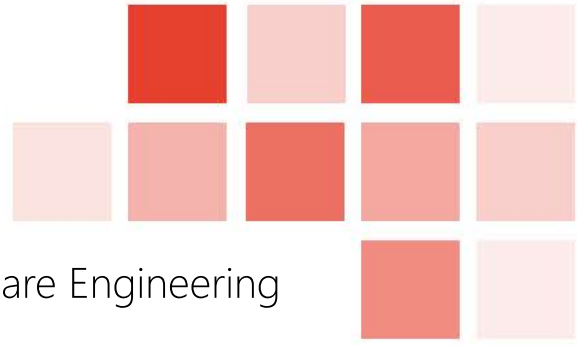


# MORSE'16

## Third Workshop on Model-Driven Robot Software Engineering

July 1st, 2016 in Leipzig, Germany



Robots are an indispensable part of modern production facilities. In the future, robots will also become more common in daily life. Currently, however, there is a lack of standardization w.r.t. hardware/software platforms for robots, leading to a vast landscape of isolated, incompatible, task-specific and, thus, non reusable solutions.

**Consequently, there is a need for new engineering methodologies for the design, implementation and execution of software for robotic platforms.**

photo by NASA Johnson via Flickr/Creative Commons

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**Model-Driven Robot Software Engineering (MORSE)** is a promising research field combining **Software Engineering and Robotics**. Its objectives are to introduce model-driven development methodologies for the development of robot software. At the same time, formal methods should be transferred to robotics because "robot apps" must be certified and verified. MORSE attempts to fill this gap.

### Robotic Platforms: MDA, Models, Processes and Tools

Hardware/Software Abstractions | Architectures | Metamodels  
Code- and Application-Reuse | Managed Redundancy | Deployment  
Variability in Robotic Systems | Self-Adaptive Systems | Evolution  
Programming Languages | Paradigms | Models | DSLs

### Models for and Modelling in Robotics

Sensors and Actuators | Sensor Integration  
Computer Vision and Image Processing | Recognition and Tracking  
Knowledge Representation and Reasoning | Context Models  
Ontologies and Conceptual Modeling  
Localization, Mapping and Navigation  
Autonomous Robots | Robot Learning and Artificial Intelligence

### Robot Ecosystems and Total Cost of Ownership

Product-Line Development  
End-User Customization | Multi-Tenancy

### Model-Driven Quality Assurance of Robotic Systems

Verification | Validation | Testing | Simulation | Debugging | Profiling  
Handling Emergent Behavior and Uncertainty | Software Qualities

### Multi-Robot Systems

Cooperative Perception | Planning | Task Allocation | Coordination  
Robot Swarms | Multi-Agent Robotic Systems

MORSE16 is co-located with the RoboCup 2016.  
[www.robocup2016.org](http://www.robocup2016.org)

**RoboCup Date**  
1st – 4th July 2016

**Location**  
Messe Leipzig  
Leipzig, Germany

**Abstract Submission**  
April 4th, 2016

**Submission Deadline**  
April 11th, 2016

**Notification**  
May 2nd, 2016

**Camera Ready**  
June 15th, 2016

**Workshop**  
July 1st, 2016

Submitted papers must conform to the ACM SIG Proceedings Style.

For more information please visit  
<http://st.inf.tu-dresden.de/MORSE16>