



## FAATNA20>22: Functional Analysis, Approximation Theory and Numerical Analysis

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### Abstract

This special issue contains a selection of contributions that have been presented at the conference “FAATNA20>22: Functional Analysis, Approximation Theory and Numerical Analysis”, which has been held in Matera (Italy), July 5-8, 2022.

This special issue contains part of the Proceedings of the International Conference FAATNA20>22 (Functional Analysis, Approximation Theory and Numerical Analysis). The conference has been held in Matera, an UNESCO World Heritage Site located in Basilicata (Italy), in the period July 5-8, 2022.

The conference was organized by the Department of Mathematics, Computer Science and Economics of the University of Basilicata in cooperation with the Department of Mathematics of the University of Bari Aldo Moro and the Department of Mathematics “Giuseppe Peano” of the University of Torino, and its Organizing Committee was composed of Donatella Occorsio (chair), Maria Carmela De Bonis, Concetta Laurita, Vita Leonessa, and Maria Grazia Russo, all of them from the University of Basilicata, Mirella Cappelletti Montano from the University of Bari Aldo Moro and Incoronata Notarangelo from the University of Torino.

FAATNA conference was conceived with the aim of continuing the long tradition of the International Conference Functional Analysis and Approximation Theory (in short, FAAT), held in Maratea (Potenza) for six editions from 1989 to 2009, and organized thanks to the efforts of Professors Francesco Altomare and Giuseppe Mastroianni. Their scope was essentially to create a space where mathematicians working in different fields could fruitfully discuss and possibly start new cooperations. Following this tradition, the FAATNA conference included a large variety of topics such as approximation by linear or non linear operators, orthogonal polynomials, methods of functional analysis in approximation problems and functional equations, linear spaces and algebras of operators, function spaces, constructive approximation, numerical integration, numerical methods for integral and differential equations, numerical linear algebra. About 250 mathematicians coming from 33 different countries took part to the conference, mainly in presence, fewer by remote. The scientific program was structured in 8 Plenary Lectures, 13 Special Sessions and a Contributed Poster Session. The complete details of the conference are available on the website <http://web.unibas.it/faatna22/index.html>.

We express our depth gratitude to the Plenary Speakers

- Francesco Altomare, University of Bari Aldo Moro (Italy)
- Len Bos, University of Verona (Italy),
- Francisco Marcellán Español, Universidad Carlos III de Madrid (Spain),
- Hrushikesh Mhaskar, Claremont Graduate University (USA),
- Gradimir V. Milovanovic, Serbian Academy of Sciences and Arts (Serbia),
- Ioan Rasa, Technical University of Cluj-Napoca (Romania),
- Gianluca Vinti, University of Perugia (Italy),
- Yuesheng Xu, Old Dominion University (USA),

for honoring us with their participation in the Conference. Moreover, we thank the Scientific Committee, directly involved in organizing the special sessions, and the anonymous referees, helping us to carefully select the papers included in this volume. We also thank the Department of Mathematics, Computer Science and Economics of the University of Basilicata, the Department of

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We would like to thank the Local Organizing Committee composed by Anna Lucia Laguardia, Sandro Lancellotti, Domenico Mezzanotte, Federico Nudo, and Valeria Sagaria, who assisted and helped us in organizing the Conference secretariat services.

Finally, we express our gratitude to Professors Len Bos and Stefano De Marchi, for accepting to publish on this scientific journal the papers presented at the conference and mainly dealing with Approximation Theory themes.