



15th International Workshop on Models@run.time

In conjunction with MODELS 2021
Virtually, 10.-15. October 2021
<http://st.inf.tu-dresden.de/MRT21>

Organizers

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Important Dates (AoE)

Deadline Submission:
Friday, July 16th, 2021
Notification of acceptance:
Friday, August 6th, 2021
Workshop at MODELS:
t.b.a.

Program Committee

Walter Cazzola
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Federal University of Rio Grande do Norte
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Matthias Tichy
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Vadim Zaytsev
University of Twente
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Call for Papers “Models@run.time”

Motivation

The complexity of adapting software during runtime has spawned interest in how models can be used to validate, monitor, and adapt runtime behavior. The use of models during runtime extends the use of modeling techniques beyond the design and implementation phases. The goal of this workshop is to look at issues related to developing appropriate model-driven approaches to managing and monitoring the execution of systems. We aim to continue the discussion of research ideas and proposals from researchers who work in relevant areas such as MDE, software architectures, reflection, and autonomic and self-adaptive systems, and provide a "state-of-the-art" research assessment expressed in terms of challenges and achievements.

Goal

The objectives of this year's edition of the models@run.time workshop are:

- to foster work on novel topics covering fundamental as well as applied research on models@run.time or, in general, work that attempts to apply model-driven techniques at runtime,
- to bring together researchers from the model-driven software development community of different specialized areas including model evolution, model transformation, model validation and multi-paradigm modeling and
- to discuss the applicability of research results on models@run.time to industrial case studies.

Moreover, we plan to use the workshop as a meeting place for the community and want to collect and classify research results of the past 10 years for an overview paper of the maturing research area.

Workshop format

The workshop participants will be selected based on their experience and ideas related to this maturing field. You are invited to apply for attendance by sending

- a **full paper** (10 pages) on original research, lessons learned from realizing an approach or experiences on transferring a research prototype into practice,
- a **position paper** (6 pages) covering a well-argued vision or position,
- a **demo paper** (2 pages) describing a demonstration to be shown at the workshop,
- an **artifact paper** (2 pages) together with the artifact, which is of use to the community (e.g., a reusable case study or a challenging example) or
- a short motivation (max. 100 words) to give a 5-minute **lightning talk**, to introduce yourself to the community at the end of the first session of the workshop.

All papers have to be formatted according to the IEEE format of the main conference and will be published via CEUR-WS. Artifacts will be published in ReMoDD, the repository for model-driven development (<http://www.cs.colostate.edu/remodd/v1/>). Motivations for lightning talks will not be published. At least three PC members will review each submission. The authors will be notified about acceptance before the MODELS 2021 early registration deadline.

Topics of Interest

Papers on models@run.time can relate (but are not limited) to the following domains:

- **Machine Learning models:** runtime models created by and for machine learning approaches
- **Cyber-physical Systems:** hybrid runtime models
- **Digital Twins (DT), DevOps, Microservices, CyberSecurity, Systems of Systems:** runtime models to make Innovative Industrial Applications autonomic and self-adaptive
- **Business Processes:** runtime models of (business) workflows
- **Cloud Computing:** runtime models for, e.g., multi-tenant systems
- **Self-modeling:** approaches able to create models on-the-fly
- **Self-adaptive and self-organizing systems** in general

We strongly encourage authors to address the following topics in their papers:

- The **causal connection** between the system and the runtime model, with particular focus on a transaction concept for this causal connection (timing, roll-back ability, and data consistency)
- **Distributed** models@run.time, i.e., having multiple, interacting systems, each having an own runtime model
- **Modular** models@run.time, i.e., approaches to improve the modularity of models@run.time systems
- **Co-evolving** models@run.time, i.e., systematic approaches to synchronize multiple, interacting models@run.time systems
- **No** papers on executable models, unless they are causally (bi-)connected to a running system (else consider submitting to the co-located workshop on executable modeling).

Further Information

Web site: <http://st.inf.tu-dresden.de/MRT21>

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