Workshop on Pioneering Processor Paradigms (WP3)
(Held in Conjunction with HPCA-2017; Saturday February 4th 2017, Austin, TX)

ADVANCE PROGRAM (morning): Location: Hilton Austin, Room: 415B

7:30 AM – 8:30 AM (room: 616AB): Breakfast (provided by the conference)

8:30 AM – 8:40 AM: Welcome and Introduction
- Pradip Bose; on behalf of the workshop co-organizers:
  (Ramon Bertran, Pradip Bose, Robert Montoye, John-David Wellman)

8:40 AM – 9:40 AM: Keynote – I: Prof. Yale N. Patt,

  Ernest Cockrell, Jr. Centennial Chair in Engineering
  University of Texas at Austin
  Talk Title: Processor Paradigms: Evolution or Disruption

9:40 AM – 10:00 AM: Stacked Memory Architectures
- Towards a memory-centric, stacked architecture for extreme-scale, data intensive computing: John Leidel, Xi Wang and Yong Chen, Texas-Tech University.

10:00 AM – 10:15 AM (room: 616AB): Coffee/Tea Break

10:15 AM – 10:40 AM: Reconfigurable and Power-Efficient Architectures
- Two-level controlled parallel reconfigurable architectures: Takanobu Baba, Kanemitsu Ootsu, Utsonomiya University
- A survey of low-power NoC design techniques: Emmanuel Ofori-Attah and Michael Opoku Agyeman, University of Northhampton (5 minute summary: remote presentation, via skype or just telephone tie-in).

- Time-randomized processors for secure and reliable high-performance computing: David Trilla, Carles Hernandez, Jaume Abella, Francisco Javier Cazorla, UPC and Barcelona Supercomputing Center, Barcelona
- End-to-end stochastic computing: Carly Schulz, Mikko Lipasti, University of Wisconsin – Madison

11:20 AM – 12:00 Noon: Retrospective Survey-I
- Efficient floating point unit design - a historical perspective: Robert Montoye, IBM T. J. Watson Research Center

12:00 Noon – 1:15 PM: LUNCH (self)
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ADVANCE PROGRAM (afternoon)

Location: Hilton Austin, Room: 415B

1:15 PM – 2:15 PM: Keynote-II: Prof. Jacob A. Abraham

*Cockrell Family Regents Chair in Engineering*

*University of Texas at Austin*

Talk Title: Pioneering Paradigms in Systems Resilience

2:15 PM – 3:15 PM: Panel Session:

- **Notable Pioneering (Research) Paradigms** (that should have made it into real design, but didn’t yet, or did make it in the end after lots of tweaks)
- **Panelists:** Prof. Yale Patt, Prof. Jacob Abraham, Prof. Mikko Lipasti
- **Moderator:** one of the workshop organizers

3:15 PM – 3:30 PM *(room: 616AB): Coffee/Tea Break*

3:30 PM – 4:15 PM: Retrospective Survey-II

- Cycle-accurate simulation advances in support of efficient & resilient design: *John-David Wellman (with Ramon Bertran and Pradip Bose), IBM T. J. Watson Research Center*

4:15 PM – 5 PM: Recap/discussion; action items

- Discussion driven by J-D Wellman, Ramon Bertran and Robert Montoye
  - Can/should we try a special issue of IEEE Computer (or ACM Communications) to cover selected articles that cover the theme of this workshop?
  - Should we offer WP3 again in the future? At ISCA or MICRO? How can we improve the quality and the end utility?