

## PARMA-DITAM Workshop PROGRAM

### PARMA 2023: 14<sup>th</sup> Workshop on Parallel Programming and Run-Time Management Techniques for Many-core Architectures

### DITAM 2023: 12<sup>th</sup> Workshop on Design Tools and Architectures for Multi-Core Embedded Computing Platforms

Location: Room **Durat** (morning) / **Mermoz** (afternoon)

Tuesday, 17 January 2023

09:00 – 10:00 *HiPEAC Keynote*

10:00 – 10:15 **PARMA-DITAM Opening session**

Chair: Stefano Cherubin, Edinburgh Napier University

10:15 – 11:00 **[Invited Talk] ByteNite: A New Commercial Model of Grid Computing**

Fabio Caironi, Niccolò Castelli (ByteNite)

Chair: Giuseppe Massari, Politecnico di Milano

11:00 – 11:30 *Coffee Break*

11:30 – 12:15 **[Invited Talk] RUST-Encoded Stream Ciphers on a RISC-V Parallel Ultra-Low-Power Processor**

Francesco Barchi, Giacomo Pasini, Emanuele Parisi, Giuseppe Tagliavini, Andrea Bartolini, Andrea Acquaviva, Università di Bologna (UNIBO)

Chair: Stefano Cherubin, Edinburgh Napier University

12:15 – 12:45 **Session A – Power and Thermal Management**

Chair: Giuseppe Massari, Politecnico di Milano

12:15 – 12:30 **MonTM: Monitoring-based Thermal Management for Mixed-Criticality Systems**

Marcel Mettler, Martin Rapp, Heba Khdr (KIT), Daniel Mueller-Gritschneider (TUM), Jörg Henkel (KIT) and Ulf Schlichtmann (TUM)

12:30 – 12:45 **Dynamic Power consumption of the Full Posit Processing Unit: Analysis and Experiments**

Michele Piccoli, Davide Zoni, William Fornaciari (POLIMI), Marco Cococcioni, Federico Rossi (UNIFI), Emanuele Ruffaldi (MMI), Sergio Saponara (UNIFI) and Giuseppe Massari (POLIMI)

13:00 – 14:00 *Lunch*

14:00 – 14:45 **[Invited Talk] Rethinking how we build compilers in a heterogeneous world**

Michael O'Boyle (University of Edinburgh)

Chair: Henri-Pierre Charles, CEA

14:45 – 15:30 **Session B – HW/SW Design**

[parma-ditam-workshop.github.io](https://parma-ditam-workshop.github.io)

## PARMA-DITAM Workshop PROGRAM

Chair: Henri-Pierre Charles, CEA

14:45 – 15:00 **An evaluation of the state-of-the-art software and hardware implementations of BIKE**

Andrea Galimberti, Gabriele Montanaro, William Fornaciari and Davide Zoni (POLIMI)

15:00 – 15:15 **Adjacent LSTM-based Page Scheduling for Hybrid DRAM/NVM Memory Systems**

Manolis Katsaragakis, Konstantinos Stavrakakis, Dimosthenis Masouros, Lazaros Papadopoulos and Dimitrios Soudris (NTUA)

15:30 – 16:00 *Coffee Break*

16:00 – 16:45 **[Invited Talk] Challenges and opportunities in C/C++ source-to-source compilation: the Clava compiler use-case**

João Bispo (University of Porto)

Chair: Stefano Cherubin, Edinburgh Napier University

16:45 – 17:00 **Closing and Final wrap-up**

Chair: Stefano Cherubin, Edinburgh Napier University

## Paper presentations

We invite authors of accepted papers to prepare presentations with slides. Each paper presentation is scheduled to last at most 15 minutes. Time slot includes:

- **10 min oral presentation**
- 3 min Q&A
- 2 min technical setup & speaker introduction by Session chair.

Presenters should provide a short (no more than 3 lines) biography introduction to be handed to the Session chair at the beginning of the Session.