

Proceeding of the

STAF 2025 Workshops

OCL, OOPSLE, ICMM, AI4DPS, AgileMDE, LLM4SE, TTC

June 10-13, 2025
Koblenz, Germany

Edited by:

Amir Shayan Ahmadian, Ralf Lämmel, Sobhan Yassipour Tehrani, Ivan Alfonso, Shekoufeh Rahimi, Arne Lange, Thomas Weber, Colin Atkinson, Uwe Aßmann, Antonio Cicchetti, Jose Antonio Hernandez López, Riccardo Rubei, Robert Clarisó, Lars Hamann, Mikhail Barash, Vadim Zaytsev, Andreas Schmitz, Friedrich Steimann, Maria Wimmer, Sandra Greiner, Georg Hinkel, Théo Le Calvar

Preface

The symposium on Software Technologies: Applications and Foundations (STAF 2025) was held on 10-13 June 2025, in Koblenz, Germany. 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 seven workshops held during STAF 2025:

- OCL 2025 - Object Constraint Language
- OOPSLE 2025 - Open and Original Problems in Software Language Engineering
- ICMM 2025 - (In-)Consistency Management in Modeling
- AI4DPS 2025 - Artificial Intelligence for Digital Public Services
- AgileMDE 2025 - Agile Model-Driven Engineering
- LLM4SE 2025 - Large Language Models for Software Engineering
- TTC 2025 - Transformation Tool Case

We would like to thank all community members, authors, keynote speakers, program committee members, and organizers who have contributed to making STAF 2025 workshops a success.

Amir Shayan Ahmadian (Workshop Chair)
Ralf Lämmel (General Chair)

OCL 2025

The 23rd International Workshop on OCL and Textual Modeling (OCL'2025) served as a forum for the community around OCL to discuss new developments around the OCL language, valuable tools based on OCL, its applications and other textual modeling languages. OCL'2025 was held as an event within the Software Technologies: Applications and Foundations (STAF'2025) federated conferences. All information about the workshop is published on the workshop website: <https://conf.researchr.org/home/staf-2025/ocl-2025>

Organizing Committee

- Robert Clarisó, Universitat Oberta de Catalunya, Spain
- Lars Hamann, University of Applied Sciences Hamburg, Germany

Program Committee

- Mustafa Al Lail, Texas A&M International University, USA
- Achim D. Brucker, University of Exeter, UK
- Jordi Cabot, Luxembourg Institute of Science and Technology
- Daniel Calegari, Universidad de la República Uruguay, Uruguay
- Dan Chiorean, Babes-Bolyai University Cluj-Napoca
- Duc-Hanh Dang, VNU University of Engineering and Technology, Vietnam
- Martin Gogolla, University of Bremen, Germany
- Denis Nikiforov, Advalange, Russia
- Xavier Oriol, Universitat Politècnica de Catalunya, Spain
- Bernhard Rumpe, RWTH Aachen University, Germany
- Arnon Sturm, Ben-Gurion University of the Negev, Israel
- Hao Wu, Maynooth University, Ireland

OOPSLE 2025

The Sixth International Workshop on Open and Original Problems in Software Language Engineering is a discussion-oriented and collaborative forum for formulating and addressing open, unsolved and unsolvable problems in software language engineering. It is a platform to define and discuss your problems or verify them on the early stage with the community.

Organizing and Program Committee

- Mikhail Barash, Bergen Language Design Laboratory, University of Bergen, Bergen, Norway
- Vadim Zaytsev, Formal Methods & Tools, University of Twente, Enschede, The Netherlands

Keynote Speaker

- Bernhard Rumpe, Software Engineering, RWTH Aachen, Germany
Addressing the “Engineering” in “Software Language Engineering”
Up to now, the development of new software languages has remained largely an artisanal process, reminiscent of the state of software engineering half a century ago. To bring a more systematic, engineering-oriented methodology to the definition of software languages, we address several critical challenges. These include the lack of formal semantics, the absence of reusable language libraries, and the difficulties enabling compositionality, extensibility, and variant management in both languages and their associated tools. We also review the current state of the art and explore potential solutions to these issues.
- Jordi Cabot, Luxembourg Institute of Science and Technology & University of Luxembourg
Who will create the languages of the future? (hint: probably not a team of language engineers!)
Software is eating the world. Which means that we need good languages to write all this software. And, often, come up with “new” languages to be able to efficiently target new software domains and technologies. In this talk, we will explore the changing landscape of language engineering and discuss how Artificial Intelligence and low-code/no-code techniques can play a role in this future by helping in the definition, use, execution, and testing of new languages. Even empowering non-tech users to create their own language infrastructure. Maybe without them even realising.
- Antonio Cicchetti, Mälardalen University, Västerås, Sweden
Let’s Make Abstraction Engineering Fun Again!
Model-Driven Engineering has witnessed a technological revolution with the advent of rich web interfaces. A part of the consequences is visible in the widespread adoption of Low-/Nocode development platforms. From a software language engineering

perspective, nowadays many language workbenches are web-based (or provide a web-based alternative). In this talk I will discuss recent experiences with the development and adoption of a “native” web-based language workbench called JJODEL. In particular, the advanced web interfaces disclose the support for interesting MDE-relevant features, notably flexible concrete syntaxes, language co-evolution, and collaborative development.

ICMM 2025

The first workshop on (In-)Consistency Management in Modeling held as part of STAF25 brought together people from academia and industry on the topic of consistency and its management.

This workshop aimed to investigate the interplay between modeling and consistency, addressing key topics such as:

- Consistency checking, repair, and preservation within modeling processes.
- Techniques for handling existing inconsistencies in large-scale or distributed models.
- Challenges and solutions for multi-view and multi-paradigm modeling, including the View-Update Problem.
- Approaches to improving the utility of abstractions for diverse stakeholders while maintaining consistency.
- Novel methods to assure software quality through effective consistency management.

Organizing Committee

- Arne Lange, *Karlsruhe Institute of Technology, Germany*
- Thomas Weber, *Karlsruhe Institute of Technology, Germany*
- Colin Atkinson, *University of Mannheim, Germany*
- Uwe Aßmann, *Technical University Dresden, Germany*

Program Committee

- Juan de Lara, *Universidad Autonoma de Madrid, Spain*
- Hossain Muhammad Muctadir, *Eindhoven University of Technology, Netherlands*
- Loek Cleophas, *TU Eindhoven, Netherlands; Stellenbosch University, South Africa*
- Romina Eramo, *University of Teramo, Italy*
- Istvan David, *McMaster University, Canada*
- Antonio Cicchetti, *Mälardalen University, Sweden*
- Andreas Winter, *Carl von Ossietzky University, Germany*
- Gabor Karsai, *Vanderbilt University, USA*
- Manuel Wimmer, *Johannes Kepler University Linz, Austria*
- Perdita Stevens, *The University of Edinburgh, UK*

- Esther Guerra, *Universidad Autónoma de Madrid, Spain*
- João Paulo Almeida, *Federal University of Espírito Santo, Brazil*
- Sebastian Götz, *Technische Universität Dresden, Germany*
- Thomas Kühn, *Martin-Luther-Universität Halle-Wittenberg, Germany*
- Bernhard Rumpe, *RWTH Aachen University, Germany*

Keynote Speaker

- Heiko Klare, *Vector Informatik, Germany*
 - Consistency Management: Successful Practice Meets Research Needs

AI4DPS 2025

The AI4DPS inaugural workshop was held on June 11, 2025 at the University of Koblenz, Germany, as part of the STAF 2025 conference series. It aimed to position GenAI in the transformation of public services. The AI4DPS workshop brought together researchers and practitioners to exchange and discuss how GenAI can drive the digital transformation of the public sector, to identify grand challenges of integrating GenAI into public services (including data security, ethical concerns, transparency, accountability, and public trust), and to identify the necessary skills and awareness in the public sector for responsible GenAI development and its diffusion in digital public services. The workshop covered six accepted contributions and two invited talks. In this joint workshop proceedings, four contributions are published. The accepted papers have been peer-reviewed by at least two independent reviewers along a single blind peer review process. We thank the STAF 2025 organizers for their great support in enabling us to run the AI4DPS inaugural workshop as a STAF 2025 workshop. Special thanks to all authors for submitting and presenting their work at the AI4DPS workshop, the two keynote speakers for sharing their knowledge and experiences during the workshop, the reviewers for their most valuable review services, and the four author teams that contributed their research as contributions to this proceeding.

Organizing Committee

- Andreas Schmitz, University of Koblenz, Germany
- Friedrich Steimann, FernUniversität Hagen, Germany
- Maria A. Wimmer, University of Koblenz, Germany

Keynote Speaker

- Stefan Kaufmann, Wikimedia Deutschland e. V., Germany
Generative KI in der Verwaltung
- Sharam Dadashnia, Insiders Technologies, Germany
From Files to Agents: How Generative AI Transforms Case Handling and Accelerates Citizen-Centric Public Administration

AgileMDE 2025

The Third International Workshop on Agile Model-Driven Engineering (Agile MDE 2025) is held as part of STAF 2025 (Software Technologies: Applications and Foundations), taking place from June 10 to 13, 2025, at the University of Koblenz in Koblenz, Germany. Agile MDE continues to serve as a dynamic platform for presenting and discussing the latest developments at the intersection of agile methods and model-driven engineering (MDE), bringing together academic researchers and industry practitioners.

The workshop aims to: Facilitate the exchange of insights between practitioners and researchers on the challenges and solutions in agile MDE. Identify effective strategies and key success factors in applying agile MDE. Foster collaboration and strengthen the community of agile MDE researchers and practitioners.

Agile methods and model-driven engineering (MDE) emerged in the late 1990s and early 2000s as innovative responses to the limitations of traditional software development. While early MDE approaches were often rigid and tailored to stable environments, growing demands for flexibility and rapid adaptation fueled interest in combining MDE with agile principles. Today, agile MDE is applied across industries such as telecoms, automotive, and avionics. Ongoing research focuses on integrating these paradigms to leverage their combined strengths: MDE enhances agility by automating development tasks, improving reliability, and accelerating delivery, while agile principles introduce responsiveness and user-centric adaptability into MDE processes.

Organizing Committee

- Sobhan Yassipour Tehrani, University College London (UCL), United Kingdom
- Iván Alfonso, Luxembourg Institute of Science and Technology, Luxembourg
- Shekoufeh Rahimi, University of Roehampton, United Kingdom

Program Committee

- Shirin Hussein, University College London (UCL), United Kingdom
- Hessa Alfraihi, Princess Nourah bint Abdulrahman University, Saudi Arabia
- Artur Boronat, University of Leicester, United Kingdom
- Kevin Lano, King's College London, United Kingdom
- Vahid Rafe, St George's, University of London, United Kingdom
- Raman Ramsin, Sharif University of Technology, Iran
- Alireza Rouhi, Azarbaijan Shahid Madani University, Iran
- Leila Samimi-Dehkordi, Shahrekord University, Iran

- Mohammadreza Sharbaf, University of Isfahan, Iran
- Touseef Tahir, University of Roehampton, United Kingdom
- Alfonso de la Vega, Universidad de Cantabria, Spain

LLM4SE

The objectives of the LLM4SE 2025 workshop is to bring together researchers, practitioners and tool developers working on applying Large Language Models to tackle software engineering tasks. We aim to foster discussions and reflections on the benefits and threats of using Large Language Models.

The objectives were to:

- Explore how LLMs can be harnessed to automate, augment, and even transform the software development lifecycle, leading to increased productivity, innovative solutions, and a new era of software creation.
- Explore potential applications where LLMs can support software engineers and engage in discussions regarding the implementation of such solutions.
- Explore the current technologies that enable the tuning of LLMs to optimise MDE processes and identify LLMs that could be applied in the MDE field.

Organizing Committee

- Antonio Cicchetti, Mälardalen University, Sweden
- José Antonio Hernández López, University of Murcia, Spain
- Riccardo Rubei, University of L'Aquila, Italy

Program Committee

- Luca Berardinelli, Johannes Kepler University Linz, Austria
- Boqi Chen, McGill University, Canada
- Giordano D'Aloisio, University of L'Aquila, Italy
- Andrea D'Angelo, University of L'Aquila, Italy
- Juri di Rocco, University of L'Aquila, Italy
- Zohra Kaouter Kebaili, IRISA, France
- Vittoriano Muttillio, University of Teramo, Italy
- Vincenzo Stoico, Vrije Universiteit Amsterdam, Netherlands
- Esther Guerra, Universidad Autónoma de Madrid, Spain
- Robbert Jongeling, Mälardalen University, Sweden
- Jesús Sánchez Cuadrado, Universidad de Murcia, Spain
- Juan de Lara, Autonomous University of Madrid, Spain
- Alfonso de la Vega, Universidad de Cantabria

Keynote Speaker

- Gabriele Taentzer, Philipps-Universität Marburg, Germany
LLMs for Software Engineering: What does that mean for model-driven software development?

TTC 2025

The Transformation Tool Case (TTC) series aim at evaluating and comparing the expressiveness, the usability, and the performance of transformation tools for structured data along a number of selected challenging case studies. We like to learn about the pros and cons of each tool considering different applications. A deeper understanding of the relative merits of different tool features will help to further improve the existing tools, to indicate open problems, and to integrate and standardize transformation tools.

In the TTC 2025, we performed a Live Contest and had a Panel Discussion on the topic **“Model transformation in the age of Generative AI”**. The Panel was composed as follows:

- Artur Boronat, University of Leicester, United Kingdom
- Jordi Cabot, Luxembourg Institute of Science and Technology, Luxembourg
- Nils Weidmann, itemis AG, Germany
- Kevin Lano, King’s College London, United Kingdom
- Matthias Tichy, University of Ulm, Germany

The Live Contest consisted of transforming UVL models into a Dot representation to allow for representing the textual syntax of these feature model as diagrams. The solutions presented and discussed at the Live Contest were developed into papers presented in the following proceedings.

Steering Committee

- Hubert Garavel, INRIA, France
- Reiko Heckel, University of Leicester, United Kingdom
- Dimitris Kolovos, University of York, United Kingdom
- Juan de Lara, Universidad Autónoma de Madrid, Spain
- Davide di Ruscio, University of L’Aquila, Italy
- Manuel Wimmer, TU Wien, Austria
- Steffen Zschaler, King’s College London, United Kingdom

Program Committee

- Anthony Anjorin, Zühlke Engineering GmbH, Germany
- Artur Boronat, University of Leicester, United Kingdom
- Thomas Buchmann, Hof University, Germany
- Mickael Clavreul, ESEO Group Angers, France
- Kevin Lano, King's College London, United Kingdom
- Shekoufeh Rahimi, University of Roehampton. United Kingdom
- Alireza Rouhi, Azarbaijan Shahdid Madani University, Iran
- Chico Sundermann, TU Braunschweig, Germany