

Special Volume on
Challenges and Advances in Numerical Analysis—
A special volume dedicated to Giuseppe Rodriguez on the
occasion of his 60th Birthday

This volume contains contributions by the participants to the conference on Challenges and Advances in Numerical Analysis. The conference was held at the University of Cagliari, in Cagliari, Italy, from the 5th to the 9th of June 2023. The focus of the conference were new advances and challenges in Numerical Analysis. The authors present at the conference covered a wide variety of topics, including numerical linear algebra, differential equations, approximation theory, inverse problems, quadrature, and graph analysis. The book of abstracts of the conference can be found at <https://bugs.unica.it/cana23/absbook.pdf>.

The conference did not have parallel sessions. This allowed the speakers to present their work to all the participants. Extended lunch breaks provided time for conference participants to interact and discuss research.

The organizing committee was composed by (in alphabetical order)

- Alessandro Buccini, University of Cagliari, Italy;
- Patricia Díaz de Alba, University of Salerno, Italy;
- Caterina Fenu, University of Cagliari, Italy;
- Luisa Fermo, University of Cagliari, Italy;
- Daniela Lera, University of Cagliari, Italy;
- Federica Pes, University of Pisa, Italy.



Photo of the participants.

The scientific committee consisted of (in alphabetical order)

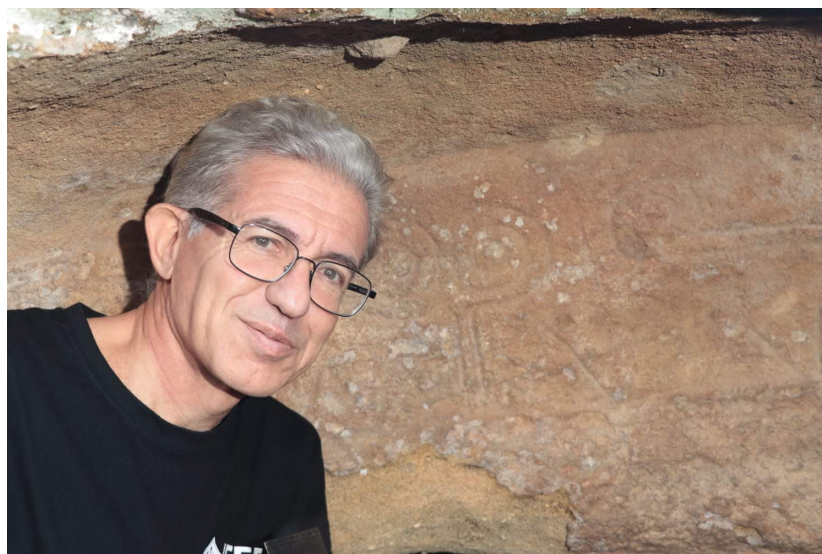
- Marc Van Barel, KU Leuven, Belgium;
- Dario Bini, University of Pisa, Italy;
- Claude Brezinski, University of Lille, France;
- Cornelis Van Der Mee, University of Cagliari, Italy;
- Marco Donatelli, University of Insubria, Italy;
- Claudio Estatico, University of Genova, Italy;
- Silvia Noschese, University of Rome (Sapienza), Italy;
- Ronny Ramlau, Johannes Kepler University Linz & Johann Radon Institute for Computational and Applied Mathematics, Austria;
- Michela Redivo Zaglia, University of Padova, Italy;
- Lothar Reichel, Kent State University, USA;
- Giuseppe Rodriguez, University of Cagliari, Italy;
- Hassane Sadok, University of Littoral Côte d'Opale;
- Fiorella Sgallari, University of Bologna, Italy;
- Raf Vandebril, KU Leuven, Belgium.

The conference was the occasion to celebrate the 60th birthday of Prof. Giuseppe Rodriguez and his many contribution to Numerical Analysis; see below. The editors of this volume are honored and glad to be able to call Giuseppe their friend.

The papers in this volume were published after being refereed in the order they were accepted for publications. We would like to thank all the authors for their contributions to this volume and the referees for their help with this volume. Special thanks go to Stefan Kindermann and the managing editors who prepared the papers of this volume for publication.

Alessandro Buccini, University of Cagliari
Marco Donatelli, University of Insubria
Caterina Fenu, University of Cagliari
Luisa Fermo, University of Cagliari
Silvia Noschese, University of Rome (Sapienza)
Ronny Ramlau, Johannes Kepler University & Johann Radon Institute for Computational and Applied Mathematics
Lothar Reichel, Kent State University

Special Volume Editors



Giuseppe Rodriguez.

Giuseppe Rodriguez

Giuseppe Rodriguez was born in Carbonia, Italy, on the 7th of April 1963, he received his degree in Mathematics at the University of Cagliari in 1988 under the supervision of Prof. Sebastiano Seatzu. After a short period of teaching at high school, he was a researcher at the Engineering school at the University of Cagliari from 1991 to 1998. He was an Associate Professor at the University of Tor Vergata, Rome, from 1998 until 2001. He then came back to Cagliari in 2001 as an Associate Professor, where he became a Full Professor in 2019.

He works on several areas of Numerical Analysis. In particular, he has made significant contributions on inverse problems, quadrature rules and orthogonal polynomials, integral equations, network analysis, photometric stereo, geophysics, and archaeology. Until now, he authored more than 80 papers, collecting more than 1500 citations. He advised four Ph.D. students (Dr. Anna Concas, Prof. Caterina Fenu, Prof. Patricia Díaz de Alba, and Dr. Federica Pes) and he is currently mentoring two Ph.D. students (Mr. Andrea Azzarelli and Ms. Elisa Crabu).