The inaugural monograph is based on the two highly acclaimed ZDM special issues on theories of mathematics education (issue 6/2005 and issue 1/2006), which stemmed from the revival of the Theories of Mathematics Education (TME group) organized by the editors. This monograph consists of articles with prefaces and commentaries from leading thinkers who have worked on theory building. It is as much summative as forward-looking by highlighting theories from psychology, philosophy and social sciences that continue to influence theory building, as well as providing new developments regarding feminist, complexity and critical theories of mathematics education. New chapters focus on neuroscience research and complexity theory for mathematics education.

This book’s cast of authors include Paul Ernest, Stephen Lerman, Frank Lester, David Tall, John Pegg, Richard Lesh, Gerald Goldin, Luis Moreno Armella, Bharath Sriraman, Lyn English, Angelika Bikner-Ahsbahs, Guenter Toerner, Gabriele Kaiser and Guershon Harel, among others.
Chapter 0
Preface by Series Editors Gabriele Kaiser & Bharath Sriraman
[Introducing the readers to the series]

Chapter 1
Advancing Mathematics Education – Seeking new frontiers (NEW)
Bharath Sriraman & Lyn English
Commentary [Jeremy Kilpatrick]

Chapter 2
Preface [Nathalie Sinclair/David Pimm]
Theories and philosophies of mathematics education (NEW)
Lyn English & Bharath Sriraman
Commentary [David Pimm /Nathalie Sinclair?]

Chapter 3
Preface (Bharath Sriraman)
Reflections on Theories of Learning (Paul Ernest) [original article] [New Preface and Commentary]
Commentary (Simon Goodchild)
Chapter 4

Preface (Lyn English)

On theoretical, conceptual and philosophical foundations for research in mathematics education (Frank Lester) [original article] [New Preface and Commentary]

Commentary (Guershon Harel)

Chapter 5

Preface (Luis Moreno-Armella)

Appreciating *Scientificity* in Qualitative Research (NEW)
Stephen Hegedus

Commentary (Bharath Sriraman)

Chapter 6

Preface (Norma Presmeg)

Theories of mathematics education: Is plurality a problem? (Stephen Lerman) [revised article] [2 reviews solicited] [New Preface and Commentary]

Commentary (Helen Forgasz)

Chapter 7

Preface (Luis Moreno-Armella)

DNR-Based Instruction in Mathematics as a Conceptual Framework (NEW)
Guershon Harel

Commentary (Hillary van Spronsen & Bharath Sriraman)
Chapter 8
Preface (Gabriele Kaiser)
Feminist pedagogy and mathematics (Judith E Jacobs) [original article] [New Preface and Commentary]
Commentary (Gilah Leder)

Chapter 9
Preface (Stephen Hegedus)
The fundamental cycle of concept construction underlying various theoretical frameworks (John Pegg & David Tall) [revised article] [2 reviews solicited] [New Preface and Commentary]
Commentary (Bettina Dahl Sondergaard)

Chapter 10 & Chapter 11
Preface (Stephen Hegedus)
Problem solving, heuristics, affect and discrete mathematics (Gerald Goldin) [original article] [New common Preface and Commentary]
Symbols and mediation in mathematics education (Luis Moreno-Armella and Bharath Sriraman) [revised article] [2 reviews solicited] [New common Preface and Commentary]
Commentary (Gerald Goldin)
Commentary (Jinfa Cai)

Chapter 12
Preface [Victor Cifarelli?]
Problem solving for the 21st century- An archaic construct or of prescient relevance (NEW)
Lyn English, Richard Lesh, Bharath Sriraman
Commentary (Jinfa Cai)
Chapter 13
Preface (Lyn English)
Mathematics education as a design science (Richard Lesh & Bharath Sriraman) [original article] [New Preface and Commentary]
Commentary (David Boote)

Chapter 14
Preface (Richard Lesh)
Complexity theories and theories of learning (Andy Hurford) [NEW article]
Commentary (TBD)

Chapter 15
Preface (TBD)
On the internal structure of goals and beliefs (Toerner et al) [NEW article]
Commentary (Gerald Goldin)

Chapter 16
Preface (Tommy Dreyfus)
Networking theories, an approach for exploiting the diversity of theoretical approaches [Angelika Bikner-Ahsbahs & Susanne Prediger] [Revised Article]
Commentary (Christer Bergsten)
Chapter 17
Zooming in and out- An Interplay of theories
Helga Jungwirth

Chapter 18
Integrating different perspectives to see the front and the back- The case of explicitness (New)
Uwe Gellert

Chapter 19
Preface (TBD)
Neurosciences and mathematics education (Stephen Campbell) (New)
Commentary (TBD)

Chapter 20
Preface [Gutstein?]
Politicizing mathematics education: Has Politics gone to far? Or not far enough? (New)
Bharath Sriraman & Lyn English
Commentary [Brian Greer]