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ATMA2021 - Approximation: Theory, Methods, and Applications

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Abstract

This special issue contains a selected collection of contributions that have been presented at the conference "ATMA2021 - Approximation: Theory, Methods, and Applications", which has been held in Reggio Calabria (Italy) in November 2021.

This special issue is related to the activities of the conference "ATMA2021 - Approximation: Theory, Methods, and Applications", which has taken place at University Mediterranea of Reggio Calabria (Italy) in November 10-12, 2021.

ATMA2021 was the fourth conference organized within the activities of RITA (Rete Italiana di Approssimazione). The previous conferences of the series took place in Palermo (2018), Napoli (2019), Perugia (2020). They are held in conjunction with the RITA and UMI - TAA (Teoria dell'Approssimazione e Applicazioni) annual meetings.

The main goal of such conference series is to bring together researchers working in different fields of approximation and to present recent advances from both a theoretical and a numerical perspective.

The complete details of the ATMA2021 conference are available on the webpage <http://www.atma2021.unirc.it>.

The program included 3 plenary presentations by internationally recognized invited speakers working in different fields of approximation: Elisabeth Larsson, Uppsala University (Sweden), Vladimir Protasov, University of L'Aquila (Italy), Ulrich Reif, Darmstadt University (Germany). The conference program was also enriched by 30 contributed presentations and 8 posters, on topics connected to: geometric modeling; numerical methods for CAGD; subdivision schemes; wavelets and frames; kernel methods; meshless approximation; approximation theory in medical imaging; approximation algorithms for biological models; mathematical signal processing; time-frequency transforms; multivariate polynomial interpolation; splines and rational interpolation and approximation; numerical methods for integral equations.

The papers in this special issue belong to a selected collection of contributions presented at ATMA2021 and have been refereed according to the standard peer review process of the journal DRNA. The topics are related to relevant research fields, like solutions to some classes of PDEs [1, 10], Radial basis function generated finite differences [2, 8], computation of the Joint Spectral Radius [3], methods for integral equations [4, 9], approximation of set-valued functions [5], RBF interpolation [6], methods for epidemiological models [7], multivariate sampling-type operators [11], challenges in subdivision schemes [12].

We would like to thank the speakers, all the participants and the local organizers for making the conference successful. We thank all the contributors to this volume, the editors of journal DRNA (especially Stefano De Marchi) for giving us the opportunity to publish this special issue. We also wish to express our warm thanks to all the reviewers for their hard work in ensuring the quality of the final papers.

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Group picture at ATMA2021 - University Mediterranea of Reggio Calabria

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