# FlexMDE 2017

## Overview

Increasingly, models are starting to become commonplace and Model Driven Engineering (MDE) is gaining acceptance in many domains including automotive, aerospace, railways, telecommunications, business, and financial organizations.

Over the last years, several modelling platforms have been developed to simplify and automate many steps of MDE processes. However, still several challenges have to be solved in order to enable a wider adoption of MDE technologies. One of the most important impediments in adopting MDE tools is related to the reduced flexibility of existing modelling platforms that do not permit applied development process. For instance, EMF does not permit to enter models which are not conforming to a metamodel: on one hand it allows only valid models to be defined, on the other hand it makes the corresponding pragmatics more difficult. In this respect, there is a wide range of equally useful artefacts between the following extremes:

- diagrams informally sketched on paper with a pencil
- models entered in a given format into a generic modelling platform, e.g., Ecore/EMF

At the moment, modelling platforms encompasses only the latter possibility. However, while depending on the stage of the process it makes sense to start with something closer to the former (to promote communication among stakeholders) to eventually end up with the latter (to allow automatic model processing and code generation). Thus, we are interested in exploring the possible forms of flexibility that are required when applying MDE processes, ranging from agile ways to develop modelling artefacts and languages to their flexible in concrete application domains.

Flexibility is also needed to enable wider possibilities for reusing MDE artefacts, like model transformations and code generators. In particular, to deal with the growing complexity of software systems, it is necessary to enforce consistent reuse and leverage the interconnection of the modelling artefacts that are produced and consumed during the different phases of the applied development processes. In such contexts, modularization mechanisms have to be devised in order to enable the development of complex modelling artefacts from smaller ones, which are easier to process and reuse.

## Topics

There is an increasing need for more disciplined techniques and engineering tools to support flexibility in several forms in a wide range of modeling activities, including metamodel, model, and model transformation definition processes. The workshop aims at:

- better identifying the difficulties in the current practice of MDE related to the lack of flexibility, and

- soliciting contributions of ideas, concepts, and techniques also from other areas of software development.

Topics of interest include, but are not limited to:

Techniques for flexible meta-modelling and flexible typing
- Flexible metamodelling techniques: less static, more flexible
- Model typing
- Metamodelling by example, bottom-up metamodeling
- Support for generic programming techniques in MDE
- Dynamic typing techniques in MDE
- Multilevel metamodeling
- Typing inconsistency management
- Partial typing, multiple typings
- Constructive (top-down) and exploratory (bottom-up) modes for model typing
- Metamodelling paradigms: multilevel, two-level, archetype-based, ...

Techniques for flexible modelling
- Model sketching
- Model abstraction
- Techniques for embedding domain specific languages in a combined language
- Modelling using mobile devices

Flexible reutilization of MDE artefacts
- Reuse techniques for transformations and code generators.
- Reuse techniques for models and metamodels
- Definition of reusable (meta-)model patterns and transformation patterns
- Componentization techniques for MDE artefacts

Techniques for increasing the agility of the MDE process
- Experience reports regarding lack of flexibility in using modeling and MDE
- Agility and MDE, agile modelling
- Techniques for reducing the gap between modelling and programming

## Submission guidelines

Two kinds of papers are solicited: regular papers (10 pp), and position papers (5 pp), adhering to the Springer LNCS style. Contributions should address novel or preliminary research ideas, challenging problems, and practical contributions to the domain. Industrial feedback are welcome: experience or case studies about applying MDE in an industrial setting showing the lack of flexibility, or ways to overcome it, are solicited as well.

All papers must be written in English. Accepted papers will be published as CEUR workshop proceedings, and indexed in DBLP. We aim to arrange for extended versions of the best papers to be published in a journal.

Paper can be submitted via Easy Chair using the following link: https://easychair.org/conferences/?conf=flexmde16

## Important dates
- Paper submission: July 14, 2017
- Notification to authors: July 28, 2017
- Workshop date: September 17-19, 2017

## Organizers

Davide Di Ruscio, University of L'Aquila (Italy)
Alfonso Pierantonio, University of L'Aquila (Italy) and MDH (Sweden)
Juan De Lara, Universidad Autónoma de Madrid (Spain)