INFORMATIK-KOLLOQUIUM
AB Programmiersprachen und Übersetzer
Institut für Computersprachen

computer languages

Einladung

zum Informatik-Kolloquium des
AB Programmiersprachen und Übersetzer am
Freitag, den 5. August 2011, um 10 Uhr s.t.
in der Bibliothek E185.1, Argentinierstr. 8, 4. Stock (Mitte)

Es spricht
Dr. Werner M. Dietl
University of Washington, Seattle, WA, USA

über

Tunable Static Inference for Generic Universe Types

Object ownership is useful for many applications, including program verification, thread synchronization, and memory management. However, the annotation overhead of ownership type systems hampers their widespread application. This talk addresses this issue by presenting a tunable static type inference for Generic Universe Types. In contrast to classical type systems, ownership types have no single most general typing. Our inference chooses among the legal typings via heuristics. Our inference is tunable: users can indicate a preference for certain typings by adjusting the heuristics or by supplying partial annotations for the program. We present how the constraints of Generic Universe Types can be encoded as a boolean satisfiability (SAT) problem and how a weighted Max-SAT solver finds a correct Universe typing that optimizes the weights. We implemented the static inference tool, applied our inference tool to four real-world applications, and inferred interesting ownership structures.

Biography: Werner M. Dietl is a post-doctoral research associate at the department of Computer Science & Engineering of the University of Washington, where he works with Prof. Michael Ernst. He is a member of the SE.CS and WASP research groups and aims to help software engineers produce high-quality software by enabling them to better understand and structure their software. Previously, he was a research and teaching assistant at the Chair of Programming Methodology, ETH Zurich, working on his doctoral thesis under the supervision of Prof. Peter Müller. (`http://www.cs.washington.edu/homes/wmdietl/`)

Zu diesem Vortrag lädt der *Arbeitsbereich für Programmiersprachen und Übersetzer am Institut für Computersprachen* herzlich ein.
Tee: 9:30 Uhr in der Bibliothek E185.1, Argentinierstr. 8, 4. Stock (Mitte).