



**Monday, August 25, 2014 (Full-day)**



**Daniel  
Amyot**

## **TUTORIAL ANNOUNCEMENT**

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

### **T05 – Modeling and analysis with the User Requirements Notation 2.0: features, goals, and scenarios**



**Gunter  
Mussbacher**

The User Requirements Notation (URN), standardized by ITU-T in 2008 with extensive improvements in 2012, offers two complementary views for modeling requirements, features, and business processes: GRL (the Goal-oriented Requirement Language) for stakeholder goals, features, and indicators, and UCM (Use Case Maps) for scenarios and high-level architectures. This tutorial first gives an introduction to the basic concepts and notations of URN, together with a comprehensive analysis approach to requirements modeling, combining both views. Illustrative examples are demonstrated with jUCMNav, a mature Eclipse-based environment that supports URN and combined goal-scenario capabilities.

The second part of the tutorial focuses on indicators (a recent addition to the standard that makes real-life measures available for reasoning within URN models), metadata and user-defined constraints for profiling URN to specific domains, and on the latest integration of feature model analysis into a holistic URN reasoning framework. These powerful mechanisms enable advanced and yet concise modeling in a wide range of application domains.

Requirements engineers, academic researchers, industry professionals, and software developers with an interest in requirements modeling will benefit from this tutorial (i) in understanding how best to apply URN to capture vaguely defined goals, variations, and intentions at the early stages of software development in addition to functional scenarios, (ii) in understanding how to analyze such models qualitatively as well as with quantifiable data, and (iii) through discussions of the presented notations and future perspectives.

**BIOGRAPHIES**

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## BIOGRAPHIES

**Daniel Amyot** is Professor at the University of Ottawa, which he joined in 2002 after working for Mitel Networks as a senior researcher. His research interests include requirements modeling and analysis with goals, scenarios, and aspects; business process modeling; software engineering; feature interactions; regulatory compliance; and e-health. He has over 125 publications in these areas. Daniel co-edited with Gunter Mussbacher all versions of the URN standard. He also leads the development of an open-source Eclipse plug-in (jUCMNav) for the creation, analysis, and transformation of URN models. Daniel holds a Ph.D. (Ottawa, 2001) and is a Professional Engineer. Daniel has given numerous tutorials and invited presentations on various topics related to URN at international conferences, at ITU-T, at departmental seminars, and for industry.

**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).

