# Third Workshop on the Analysis of Model Transformations (AMT'14)

URL: http://msdl.cs.mcgill.ca/conferences/AMT

Valencia, Spain

September 28, 29, or 30, 2014

Co-located with MODELS'14

**Motivation.** To facilitate the processing and manipulation of models, a lot of research has gone into developing languages, standards, and tools to support model transformations — a quick search on the internet produces more than 30 different transformation languages that have been proposed in the literature or implemented in open-source or commercial tools. The increasing adoption of these languages and the growing size and complexity of the model transformations developed require a better understanding of how all activities in the model transformation life cycle can be optimally supported.

Properties of an artifact created by a model transformation are intimately linked to the model transformation that produced it. In other words, to be able to guarantee certain properties of the produced artifact, it may be very helpful, or even indispensable, to also have knowledge of the producing transformation. As the use and significance of modeling increase, the importance that the model transformations produce models of sufficient quality and with desirable properties increases as well; similarly, as the number and complexity of model transformations grows, the importance that transformations satisfy certain non-functional requirements and that life cycle activities for model transformations such as development, quality assurance, maintaince, and evolution are well supported grows as well.

**Objectives and Scope.** The central objective of the workshop is to provide a forum for the discussion and exchange of innovative ideas for the analysis of model transformations, broadly construed. Analyses might support a variety of model transformation activities including the development, quality assurance, maintenance and evolution by facilitating, for instance,

- the detection of typing errors, anti-patterns, dead code, transformation slices, likely invariants, or performance bottlenecks,
- the informal, semi-formal, or formal establishment of properties related to correctness or performance,
- test suite evaluation through code coverage determination,
- code completion and generation,
- the evolution of metamodels,
- impact analysis, and
- refactoring.

Another objective of the workshop is to help clarify which transformation analysis problems can be solved with the help of existing analysis techniques and tools developed in the context of general-purpose programming languages and source code transformation languages, and which analysis problems require new approaches specific to model transformations. The exchange of ideas between the modeling community on the one hand and the programming languages community and source code transformation community on the other hand thus is another objective of the workshop.

**Topics.** Topics of interest include, but are not limited to:

- testing and test case generation for model transformations
- formal specification and verification of model transformations
- abstract interpretation for model transformations (to, e.g., support optimization)
- static analysis for model transformations such as control and data flow analyses and slicing
- dynamic analysis for model transformations such as run-time monitoring and profiling (to, e.g., determine code coverage, or detect requirements violations or likely invariants)
- metrics for model transformations (to support, e.g., anti-pattern detection, refactoring and evolution)
- impact analysis model transformations (to support, e.g., maintenance)
- certification and incremental re-validation for model transformations (e.g., for use in safety-critical systems)
- tools for analyzing model transformations
- (higher-order) transformation of transformation models to make them amenable for analysis
- case studies for analyzing model transformations

**Intended Audience.** The intended audience consists of researchers and practitioners interested in advancing the theory and practice of model transformation through analysis. While the workshop is aimed primarily at members of the modeling community, participation from members of other relevant communities such as programming languages and source code transformation is encouraged.

**Proceedings and Submission Guidelines.** Authors are invited to submit short papers or long papers. **Long papers (max. 10 pages)** should describe novel and innovative contributions to the field of model transformation analysis. **Short papers (max. 6 pages)** can present

- *industrial feedback:* industrial participants may contribute research agendas, experience reports or case studies involving the analysis of model transformations in an industrial setting.
- *work envisioned or in-progress:* researchers new to the field may submit extended abstracts about work they are planning to do or are currently doing.
- *tools:* these submissions discuss tools (or their use) that are at least partially used for the analysis of model transformations.

All submissions must be written in English, should adhere to the LNCS template (available at http://www.springer.com/computer/lncs?SGWID=0-164-6-793341-0). Accepted papers will appear in workshop proceedings published in CEUR, which is indexed by DBLP; each workshop will have its own volume, with the common ISSN of the CEUR series. Submissions will be handled using EasyChair and reviewed by at least three PC members.

**Important Dates.**

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| July 11, 2014 | Submission deadline |
| August 22, 2014 | Author notification |
| TBD | Final version due |
| Sept 19, 2014 | Proceedings available online |

**Program Committee.**

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| Marsha Chechik | University of Toronto, Canada |
| Juergen Dingel (co-chair) | Queen's University, Canada |
| Alexander Egyed | University of Linz, Austria |
| Joel Greenyer | University of Hannover, Germany |
| Holger Giese | University of Potsdam, Germany |
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| Hans Vangheluwe (co-chair) | University of Antwerp, Belgium and McGill University, Canada |
| Dániel Varró | Budapest University of Technology and Economics, Hungary and McGill University, Canada |
| Manuel Wimmer | University of Vienna, Austria |