Proceedings of the

STAF 2024 Workshops
AgileMDE 2024, LLM4MDE 2024, MeSS 2024

STAF-WS 2024

July 8–11, 2024
Enschede, The Netherlands

Edited by (in lexicographical order):

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Preface

The symposium on *Software Technologies: Applications and Foundations* (STAF 2024) was held on 8-11 July 2024, in Enschede, The Netherlands. Its workshops, as usual, were an essential complement to the programme of the main conferences of the event.

These proceedings bring together the collective insights and contributions from three workshops held during STAF 2024, all with a central focus on Model-Driven Engineering (MDE):

- The Second International Workshop on Agile Model-Driven Engineering (**AgileMDE**)
- The Fourth International Workshop on Model-Driven Engineering for Smart Internet-of-Things Systems (**MeSS**)
- The First Large Language Models for Model-Driven Engineering Workshop (**LLM4MDE**)

Contributions to other STAF 2024 events — **ECMFA**, **ICGT**, **WADT** and **GCM** — are published in their own separate (post)proceedings volumes and thus not included here.

We would like to thank all community members who have contributed to making STAF 2024 a success. Special thanks to all the authors for submitting and presenting their work, the keynote speakers for sharing their knowledge and experiences during the symposium, the programme committee members for their time and care in reviewing the submissions, and the organisers for putting it all together.

Mairieli Wessel *(Publication Chair)*
Georgiana Caltais *(Workshop Chair)*
Vadim Zaytsev *(General Chair)*

Agile MDE 2024

The Second International Workshop on Agile Model-Driven Engineering served as a platform for the presentation and discussion of cutting-edge work in agile MDE, drawing from both industrial practice and academic research. Its objectives were to:

- Facilitate exchange of insights between practitioners and researchers regarding the challenges and potential solutions in agile MDE approaches.
- Identify successful strategies and key factors for achieving success in implementing agile MDE.
- Foster growth and collaboration within the research and practitioner community in this field.

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Keynote Speaker

- Iván Alfonso, *Luxembourg Institute of Science and Technology*
  - Low-Code and Low-Modeling Strategies for Agile MDE Processes

MeSS 2024

The Fourth International Workshop on Model-Driven Engineering for Smart Internet-of-Things Systems is one of the most accurate venues to offer researchers a dedicated forum to discuss fundamental as well as applied research that attempts to exploit model-driven techniques in the IoT domain.

The key goals of the workshop were:

- foster work in its early stage on novel topics covering fundamental as well as applied research that attempts to apply model-driven techniques in the IoT domain,
- bring together researchers from the model-driven software development and IoT communities, as well as to promote discussions between theoreticians and practitioners, and
- discuss the transfer and/or applicability of research results from the MDE community to IoT industrial case studies.

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- Matthias Tichy, *Ulm University, Germany*

Keynote Speaker

- Giancarlo Guizzardi, *University of Twente, The Netherlands*
  - It's Patterns all the Way Down: Patterns, Anti-Patterns and Pattern Languages for Next-Generation Semantic Modelling

LLM4MDE 2024

The primary objective of the First Large Language Models for Model-Driven Engineering Workshop was to explore potential applications where Large Language Models (LLMs) can support MDE engineers and engage in discussions regarding the implementation of such solutions.

The objectives were to:

- identify use-cases within MDE that can be assisted by LLMs;
- explore the current technologies that enable the tuning of LLMs to optimise MDE processes;
- identify LLMs that could be applied in the MDE field;
- explore MDE technologies for automating the tuning and configuration of LLMs.

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- Juri Di Rocco, *University of L'Aquila, Italy*