FOREWORD TO PROCEEDINGS OF EQUADIFF 15

The Conference on Differential Equations and Their Applications – abbreviated as Equadiff – is one of the oldest active series of mathematical conferences in the world. The tradition of the Czechoslovak Equadiff dates back to 1962 when Equadiff 1 took place in Prague. The subsequent Czechoslovak Equadiff conferences are held since then periodically in Prague, Bratislava, and Brno every four years (with few exceptions). The Western Equadiff conferences are organized in various cities in Western Europe, starting in Marseille in 1970 and with the last meeting in Leiden in 2019.

The last Equadiff was held in Brno in summer 2022 as the 15th conference within the Czechoslovak Equadiff series, and hence it bears the name Equadiff 15. The conference was rescheduled to the year 2022 from the original date in July 2021 due to an unstable pandemic situation in the world. The proceedings from all previous Czechoslovak Equadiff conferences are available via the Czech Digital Mathematics Library at

$$\texttt{https://dml.cz/handle/10338.dmlcz/700001.}$$

The conference Equadiff 15 was organized by joint efforts of the Faculty of Science of Masaryk University (and its Department of Mathematics and Statistics) with the Faculty of Civil Engineering of Brno University of Technology, the Institute of Mathematics of the Czech Academy of Sciences, and the Brno branch of The Union of Czech Mathematicians and Physicists. The conference took place at the campus of the Faculty of Economics and Administration of Masaryk University from July 11 till July 15, 2022. More than 250 participants from 37 countries from all over the world attended the 241 talks of the conference, including 6 plenary talks, 17 invited talks, 124 talks in 33 organized minisymposia, 75 contributed talks, and 19 posters.

The proceedings of Equadiff 15 cover the theory of differential equations in a broad sense, including their theoretical aspects, numerical methods, and applications. The proceedings contain 29 scientific articles written by participants of Equadiff 15. The papers are divided into three sections according to the program of the conference:
  – ordinary differential equations (15 papers),
  – partial differential equations (9 papers),
  – numerical analysis and applications (5 papers).
Each manuscript underwent a rigorous refereeing process to ensure its scientific quality. This issue contains the contributions from section Partial differential equations.

We would like to take this opportunity to express our special thanks to all the participants for their active contributions to the success of the Equadiff 15 conference. Our gratitude and appreciation belong to the members of the Scientific Committee who ensured the high standards of the scientific activities of the conference, to the organizers and supporting PhD students for their efforts towards the realization of the conference, to the administration of the Faculty of Economics and Administration of Masaryk University for providing the venue for the conference and for their organizational support, to the management and employees of the Accommodation and Catering Services of Masaryk University for their help with the organization and realization of the catering during the conference, to the workers of the Botanical Garden of the Faculty of Science of Masaryk University for providing the flower decoration, and to the director of the Department of Mathematics and Statistics of the Faculty of Science of Masaryk University for financial support. We also thank to Ilona Lukešová from the Editorial Office of Archivum Mathematicum for her extensive editorial work on these proceedings.

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