

Contents

| | |
|--|-----------------|
| <i>Contributors</i> | <i>page</i> vii |
| <i>Introduction</i> | 1 |
| 1 An introduction to \mathbb{P}_{\max} forcing | 5 |
| <i>Paul B. Larson, Peter Lumsdaine and Yimu Yin</i> | |
| 2 Countable Borel equivalence relations | 25 |
| <i>Simon Thomas and Scott Schneider</i> | |
| 3 Set theory and operator algebras | 63 |
| <i>Ilijas Farah and Eric Wofsey</i> | |
| 4 A tutorial on Set Mapping Reflection | 121 |
| <i>Justin Moore and David Milovich</i> | |
| 5 An introduction to hyperlinear and sofic groups | 145 |
| <i>Vladimir G. Pestov and Aleksandra Kwiatkowska</i> | |
| 6 Aronszajn trees and the SCH | 187 |
| <i>Itay Neeman and Spencer Unger</i> | |
| 7 Iterated forcing and the Continuum Hypothesis | 207 |
| <i>Todd Eisworth, Justin Tatch Moore and David Milovich</i> | |
| 8 Short extender forcing | 245 |
| <i>Moti Gitik and Spencer Unger</i> | |
| 9 The complexity of classification problems in ergodic theory | 265 |
| <i>Alexander S. Kechris and Robin D. Tucker-Drob</i> | |
| 10 On the strengths and weaknesses of weak squares | 301 |
| <i>Menachem Magidor and Chris Lambie-Hanson</i> | |
| 11 Proper forcing remastered | 331 |
| <i>Boban Veličković and Giorgio Venturi</i> | |

| | |
|---|-----|
| 12 Set theory and von Neumann algebras | 363 |
| <i>Asger Törnquist and Martino Lupini</i> | |
| 13 The HOD Dichotomy | 397 |
| <i>W. Hugh Woodin, Jacob Davis and Daniel Rodríguez</i> | |