Preface

Welcome to the 26th International Conference on Computational Science (ICCS 2026 - https://www.iccs-meeting.org/iccs2026/), held from 30 June to 1 July 2026 at DESY (Deutsches Elektronen-Synchrotron), in Hamburg, Germany.

This 26th edition, jointly organized by the University of Amsterdam (UvA) and the University of Tennessee at Knoxville (UTK), was a fully in-person event — as was the previous edition in Singapore. Despite the many challenges of our present times, we have strived to keep the ICCS community as dynamic, creative, and productive as possible. We are proud to present these proceedings as a testament to that effort.

Founded in 1959, DESY is a publicly-funded research center of the Helmholtz Association and one of the world's leading accelerator centers. With 3000 staff members, of which 1300 scientists, DESY conducts ground-breaking matter research, leveraging DESY research infrastructures, such as the X-ray radiation source PETRA III, but also its international involvement, for example, in CERN experiments. This very data-intensive strand of research builds upon efficient data-centric computing and data streaming infrastructures, in particular DESY's Interdisciplinary Data & Analysis Facility (IDAF), and upon matter-oriented computing and data management research and development. This interplay of infrastructures, research and development enables unprecedented scientific insights into more than 200 PBs of data that are being managed by DESY—from the interaction of elementary particles to nanomaterials or biomolecular processes. With these capabilities and capacities, DESY has become a magnet for thousands of guest researchers and is particularly happy to welcome ICCS participants in 2026!

The International Conference on Computational Science is an annual conference that brings together researchers and scientists from mathematics and computer science as basic computing disciplines, as well as researchers from various application areas who are pioneering computational methods in sciences such as physics, chemistry, life sciences, engineering, arts, and humanitarian fields, to discuss problems and solutions in the area, identify new issues, and shape future directions for research.

The ICCS proceedings series have become a primary intellectual resource for computational science researchers, defining and advancing the state of the art in this field.

We are proud to note that this 26th edition, with 23 workshops (the Workshops on Computational Science), and over 300 participants, has kept to the tradition and high standards of previous editions.

The theme for 2026, "**At the Forefront of Science through Computation and Data**", highlighted the role of Computational Science in assisting multidisciplinary research. This conference was a unique event, focusing on recent developments in scalable scientific algorithms; advanced software tools; computational grids; advanced numerical methods; and novel application areas. These innovative novel models, algorithms, and tools drive new science through efficient application in physical systems, computational and systems biology, environmental systems, finance, and others.

ICCS is well known for its lineup of keynote speakers. The keynotes for 2026 were:

- **George Karniadakis**, Brown University, USA
- **Amanda Randles**, Duke University, USA
- **Christian Schroer**, DESY | University of Hamburg, Germany
- **Hareesha Narayana Shirankallu**, Bosch Global Software Technologies GmbH, Germany
- **Estela Suarez**, Jülich Supercomputing Centre | University of Bonn, Germany

This year, the main track of ICCS registered 177 submissions, of which 59 were accepted as full papers, and 35 as short papers. There were on average 2.1 single-blind reviews per submission.

We would like to thank all committee members from the main track and workshops for their contribution to ensuring a high standard for the accepted papers. We would also like to thank *Springer, Elsevier,* and *Intellegibilis* for their support. Finally, we appreciate all the local organizing committee members for their hard work in preparing this conference.

We hope you enjoyed the conference and the beautiful city of Hamburg.

July 2026

Philipp Neumann

Michael J. Puma

Michael H. Lees

Derek Groen

Jack J. Dongarra

Peter M. A. Sloot

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