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EDITORIAL

Special Issue on: Model and Data Engineering

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1 Introduction

We welcome you to this special issue dedicated to the best papers presented at the second International Conference on Model and Data Engineering (MEDI) that was held in Poitiers, France in October 2012. MEDI, initiated by researchers from Euro-Mediterranean countries, aims at promoting the creation of north–south scientific networks, projects and faculty/student exchanges as well as of other parts of the world. The first edition of MEDI was held in Óbidos, Portugal, in September 2011. MEDI promotes the interaction and collaboration of research communities issued from modelling and system modelling on the one hand and data and data modelling on the other hand. However, the explosion of the volume of data, models, processes within organizations has brought up new requirements and research issues, in particular to cope with problems related to semantic modelling, deployment, exploitation, performance, personalization or recommendation.

Each year, MEDI invites world-known researchers to give talks. In the first edition, Timos Sellis presently at RMIT University in the School of Computer Science and Information Technology, Australia gave a talk about *Personalization in Web search and data management*, and Mandy Chessell from IBM, UK on *Information Supply Chain Patterns*. The second edition proposed two keynote speakers from system and data modelling communities which were: Mike P. Papazoglou, Tilburg University, the Netherlands and Eric Féron, Georgia Institute of Technology, Atlanta, Georgia, USA. Their respective talks were: *Cloud Blueprint: A Model-driven Approach to Configuring Federated Clouds* and *Model-based Auto Coding of Embedded Control Software with full Semantics.*

The MEDI 2012 call for papers attracted 35 submissions by authors from 13 different countries (being Algeria, France, Portugal and Tunisia the countries with more representatives). The most addressed topics were "Model Driven Engineering, Modelling Languages, Meta-modelling, Model Transformation, Model Evolution" and "Ontology Based Modelling, Role of Ontologies in Modelling Activities".

After careful review and discussion, the programme committee (composed by researchers from 23 different countries) decided to accept 12 long papers and 5 short papers. We are thankful to all the researchers who helped in the review process and made this possible. Out of the 12 full papers, we selected 4 papers to be invited for the special issue in the *Journal on Data Semantics* and after a second round of reviews we finally accepted 3 papers. Thus, the relative acceptance rate for the papers included in this special issue is a competitive 25 %. Needless to say, these three papers represent innovative and high-quality research. We congratulate the authors of these three papers and thank all authors who submitted articles to MEDI.

2 Content

In general, research papers presented at MEDI 2012 covered the most recent and relevant topics in the areas of Model Driven Engineering, Ontology Engineering, Formal Mod-

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elling, Security, Data Mining, and crowd sourcing which represents a hot topic.

In *Integrating a Formal Development for DSLs into Meta-Modelling*, Selma Djeddai, Martin Strecker, and Mohamed Mezghiche present a framework and techniques for models transformation. More specifically, the proposed bi-directional transformation rules represent mappings between data types in proof assistants and class diagrams.

In *Context-based Query using Dependency Structures based on Latent Topic Model*, Masato Shirai, Takashi Yanagisawa, and Takao Miura present context-aware query techniques and experience over document bases. Context abstractions capture dependencies in Japanese based on latent topic model.

In *Modelling Crowd Sourcing scenarios in Socially Enabled Human Computation Applications*, Alessandro Bozzon, Piero Fraternali, Luca Galli and Roula Karam discuss issues related to representing user and content models in social-centred crowd sourcing services. They propose a unified model that builds on existing user and contents models and extends them to represent multiple dimensions of crowd workers, including their social graphs, interest graphs, and worker activities. The authors also discuss use cases and experiments related to socially enabled crowd sourcing platforms.

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