

12th Workshop on Parallel Programming and Run-Time Management Techniques for Many-core Architectures

10th Workshop on Design Tools and Architectures for Multicore Embedded Computing Platforms

PARMA-DITAM 2021, January 19, 2021, Budapest, Hungary

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ACM Classification 2012

Hardware → Reconfigurable logic and FPGAs; Software and its engineering → Compilers; Computer systems organization → Parallel architectures; Theory of computation → Concurrency

ISBN 978-3-95977-181-8

Published online and open access by

Schloss Dagstuhl – Leibniz-Zentrum für Informatik GmbH, Dagstuhl Publishing, Saarbrücken/Wadern, Germany. Online available at <https://www.dagstuhl.de/dagpub/978-3-95977-181-8>.

Publication date

March, 2021

Bibliographic information published by the Deutsche Nationalbibliothek

The Deutsche Nationalbibliothek lists this publication in the Deutsche Nationalbibliografie; detailed bibliographic data are available in the Internet at <https://portal.dnb.de>.

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Digital Object Identifier: 10.4230/OASlcs.PARMA-DITAM.2021.0

ISBN 978-3-95977-181-8

ISSN 1868-8969

<https://www.dagstuhl.de/oasics>

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ISSN 1868-8969

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In a moment of exceptional changes,
We remember all the people we lost.
May they inspire us to look ahead
To the new opportunities we found.

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■ Preface

This volume collects the papers presented at the 12th Workshop on Parallel Programming and Run-Time Management Techniques for Many-core Architectures, and the 10th Workshop on Design Tools and Architectures for Multicore Embedded Computing Platforms (PARMA-DITAM 2021). The workshop is co-located with the 2021 edition of the HiPEAC conference and was held on January 19, 2021. Although the workshop was originally planned to take place at Budapest, Hungary, due to the COVID-19 pandemic it switched to a virtual online event.

The current trend towards many-core and the emerging accelerator-based architecture requires a global rethinking of software and hardware design. The PARMA-DITAM workshop focuses on many-core architectures, parallel programming models, design space exploration, tools and run-time management techniques to exploit the features of such (heterogeneous) many-core processor architectures from embedded to high performance computing platforms.

The scope of the PARMA-DITAM workshop include the following topics:

- Parallel programming models and languages, compilers and virtualization techniques
- Runtime adaptivity, runtime management, power management and memory management
- Heterogeneous and reconfigurable many-core architectures and design space exploration
- Design tools and methodologies for many-core architectures
- Parallel applications for many-core platforms
- Architectures and compiler techniques to accelerate deep neural networks



