

# **Proceedings**

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(Eds.)

## **VaMoS'23**

17th International Working Conference on  
Variability Modelling of Software-Intensive Systems

Odense, Denmark  
January 25–27, 2023



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# Foreword

This volume contains the proceedings of the 17th International Working Conference on Variability Modelling of Software-intensive Systems (VaMoS'23), which was held on the Odense Campus of the University of Southern Denmark from January 25-27, 2023. The previous editions of the event were held in Florence (2022, virtually), Krems (2021, virtually), Magdeburg (2020), Leuven (2019), Madrid (2018), Eindhoven (2017), Salvador (2016), Hildesheim (2015), Nice (2014), Pisa (2013), Leipzig (2012), Namur (2011), Linz (2010), Sevilla (2009), Essen (2008), and Limerick (2007). This year, the conference returned to an in-person format, after a 2 year hiatus due to the Covid-19 pandemic. It was exciting to bring the community back together in the city of Odense. The 16 previous editions of the VaMoS conference successfully bootstrapped research on modelling and managing variability of software systems, as witnessed by the many related breakthroughs published in top-tier conferences and journals. VaMoS aims to bring together researchers and practitioners to share ideas, results and experiences about their quest for mastering variability. As such, in addition to its usual call for technical research papers, VaMoS strongly supports the participation of aspiring young researchers as well as practitioners from industry. This year, thanks to our sponsors we were able to provide free registrations to a number of attendees to keep this tradition going.

As tradition, VaMoS supports two paper tracks for submission: A technical track, and a variability in practice track. This year, we added a new track called New and Controversial Ideas. These are short papers meant to present new ideas or to spark discussion on topics of interest to the VaMoS community. We received 22 submissions across all tracks, which underwent a rigorous review with 3 or 4 reviewers per paper. The technical track and new and controversial ideas track were both reviewed using a double anonymous process, while the variability in practice track used a single anonymous model.

After an online discussion phase, the program committee accepted 14 papers (some initially conditionally) to be presented at the conference. We thank the program committee members and all additional reviewers for providing detailed feedback and for participating in the discussions.

To jumpstart our in person community again we also invited all authors of papers which appeared virtually in VaMoS 2021 and 2022 to submit an abstract for an additional track we call snapshots of VaMoS 2021-2022 and we have included all that we received (7 in total) in this year's program. This has given us an exciting and varied technical program.

Like previous VaMoS, this year's edition was a highly interactive event. Each session provided moderated discussions and also involved the paper presenters as discussants. We are grateful to the local, publicity, and web chairs for their help in organizing VaMoS'23. We also thank the Steering Committee that entrusted us with the organization of the conference.

# Keynotes

The VaMoS'23 conference featured two keynote talks:

- **Variability and Complexity: Automotive Product Line Management as a Constraint Satisfaction Problem**, by Yves Bossu (Renault, France)
- **Defining, Analyzing, Querying and Assuring Product Line Models**, by Marsha Chechik (University of Toronto, Canada)

We thank our keynote speakers for accepting our invitation and for sharing their expertise at the conference.

# Most Influential Paper Award

This year “A Survey of Variability Modeling in Industrial Practice”, by Thorsten Berger, Ralf Rublack, Divya Nair, Joanne M. Atlee, Martin Becker, Krzysztof Czarnecki, Andrzej Wąsowski, was selected as the Most Influential paper. This paper appeared in VaMoS 2013 and has been cited more than 450 times according to Google scholar. The paper stands out since it provides a unique window into industrial practice with respect to variability. It presents the results of a survey performed with industrial practitioners to understand the use of variability modeling in practice. It examines what types of notations and tools are used, the scale of the industrial models and gathers their challenges and mitigation strategies.

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