2013 International Symposium on Code Generation and Optimization

Shenzhen, China
February 23-27, 2013

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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 11, 2012, 3am CEST
3. **Author Response Period**: October 22-24, 2012
4. **Notification to Authors**: October 31, 2012

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