2013 International Symposium on Code Generation and Optimization

Shenzhen, China
February 23-27, 2013

Organizing Committee

General Chairs
Chenggang Wu, CAS (Chinese Academy of Sciences)
Jack W. Davidson, Univ. of Virginia

Program Chairs
Kathryn S McKinley, Microsoft Research & Univ. of Texas at Austin
Lieven Eeckhout, Gent University

Finance Chairs
Weina Wang, CAS
Shengmei Li, CAS

Local Chair
Shengzhong Feng, CAS

Publicity Chair
Huimin Cui, CAS

Publications Chair
Xipeng Shen, Univ. of William & Mary

Registration Chair
Jianjun Li, CAS

Tutorials Chair
Bruce Childers, Univ. of Pittsburgh

Workshop Chair
Maged Michael, IBM Research

Sponsor Chairs
Yunquan Zhang, CAS
Robert Hundt, Google

Student Chair
Adam Welc, Adobe

Website Chair
Kun Ling, CAS

Steering Committee

Ben Zorn (Chair), Microsoft Research
Saman Amarsighe, MIT
David August, Princeton Univ.
Carol Eidt, Microsoft
Mary Hall, University of Utah
Kim Hazelwood, Univ. of Virginia
Anne Holler, VMware
Robert Hundt, Google
Scott Mahlke, University of Michigan
Uma Srinivasan, Intel
Olivier Temam, INRIA

The International Symposium on Code Generation and Optimization (CGO) provides a premier venue to bring together researchers and practitioners working at the interface of hardware and software on a wide range of optimization and code generation techniques and related issues. The conference spans the spectrum from purely static to fully dynamic approaches, including techniques ranging from pure software-based methods to architectural features and support.

Original contributions are solicited on, but not limited to, the following topics:

Code Generation and Optimization
- Efficient execution of dynamically typed and higher-level languages
- Optimization and code generation for emerging programming models, platforms
- Optimizations for energy efficiency
- Profile-guided, feedback-directed, and machine learning based optimization
- Compiler abstractions and intermediate representations

Parallelism
- Languages, optimizations, and runtimes for parallelism & heterogeneity
- Optimizations for heterogeneous or specialized parallel targets, e.g. GPUs
- Data distribution and synchronization
- Thread extraction

Static and Dynamic Analysis
- Profiling and instrumentation for power, memory, throughput or latency
- Efficient profiling and instrumentation techniques
- Program characterization methods
- Profile-guided optimization
- Novel and efficient tools for power, performance analysis, debugging and testing

OS, Architecture and Runtime support
- Architectural support for improved profiling, optimization and code generation
- Integrated system design (HW/OS/VM/SW)
- Memory management and garbage collection

Security and Reliability
- Code analysis and transformations to address security or reliability concerns

Practical Experience
- Real dynamic optimization and compilation systems for general purpose, embedded system and HPC platforms

Applications of above in emerging technology areas, such as
- Web programming environments, application runtimes, optimizations
- SOCs, heterogeneous platforms hardware/software co-design, analysis and optimization

Important Dates
1. **Abstract Submission**: September 6, 2012
2. **Paper Submission**: September 12, 2012
3. **Author Response Period**: October 22-24, 2012
4. **Notification to Authors**: October 31, 2012

http://www.cgo.org/cgo2013