<i>Fahad Rafique Golra, Fabien Dagnat, Reda Bendraou, and Antoine Beugnard</i>	
An Approach to Automated Two-Phase Business Model-Driven Synthesis of Data Models. . . . .	57
<i>Drazen Brdjanin, Danijela Banjac, Goran Banjac, and Slavko Maric</i>	
Modular Term-Rewriting Framework for Artifact-Centric Business Process Modelling . . . . .	71
<i>Bartosz Zielinski</i>	

## Systems and Software Assessments

The Stability of Threshold Values for Software Metrics in Software Defect Prediction . . . . .	81
<i>Goran Mauša and Tihana Galinac Grbac</i>	
Big Data DBMS Assessment: A Systematic Mapping Study. . . . .	96
<i>Maria Isabel Ortega, Marcela Genero, and Mario Piattini</i>	
Assessment of the SEMCO Model-Based Repository Approach for Software System Engineering . . . . .	111
<i>Brahim Hamid</i>	

Self-adaptive Architecture for Ensuring QoS Contracts in Cloud-Based Systems . . . . .	126
<i>Esma Maatougui, Chafia Bouanaka, and Nadia Zeghib</i>	

## Modeling and Formal Methods

Contextualization and Dependency in State-Based Modelling - Application to Event-B. . . . .	137
<i>Souad Kherroubi and Dominique Méry</i>	
Formal Modelling of Domain Constraints in Event-B . . . . .	153
<i>Linda Mohand-Oussaid and Idir Ait-Sadoune</i>	
Use of Tabular Expressions for Refinement Automation . . . . .	167
<i>Neeraj Kumar Singh, Mark Lawford, Thomas S.E. Maibaum, and Alan Wassying</i>	

## Data Engineering

Bulk Insertions into xBR <sup>+</sup> -trees . . . . .	185
<i>George Roumelis, Michael Vassilakopoulos, Antonio Corral, and Yannis Manolopoulos</i>	
RkNN Query Processing in Distributed Spatial Infrastructures: A Performance Study . . . . .	200
<i>Francisco García-García, Antonio Corral, Luis Iribarne, and Michael Vassilakopoulos</i>	
An Evaluation of TANE Algorithm for Functional Dependency Detection . . .	208
<i>Nikita Bobrov, George Chernishev, Dmitry Grigoriev, and Boris Novikov</i>	
Towards an Explication and a Conceptualization of Cost Models in Database Systems . . . . .	223
<i>Abdelkader Ouared</i>	

## Data Exploration and Exploitation

Exploiting User Feedbacks in Matrix Factorization for Recommender Systems . . . . .	235
<i>Haiyang Zhang, Nikola S. Nikolov, and Ivan Ganchev</i>	
A Feature Selection Method Based on Feature Correlation Networks . . . . .	248
<i>Miloš Savić, Vladimir Kurbalija, Mirjana Ivanović, and Zoran Bosnić</i>	

Collecting and Processing Arabic Facebook Comments for Sentiment Analysis. . . . .	262
<i>Abdeljalil Elouardighi, Mohcine Maghfour, and Hafdalla Hammia</i>	

### **Modeling Heterogeneity and Behavior**

Conceptual Modelling of Hybrid Systems: Structure and Behaviour. . . . .	277
<i>Andreea Buga, Atif Mashkoor, Sorana Tania Nemeş, Klaus-Dieter Schewe, and Pornpan Songprasop</i>	
Mastering Heterogeneous Behavioural Models . . . . .	291
<i>J. Christian Attiogbé</i>	
Intelligent Detection Without Modeling of Behavior Unusual by Fuzzy Logic. . . . .	300
<i>Hocine Chebi, Dalila Acheli, and Mohamed Kesraoui</i>	

### **Model-Based Applications**

Enabling Agile Web Development Through In-Browser Code Generation and Evaluation . . . . .	311
<i>Alejandro Cortiñas, Carlo Bernaschina, Miguel R. Luaces, and Piero Fraternali</i>	
DAGGTAX: A Taxonomy of Data Aggregation Processes . . . . .	324
<i>Simin Cai, Barbara Gallina, Dag Nyström, and Cristina Seceleanu</i>	
Automating the Evolution of Data Models for Space Missions. A Model-Based Approach . . . . .	340
<i>Lynda Ait Oubelli, Yamine Ait Ameer, Judicaël Bedouet, Benoit Chausserie-Lapree, and Beatrice Larzul</i>	

### **Ontology-Based Applications**

Towards an Emergent Semantic of Web Resources Using Collaborative Tagging . . . . .	357
<i>Sara Qassimi, El Hassan Abdelwahed, Meriem Hafidi, and Rachid Lamrani</i>	
Ontology to Profile User Models with Disabilities. . . . .	372
<i>Brunil Dalila Romero-Mariño, Vanesa Espín, María José Rodríguez-Fórtiz, María Visitación Hurtado-Torres, Luis Ramos, and Hisham M. Haddad</i>	

Ontology-Based User Profile Modelling to Facilitate Inclusion of Visual Impairment People . . . . .	386
<i>María Isabel Torres-Carazo, María José Rodríguez-Fórtiz, Vanessa Espin-Martín, and María Visitación Hurtado</i>	
<b>Author Index</b> . . . . .	395

Model and Data Engineering

7th International Conference, MEDI 2017, Barcelona,  
Spain, October 4-6, 2017, Proceedings

Ouhammou, Y.; Ivanovic, M.; Abelló, A.; Bellatreche, L.  
(Eds.)

2017, XIV, 396 p. 104 illus., Softcover

ISBN: 978-3-319-66853-6