EDITORIAL

Today, complex web information systems are being developed at the same time as high quality development is required. In addition, new methods, techniques and tools for the development of web information systems have appeared in these last years. In fact, there is a big amount of technology that implies that methodologies and tools to develop web information systems have to be constantly changing and evolving to be adapted to the latest advances. This requires that existing methods, techniques and tools for the development of web information systems must be adapted and fast evolved in a flexible and practical way by developers. Then, this changing environment makes it necessary to use proposals that allow estimating efforts in the development of web information systems based on the requirements, requirements that in this context are usually very changing but in turn, independent of technology.

This special issue is oriented to discuss about advanced techniques, new tendencies, experiences of MDWE (Model-driven web engineering) applied to the web information system development, including advances in tool support and enterprise experiences. The theme of this special edition is the new advances in adaptability and rapid evolution of technology in the development of web information systems. So, some proposals that can allow a greater capacity of adaptation to all these changes in a changing environment context caused by the fast evolution of technology are shown.

On the one hand, a model-driven development approach with the capacity to evolve the metamodel quickly is presented, making possible the creation of new artifacts that allow to model new concepts. The paper titled as TOWARDS FAST METAMODEL EVOLUTION IN LIQUIDML" presents an approach for fast evolution of a self-reflective modeling language that allows experts to abstract new language concepts from primitives. It mainly provides zero downtime application and automatic tool evolution. As a consequence, applications designed with this proposed approach can be quicker adapted to business needs than those based on traditional Web modeling languages. with existing modeling languages in a case study, as a proof of its ability to adapt faster to new business needs than conventional approaches.

On the other hand, a proposal that allows defining a SaS architecture to interconnect web information subsystems in a flexible and practical way. The paper titled as APPLYING A MODEL-BASED METHODOLOGY TO DEVELOP WEB-BASED SYSTEMS OF SYSTEMS presents a MDWE methodology to include Web-based interaction into SoS development. Systems of Systems (SoS) are emerging applications composed by subsystems that interacts in a distributed and heterogeneous environment. Web-based technologies are a current trend to achieve SoS user interaction. It's composed of ten models and seven model transformations and it's fully implemented in a support tool for its usage in practice. The proposed approach is validated by its application into a real-world project together with a preliminary analysis of potential benefits.

Finally, a proposal to estimate efforts in big projects and based on requirements is presented. This proposal allows estimates to be made no matter how much they change during development. Then, the paper titled as IDENTIFYING FUNCTIONAL REQUIREMENTS INCONSISTENCIES IN MULTI-TEAM PROJECTS FRAMED INTO A MODEL-BASED METHODOLOGY presents an approach for the systematic conciliation of functional requirements in big projects dealing with a model-based approach. Web information systems requirements should be as consistent as possible to enable estimating in a suitable manner the effort required to obtain the final web information system. It also explains how this approach may be implemented in the context of a model-driven development methodology and finally, it describes a preliminary evaluation of this proposal within a real-world project by analyzing the improvements obtained with the approach.

Francisco José Domnguez-Mayo, *fjdominguez@us.es*
Julián Alberto García-García, *julian.garcia@iwt2.org*
Laura García-Borgoñón, *laura.garcia@iwt2.org*

Guest Editors