

PARMA-DITAM Workshop PROGRAM

PARMA 2025: 16th Workshop on Parallel Programming and Run-Time Management Techniques for Many-core Architectures

DITAM 2025: 14th Workshop on Design Tools and Architectures for Multi-Core Embedded Computing Platforms

Location: Room **4**

Wednesday, 22 January 2025

09:00 – 10:00 *HiPEAC Keynote*

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

Chair: Stefano Cherubin, NTNU

10:15 – 11:00 **Invited Talk**

William Fornaciari (Politecnico di Milano)

Chair: Giovanni Agosta, Politecnico di Milano

11:00 – 11:30 *Coffee Break*

11:30 – 13:00 **Session A – High-Performance and Real-Time Systems**

Chair: Giovanni Agosta, Politecnico di Milano

11:30 – 12:00 **HiPART: High-Performance technology for Advanced Real-Time systems**

Sara Royuela, Adrian Munera, Chenle Yu, Josep Pinot

12:00 – 12:30 **System-Level Timing Performance Estimation Based on a Unifying HW/SW Performance Metric**

Vittoriano Muttillio, Vincenzo Stoico, Giacomo Valente, Marco Santic, Luigi Pomante, Daniele Frigioni

12:30 – 13:00 **Analysis of GPU Memory Allocation Characteristics**

Marcos Rodriguez, Irune Yarza, Leonidas Kosmidis, Alejandro Calderón

13:00 – 14:00 *Lunch*

14:30 – 15:30 **Session B – Advances in Compiler and Optimization**

Chair: Vittoriano Muttillio, Università di Teramo

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- 14:30 – 15:00 **Evaluation of the Parallel Features of Rust for Space Systems**
Alberto Perugini, Leonidas Kosmidis
- 15:30 – 16:00 **Assessing the Impact of Compiler Optimizations on GPUs Reliability using source to source code randomization tool**
Pau Lopez Castillon, Xavier Carrichio Hernández, Leonidas Kosmidis
- 15:00 – 15:30 **Custom Floating-Point Computations for the Optimization of ODE Solvers on FPGA**
Serena Curzel, Marco Gribaudo

15:30 – 15:45 **Closing and Final wrap-up**

Chair: Stefano Cherubin, NTNU

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:

- **23 min oral presentation**
- 5 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.