Fachbereich Computerwissenschaften

EINLADUNG
zum Gastvortrag am

Mittwoch, 17. März 2010, 11:00 Uhr, T03
Institutsgebäude Jakob-Haringer-Str. 2, Itzling

von

Tomáš Kalibera, Ph.D.
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zum Thema:

Real-time Garbage Collector for Java

Tomas Kalibera is an assistant professor at Charles University, Czech Republic. From 2007 to 2009 he worked as a postdoctoral researcher at Purdue University on real-time garbage collection and real-time Java.
At Purdue, he contributed to Ovm real-time Java virtual machine. He received his Ph.D. from Charles University in 2006 - his dissertation was in the field of performance evaluation of computer systems. His masters project was an implementation of a software component model for C++ applications.

Abstract:
Real-time Java with real-time garbage collection might become a platform of choice for future real-time and embedded systems, as they bring features that make programming easier and less error prone than C or Ada: dynamic allocation, automatic deallocation, the lack of memory access errors, and a means to build spatial separation on.
Although there are some successful deployments of the technology in mostly demonstrator case studies, both Java and garbage collection currently have limitations that prevent their use in hard real-time safety-critical/embedded systems: unpredictability, complexity, large footprint, and ultimately unlikely certification. The main focus of the talk will be Minuteman, a real-time garbage collection framework that allows an apple-to-apple comparison of different real-time garbage collection features, some of which are present in state-of-the-art production systems, where they however cannot be compared on the fair grounds.

Univ.Prof. Dr. Christoph Kirsch (Host)