

25 February, 2018 / Vienna, Austria

Second Workshop on Pioneering Processor Paradigms

In conjunction with the 24th IEEE Symposium on High Performance Computer Architecture

| **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:** *Mikko H. Lipasti, MICRO 2017 Test of Time Award, University of Wisconsin - Madison*

- Talk Title: A Brief History of Speculation

| **9:40 AM – 10:00 AM: Retrospective Survey I**





- On the Evaluation of Computer Architectures
Mario Badr and Natalie Enright Jerger, University of Toronto
[Paper](#)  [Presentation](#) 

| **10:00 AM – 10:30 AM: Coffee/Tea Break**

| **10:30 AM – 11:20 AM: Invited Talk:** *Lluis Vilanova, Technion*

- Talk Title: 40 years since dusk: will hardware capabilities finally make our systems more capable?

| **11:20 AM – 12:00 AM: New/Exploratory paradigms**





- A Multi-component Branch Predictor Design for Low Resource Budget Processors
Moumita Das, Ansuman Banerjee and Bhaskar Sardar, Indian Statistical Institute and Jadavpur University
[Paper](#)  [Presentation](#) 
- FFT implementation using mono-instruction set computer architecture
Hiroki Shinba and Minoru Watanabe, Shizuoka University
[Paper](#)  [Presentation](#) 

| **12:00 Noon – 1:30 PM: Lunch**

| **1:30 PM – 2:20 PM: Keynote-II:** *R. Iris Bahar, Brown University*



- Talk Title: Ventures into Power-Aware Computer Architecture Design

| **2:20 PM – 3:00 PM: Retrospective Survey II**

- This Architecture Tastes Like Microarchitecture
Curtis Dunham and Jonathan Beard, ARM Research
[Paper](#)  [Presentation](#) 
- Project CrayOn: Back to the future for a more General-Purpose GPU?
Philip Machanick, Rhodes University
[Paper](#)  [Presentation](#) 

| **3:00 PM – 3:30 PM: Coffee/Tea Break**

| **3:30 PM – 3:50 PM: Retrospective Survey III**

- 45-year CPU evolution: one law and two equations
Daniel Etiemble, University Paris Saclay
[Paper](#)  [Presentation](#) 

| **3:50 PM – 4:50 PM: Panel Session**

- Panel title: Retrospective Vision: A Blessing or a Curse?
Panelists: Daniel Etiemble, Curtis Dunham, Mario Badr, Philip Machanick
Moderator: Miquel Moreto
Panel Description: This panel will discuss and debate the worth of looking back at pioneering processor paradigms of the past. Are such retrospective views of past innovations useful in future research, or can they discourage new researchers from pursuing ideas in that field - because they conclude it to be a mature (or even dead-ended) field? The panel is composed of a range of innovators - from seasoned, senior researchers/practitioners to younger innovators who are quite new as professionals. .

| 4:50 PM - Recap/discussion; closing remarks, action items

- Discussion driven by workshop organizers.
 - 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?