Tuesday, August 26, 2014 (Full-day)

TUTORIAL ANNOUNCEMENT

22nd IEEE International Requirements Engineering Conference (RE'14) – Karlskrona, Sweden – http://www.re14.org

João Araújo

Ana Moreira

Gunter Mussbacher

T15 – Model driven requirements engineering

Model-Driven Development (MDD) relies on the use of models for describing software systems. In MDD, models are first-class citizens, and a software system is obtained through the definition of different models at different abstraction layers. Models of a certain abstraction layer are derived from models of the upper abstraction layer by means of automatic model transformations. MDD technology is attracting a wide number of people from industry and academy, because its ability to automate repetitive tasks of the software development process results in increased productivity. Furthermore, more reliable software can be produced once model transformations have been correctly developed and implemented.

In the first part of this tutorial, we give an overview of key modeling techniques useful for Requirements Engineering (RE) activities. The second part then shows how to incorporate model-driven techniques at the RE level and identifies their strengths and weaknesses. We discuss how RE can benefit from model-driven techniques to, for example, ensure consistency among different kinds of requirements models, aid analysis, or automatically construct initial system or architectural models from requirements.

Graduate and post-graduate students, requirements and software engineers, academic researchers, software developers, and other industry professionals will benefit from this tutorial in understanding how MDD techniques can be applied to different aspects of Requirements Engineering, highlighting its advantages when solving problems related to the identification, modeling, and transformation of system requirements.

BIOGRAPHIES

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BIOGRAPHIES

João Araújo is an Assistant Professor of the Department of Informatics at the Universidade Nova de Lisboa. He holds a PhD in Computer Science from Lancaster University in the area of Software Engineering. His principal research interests are Requirements Engineering, Model-driven Engineering, and Software Product Lines, Advanced Modularity where he has published several papers on these topics in journals, international conferences, and workshops. He has been involved in several projects on these topics funded by the European Union, ESA, CRUP, SOFTAS, and FCT/MCTES. He has been a co-founder of the series of the Early Aspects workshops held at AOSD, OOPSLA, SPLC, and ICSE conferences. Additionally, he served on the organization committees of MoDELS, RE, ECOOP, AOSD, and ICSE in the past few years. He served as a guest editor of the Special issue on Early Aspects in the TAOSD journal in 2007. He was on the program board of RE'13. He got "The Most Influential Paper Award" from AOSD'13 conference.

Ana Moreira is an Associate Professor at Universidade Nova de Lisboa where she leads the Software Engineering group. Currently, her main research topics are Advanced Modularization for Software Development, Requirements Engineering and Architecture Design, Model-Driven Development, Variability and Trade-Off Analysis. Ana has been involved in several projects about advanced software engineering techniques, such as MDD, SPL, and AOSD. She publishes regularly at major scientific events of her research interests and has been responsible for several successful international and national research projects. She is a member of the editorial board of the TAOSD and SoSyM journals. She has been a member of the Steering Committee for MODELS and AOSD. She has been, and is, involved, as organizer and program committee member, in several conferences (e.g., ECOOP, CAiSE, MODELS, RE, and AOSD). She has co-organized various international workshops and is co-founder of the international movements pUML and Early Aspects. She was Conference Chair and Program Committee Chair of several international events and was the Foundations Track Chair for MODELS 2013.

Gunter Mussbacher is Assistant Professor in the Department of Electrical and Computer Engineering at McGill University. In his 2010 PhD thesis in computer science from the University of Ottawa, he developed the Aspect-oriented User Requirements Notation (AoURN). He worked in industry as a research engineer for Mitel Networks, where he applied and taught URN concepts. He has several journal publications (e.g., REJ, SQJ, TAOSD), and co-edited with Daniel Amyot all versions of the URN standard. He is teaching software engineering courses as well as URN and AoURN tutorials for industry and at international conferences such as RE, ICSE, MODELS, and AOSD. His general research interests lie in requirements engineering, URN, concern-driven development, model-driven requirements engineering, aspects, and patterns. Gunter is an organizer and program committee member for numerous conferences and workshops (e.g., RE, MODELS, MoDRE, CMA, SAM, SDL Forum).