

# Series Preface

The fourth volume in the series *Advances in Mathematics Education* deals with contributions from the SimCalc research programme, a highly prestigious and long-term research programme going back to the visions of Jim Kaput. Jim Kaput started to develop his visions in the eighties of the last century; the SimCalc-Project is implementing the Kaputian research ideas into practice. The papers are contributing to an eminent important and topical theme, namely a democratic access to important mathematics can be offered based on dynamic representations.

The book starts with a section focusing on more general aspects such as the philosophical foundation of the programme dealing with eminent important aspects such as the transfer from static to dynamic perspectives on mathematics and mathematics education. These foundational reflections are followed by discussions on the design of the SimCalc-technology, which influence the design of the whole research programme. The SimCalc research project is not limited to these kinds of reflections, it aims to scale up and influence mathematics education in a general way. The papers describe and analyze how SimCalc changed ordinary teaching at various levels including dynamic representations during the whole teaching-and-learning-processes. The book shows by an impressive collection of research studies, how the SimCalc-programme changed classroom discourse, enabled an equal access to mathematics by considering a high diversity. The impressive collection of research studies is followed by commentaries and reflections from outsiders, who connect the SimCalc research programme with the mathematics education debate in general.

The book continues the discussion of other books in this series focusing on diversity and equity based on a clear theoretical foundation, which makes the book fit perfectly into the series *Advances in Mathematics Education*. This monograph has the potential to strongly influence the debate on technology in mathematics education. It shows how technology and its theory-guided usage can provide a rich mathematical learning environment allowing equal access to mathematics for all students.

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The SimCalc Vision and Contributions  
Democratizing Access to Important Mathematics  
Hegedus, S.J.; Roschelle, J. (Eds.)  
2013, XII, 480 p., Hardcover  
ISBN: 978-94-007-5695-3