

PREFACE

The volume contains eleven papers written by participants (and their coauthors) of the international conference *Inspirations in Real Analysis* which took place in Będlewo, in April 3–8, 2022.

The conference was addressed especially to people mostly interested in real analysis approach to dynamical systems, topology, set theory, and also other topics which are close to the ones just mentioned, and the content of this volume covers these areas of mathematics.

The reader will find papers on free groups generated by Hamel functions, extensions of the Hutchinson–Barnsley theory of fractals (e.g. involving Lasota–Myjak semiattractors, nonmetrizable attractors, noncontractive IFSs, generalized IFSs in the sense of Miculescu and Mihail), cardinal numbers related to topological spaces like Q -spaces and T_i spaces, topological games approach to the Freese–Nation property, the Assouad embedding theorem, iterations in rings of formal power series, group actions on Polish spaces, and difference inclusions.

The topics considered are interrelated with the general theory of real analysis. We believe that the papers will be stimulating and inspiring for the readers and may give rise to new research trends.

The conference gathered 63 mathematicians (48 of them participated in person and 15 remotely) from all over the world: Brasil (online), Czech Republic, Hungary, Ireland (online), Italy, Poland, Romania (online), USA, Ukraine (online). The participants listened to 45 short talks and to 6 plenary talks delivered by the invited speakers: Emma D’Aniello, Udayan Darji, Tomasz Downarowicz, Marton Elekes, Rafał Filipów and Michał Morayne. The position of the international mathematical community on the Russian attack on Ukraine was expressed during a special additional session.

Finally, on behalf of the organizing and scientific committees, we wish to express our thanks to the staff of the Będlewo Conference Center for their invaluable help with organizing the meeting, and to the Banach Center of the Polish Academy of Sciences and the Rector of Lodz University of Technology for their generous financial support. Last but not least, we thank all the participants of the conference for creating a great scientific and social atmosphere, and all contributors to this volume for their inspiring papers.

The Editors