7th Workshop on Next Generation Real-Time Embedded Systems

NG-RES 2026, January 28, 2026, Kraków, Poland

Edited by
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ACM Classification 2012
Computer systems organization → Real-time systems; Computer systems organization → Embedded and cyber-physical systems; Software and its engineering → Software notations and tools; Networks

ISBN 978-3-95977-415-4

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/978-3-95977-415-4.

Publication date
March, 2026

Bibliographic information published by the Deutsche Nationalbibliothek
The Deutsche Nationalbibliothek lists all publications of this volume in the Deutsche Nationalbibliografie; detailed bibliographic data are available in the Internet at https://portal.dnb.de.

Digital Object Identifier: 10.4230/OASIcs.NG-RES.2026.0

ISBN 978-3-95977-415-4 **ISSN 1868-8969** **https://www.dagstuhl.de/oasics**

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ISSN 1868-8969

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OASICS Schloss Dagstuhl – Leibniz-Zentrum für Informatik, Dagstuhl Publishing, Germany

Preface

On behalf of the Technical Program Committee, we are pleased to welcome you to the Proceedings of the 7th Edition of the Workshop on Next Generation Real-Time Embedded Systems (NG-RES 2026), held in Krakow, Poland, on January 28, 2026.

The NG-RES workshop series focuses on real-time embedded systems, with particular emphasis on distributed and parallel aspects. It serves as a forum for both the networking and multicore real-time communities, fostering cross-fertilisation and multidisciplinary approaches to the design, analysis, and implementation of next-generation embedded systems.

Key topics covered at NG-RES 2026 included, but were not limited to:

- Formal verification and timing analysis of distributed/parallel real-time systems
- Programming models and runtime frameworks for heterogeneous platforms (CPUs, GPUs, FPGAs, AI accelerators)
- Real-time networking protocols and services
- ML-assisted scheduling, resource management, and control
- Middleware for CPS, IoT, and IIoT
- Virtualisation, containerization, and mixed-criticality management
- RTOS, hypervisors, and separation kernels Distributed trust, resilience, and adaptive security in CPS
- Scheduling and schedulability analysis for distributed and/or parallel real-time systems
- Sustainable and low-power real-time computing techniques

We would like to express our sincere gratitude to everyone involved in the organization of the workshop. In particular, we thank the General Chair, Federico Terraneo, and the Submission and Web Chair, Daniele Cattaneo, for their leadership and dedication. We also extend our special appreciation to the Program Committee members listed below, whose commitment, expertise, and hard work were instrumental in shaping a high-quality and engaging workshop program.

- Deepak Gangadharan, *International Institute of Information Technology, Hyderabad*
- Jatin Arora, *VORTEX CoLab and CISTER Research Centre, Portugal*
- Jürgen Teich, *Friedrich-Alexander-Universität Erlangen-Nürnberg, Germany*
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- Mubarak Ojewale, *National College of Ireland, Ireland*
- Patrick Meumeu Yomsi, *CISTER Research Centre, ISEP, Portugal*
- Syed Aftab Rashid, *Hitachi Energy Research, Switzerland*

We also thank our publisher, Schloss Dagstuhl, as well as the HiPEAC organizers for their valuable support and contributions to the success of this workshop. Finally, we sincerely thank all the authors who contributed to NG-RES 2026. Their high-quality research and insightful contributions made this workshop possible.

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