DATE 20 — Design, Automation and Test in Europe Conference

Computing In-Memory:
from Device to Applications Workshop (CIMW)
Grenoble, 13.03.2020

1ˢᵗ Workshop on Computing-in-Memory: from Device to Applications

Call for Papers

General Chairs:

Said Hamdioui
TUDelft, NL

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INL, FR

Program Chair:

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TIMA, FR

Panel Chair:

Ian O'Connor
INL, FR

Program Committee (to include):

Stephan Wong, NL
Onur Mutlu, CH
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Bastien Giraud, FR
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Jean Michel Portal, FR
Georgios Sirakoulis, GR
Artur Poigel, PL
Farshad Moradi, DK
Daniel Arumi, ES
Marco Ottavi, IT
Christan Weis, DE

Key Dates:

Paper Submission:
January 12, 2020

Notification:
January 19, 2020

Camera Ready:
January 28, 2020

Aim of the Conference: All issues with which the architectures and technologies are face today have led to the slowdown of the traditional device scaling. In order for computing systems to continue deliver sustainable benefits for the foreseeable future, alternative computing architectures and notions have to be explored in the light of emerging new device technologies.

This workshop aims at providing a forum to discuss Computation-in-Memory (as an alternative architecture) in the light of emerging non-volatile devices (such as RRAM, PCM and STT-MRAM), and its potential applications. It also aims at reinforcing the CIM community and at offering a holistic vision of this emerging computing paradigm to the electronic design, automation and test communities. The workshop covers all aspects of CIM based on non-volatile devices including (but not limited to):

- **Device and technology:** physics and modeling, device technologies, device characterization.
- **Novel logic and circuit design concepts using NV devices:** Boolean logic, threshold logic, arithmetic circuits, multi-level based logics, memories, PUF technology, TRNG design.
- **System architectures and new computing paradigms:** resistive computing, neuro-inspired computing, novel architectures and CMOS integration, cellular automata and array computing.
- **Applications exploiting NV devices:** signal processing, chaos and complex networks, sensors applications, AI applications.
- **Automation and CAD tools:** mapping tools, compilers, logic synthesis tools, design space exploration tools.
- **Test and Reliability:** test and reliability solutions for circuits and architectures.

Paper Submission: Authors are invited to submit their research work to the CIM Workshop, the 2020 edition. Paper submissions should be in the form of **extended abstracts**. The paper must clearly indicate the research area, main results and contributions. The manuscript should follow the instructions included in the author's kit on the conference website. Submitted articles should be in PDF format and uploaded on the on-line submission system. Submissions will be considered as evidence that, upon acceptance, the corresponding author assumes responsibility of preparing the final version in due time and the commitment of registration and presentation of the paper at the workshop.

https://www.date-conference.com/workshop/w02

Questions about the workshop can be addressed to:

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