

EINLADUNG

Zeit: Mittwoch, 25. Januar 2012, 15:00 Uhr

Ort: Hörsaal AH 3, Ahornstr. 55

Referent: Thomas Noll
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Thema: Correctness, Safety and Fault Tolerance in
Aerospace Systems: The ESA COMPASS
Project

Building modern aerospace systems is highly demanding. They should be extremely dependable, offering service without failures for a very long time – typically years or decades. The need for an integrated system-software co-engineering framework to support the design of such systems is therefore pressing. However, current tools and formalisms tend to be tailored to specific analysis techniques and do not sufficiently cover the full spectrum of required system aspects such as safety, dependability and performance. Additionally, they cannot properly handle the intertwining of hardware and software operation. As such, current engineering practice lacks integration and coherence.

This talk gives an overview of the COMPASS project that was initiated by the European Space Agency to overcome this problem. It supports system-software co-engineering of real-time embedded systems by following a coherent and multidisciplinary approach. We show how such systems and their possible failures can be modeled in the Architecture and Analysis Design Language, how their behavior can be formalized, and how to analyze them by means of model checking and related techniques.

Es laden ein: Die Dozenten der Informatik