

Einladung

zum Informatik-Kolloquium des
AB Programmiersprachen und Übersetzer am
Mittwoch, den 26. April 2017, um 14:00 Uhr c.t.
in der Bibliothek E185.1, Argentinierstr. 8, 4. Stock (Mitte)

Es spricht

Prof. Dr. João Saraiva

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über

Green Software Laboratory: Towards an Engineering Discipline for Green Software

While in the previous century computer users were mainly looking for fast computer software, this is nowadays changing with the advent of powerful mobile devices, like laptops, tablets and smartphones. In our mobile-device age, one of the main computing bottlenecks is energy consumption. This growing concern on energy efficiency may also be associated with the perspective of software developers. Unfortunately, developing energy-aware software is still a difficult task. While programming languages provide several compiler optimizations, memory profiler tools, benchmark and time execution monitoring frameworks, there are no equivalent tools/frameworks to profile/optimize energy consumption.

In the context of the Green Software Laboratory project we are developing techniques and tools to support programmers in analyzing, optimizing and, thus, developing greener software. We will present a technique to improve the energy consumption of Java programs by defining a “green ranking” of the Java Collection Framework. We will also present SPELL - Spectrum-based Energy Leak Localization: a language independent technique and tool to locate “energy leaks” (ie. abnormal energy consumption) in the software’s source code.

Biographie: João Saraiva is Professor Auxiliar at the Departamento de Informática, Universidade do Minho, Braga, Portugal, and a researcher member of HASLab/INESC TEC. He obtained a MSc degree from University do Minho in 1993 and a Ph.D. degree in Computer Science from Utrecht University in 1999. His main research contributions have been in the field of program language design and implementation, program analysis and transformation, and functional programming. He is one of the founders of the successful series of summer schools on Grand Timely Topics in Software Engineering (GTTSE), which he co-organized in 2005, 2007, 2009, 2011, and 2015 (volumes 4143, 5235, 6491, and 7680 of LNCS - Tutorial by Springer-Verlag) in Braga. He was the organizing chair of ETAPS’07, organized in Braga in 2007, and a member of its scientific committee (2007-2012). (<http://haslab.uminho.pt/jas/>)

Zu diesem Vortrag lädt der *Arbeitsbereich für Programmiersprachen und Übersetzer am Institut für Computersprachen* herzlich ein.

Tee: 13:30 Uhr in der Bibliothek E185.1, Argentinierstr. 8, 4. Stock (Mitte).