

**Eingeladener Vortrag:**  
**Towards Model-Driven Software Engineering for Cloud  
Robots**

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**Abstract:** Cloud-based robots are a specific forms of cyber-physical system, in which sensors, actuators, embedded system and cloud technology have to play together reliably. Therefore, cloud robots pose a new challenge for software engineering and programming languages: Cloud robots are not only complex robotic systems, but need all techniques of model-driven software development, such as domain-specific modelling, world modelling, reasoning in heterogeneous technical spaces, traceability between code and requirements, platform-independent and -dependent modelling, reuse technologies, and many more. In the end, software for cloud robots must be certified, i.e., a new product line technology has to be developed in which "apps" are certified incrementally, both in variants and versions.

We present some of the related challenges and discuss the hypothesis that this will lead to a new research field between model-driven software engineering and robotics.