2014 International Symposium on Code Generation and Optimization

Orlando, Florida

February 15-19, 2014

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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

Optimization for Parallelism
- Runtime systems for parallelism & heterogeneity
- Optimizations for heterogeneous or specialized parallel targets, e.g. GPUs
- Compiler-driven 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

CGO 2014 is co-located with HPCA 2014 and PPoPP 2014 this year. Authors should carefully consider the difference in focus of the conferences when deciding where to submit a paper.

CGO will make the proceedings *freely available* via the ACM DL platform for up to two weeks before and two weeks after the event. This option will facilitate easy access to the proceedings by conference attendees, and it will also enable the community at large to experience the excitement of learning about the latest developments being presented in the period surrounding the event itself.

Important Dates

1. Abstract Submission: September 6, 2013, 11:59 pm EST
2. Paper Submission: September 13, 2013, 11:59 pm EST
3. Author Response Period: October 28-30, 2013
4. Notification to Authors: November 8, 2013