CALL FOR PAPERS – TAU 2015

ACM International Workshop on Timing Issues in the Specification and Synthesis of Digital Systems

Mar 12-13, 2015 – Monterey, CA – www.**tauworkshop**.com

What is the future of timing analysis? How to meet the industry's insatiable quest for speed, capacity, accuracy, and integration with optimization? Will parallelism be the final answer, or shall we fundamentally re-think timing? What about the challenges for process, 3D, variability, analog modeling and validation?

The TAU series of workshops provide an informal forum for practitioners and researchers working on these and other temporal aspects of analog and digital systems to disseminate early work and engage in a free discussion of ideas. The twenty-second in the TAU series, the **TAU 2015** workshop invites submissions and proposals from the traditional as well as emerging areas related to the timing properties of digital electronic systems, including but not limited to the topics listed below.

Timing (including incremental timing)
- *System-level timing*
- *Circuit/gate-level timing*
- *Transistor-level timing*
- *Timing of mixed signal circuits*
- *Common path pessimism removal/reduction*

Variability
- *Timing analysis under uncertainty*
- *Statistical timing analysis and optimization, Monte Carlo and stochastic methods*
- *Variation modeling*
- *Digital cell characterization for many corner/statistical timing*
- *Sensitivity/criticality analysis*
- *Yield analysis and optimization*

Signal integrity
- *Crosstalk modeling, analysis, avoidance and optimization*
- *Adjacent line switching and coupling*

Characterization
- *Cell (library) characterization*
- *Latch characterization*
- *Simulation and characterization of SRAM circuits*

Emerging technologies
- *Full custom design analysis*
- *Special circuit families*
- *Timing issues for 3D ICs*
- *Modeling and analysis of TSVs*
- *Timing implications of emerging technologies*

Modeling and simulation
- *Transistor level modeling*
- *Analog circuit modeling*
- *Circuit level simulation*
- *Delay models and metrics*
- *Reliability modeling and simulation*

Power, trade-offs and optimization
- *Timing issues in low-power design*
- *Power-delay tradeoffs*
- *Layout impact on timing*
- *Timing driven layout optimization*
- *Timing driven synthesis, re-synthesis*
- *Circuit optimization*

Clocking
- *Clocking, synchronization, and skew*
- *Clock domains, static/dynamic logic*
- *Novel clocking schemes*

Hierarchical timing
- *Timing macro-modeling*
- *Incorporating crosstalk and/or variation effects in macro-modeling*

Others
- *Integrated functional-temporal analysis*
- *Formal theories and methods*
- *Asynchronous systems*
- *Smart sensor placement*

DATES

Paper submission deadline:
~~November 17, 2014~~
November 26, 2014
(extended)

Acceptance notification:
December 22, 2014

Camera ready papers due:
January 12, 2015

Contest registration starts:
October 1, 2014

Early binary due:
February 1, 2015

Final binary due:
February 15, 2015

ORGANIZATION

General chair: Igor Keller (Cadence)

Past chair: Chirayu Amin (Intel)

Technical program chair:
Debjit Sinha (IBM)

Contest chair:
Jin Hu (IBM)

Timing contest: Similar to prior years, TAU is organizing a timing contest. The topic for the TAU 2015 contest is "*Incremental timing and CPPR (common path pessimism reduction)*". Details are posted on the workshop website. Winners of the contest will be awarded plaques as well as cash prizes!

SUBMISSION OF PAPERS

All papers must be submitted electronically via the workshop website www.tauworkshop.com. Submissions are limited to 6 pages in the double column proceedings format. In order to allow for a blind review, submitted pdf version of the papers should not contain the authors name or any direct reference to the authors. TAU is a workshop aimed at fostering a high level of professional interaction, not a conference. Copies of papers will be provided to the attendees, but the proceedings will not be published by the ACM or the IEEE. Therefore, *accepted papers can still be submitted to other conferences and journals*.