Second International Summer School on Trends in Concurrency

Trend in Concurrency 2008

PRAGUE, CZECH REPUBLIC
June 22 - 27

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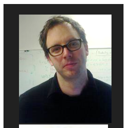
Concurrency is a pervasive and essential characteristic of modern computer systems. Whether it is the design of new hyper-threading techniques in computer architectures, specification of non-blocking data structures and algorithms, implementation of scalable computer farms for handling massive data sets, or the design of a robust software architecture for distributed business processes, a deep understanding of mechanisms and foundations for expressing and controlling concurrency is required. Recent architectural advances in multi-core and many-core architectures have made this an essential topic for any serious student of computer science.

This summer school will bring together outstanding researchers from academia and industry to discuss current research and future trends in concurrent systems design and implementation. All instructors have had significant impact in the area of concurrency, and play an active role in substantial ongoing research and commercial efforts.

The goal of this school is to expose graduate students and young researchers to new and important ideas in concurrent programming. The school is the second of a series; the first was held in Bertinoro, Italy in 2006. The school is intended to foster in-depth discussion between instructors and students, and to encourage wide-ranging discussions. Laboratory sessions are planned, student presentations will be encouraged. The focus this year is on programming language design, program analysis, specification, and implementation as they relate to concurrent systems.

To encourage free discussion, attendance will be limited to 40 participants. Admission will be competitive, and preference will be given to students actively pursuing (or who have recently completed) a Ph.D in the topic areas being covered.

The meeting is organized in collaboration with the Distributed Systems Group at the Charles University, and will include an invited lecture by Profs. Frantisek Plasil and Petr Hnetynka on the SOFA 2.0 component model.
Our speakers include the following researchers.

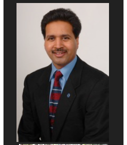


BYRON COOK, MICROSOFT RESEARCH.
Dr. Cook's research interests include program verification, theorem proving, concurrency, and programming languages. Byron has developed the Terminator termination prover and the SLAyer shape analysis tool. Before moving to MSR Cambridge Byron co-developed the SLAM software model checker.

NEAL GLEW, INTEL RESEARCH.
Neal Glew received a PhD from Cornell University in 2000. Neal joined Intel Corporation In 2002. His research has focused on Typed Assembly Language, Java virtual machines, and parallel functional languages.

JAN-WILLEM MAESSEN, SUN LABORATORIES.
Dr. Maessen is working on the design and implementation the Fortress programming language at Sun Microsystems Laboratories. His interests include language design, computer architecture, parallel algorithms, and memory consistency models. Jan has a Ph.D. from MIT, and worked on parallel Haskell.

MARTIN ODERSKY, EPFL.
Prof. Odersky designed the Pizza and GJ extensions of Java. His current research concentrates on the design of the language Scala which achieves a fusion of object-oriented and functional programming, while remaining compatible with platforms such as Java and .NET.



VIVEK SARKAR, RICE UNIVERSITY.
Prof. Sarkar conducts research in programming languages, program analysis, compiler optimizations and virtual machines for parallel systems. His past projects at IBM include the X10 language, Jikes RVM, ASTI, and PTRAN. He is currently working on the Habanero Multicore Software project at Rice University.

PETER SEWELL, CAMBRIDGE UNIVERSITY.
Peter Sewell is a Senior Lecturer at the University of Cambridge, following a Royal Society University Research Fellowship and study at Edinburgh and Oxford. His main interests are in applied semantics: for programming languages, specification and verification techniques for network protocols, and security.