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	Nota di contenuto	Part I: Current Challenges for the Set Theoretic Foundations -- 1. Neil Barton and Sy-David Friedman: Does set theory need an apology? -- 2. Laura Fontanella: The choice of new axioms in set theory -- 3. Michèle Friend: Pluralism in Foundations of Mathematics: Oxymoron, Paradox, Neither or Both? -- 4. Deborah Kant: A distinction between meta set theory and object set theory -- 5. Jan von Plato: The weaknesses of set theory -- 6. Claudio Ternullo: Multiversism and Naturalism -- 7. Philip Welch: Proving Theorems from Reflection: Global Reflection Theorems -- Part II: What are the Univalent Foundations? -- 8. Benedikt Ahrens and Paige North: Univalent foundations and the equivalence principle

-- 9. Thorsten Altenkirch: A constructive justification of Homotopy Type Theory -- 10. Ulrik Buchholtz: Title: Higher structures in Homotopy Type Theory -- 11. Andrei Rodin: Models of HoTT and the Semantic View of Theories -- 12. Urs Schreiber: Modern Physics formalized in Modal Homotopy Type Theory -- 13. Vladimir Voevodsky: Multiple Concepts of Equality in the New Foundations of Mathematics -- Part III: Thoughts on the Foundations of Mathematics -- 14. Nathan Bowler: Foundations for the working mathematician, and for their computer -- 15. Merlin Carl: Formal and Natural Proof - A phenomenological approach -- 16. Stefania Centrone and Deniz Sarikaya: Thoughts on the Foundation of Mathematics: Logicism, Intuitionism and Formalism -- 17. Mirna Džamonja: A new foundational crisis in mathematics, is it really happening? -- 18. Penelope Maddy: What foundational jobs do we want done? -- 19. Giovanni Sambin: Dynamics in foundations: what does it mean in practice -- 20. Roy Wagner: Does mathematics need foundations?.

Sommario/riassunto	This edited work presents contemporary mathematical practice in the foundational mathematical theories, in particular set theory and the univalent foundations. It shares the work of significant scholars across the disciplines of mathematics, philosophy and computer science. Readers will discover systematic thought on criteria for a suitable foundation in mathematics and philosophical reflections around the mathematical perspectives. The volume is divided into three sections, the first two of which focus on the two most prominent candidate theories for a foundation of mathematics. Readers may trace current research in set theory, which has widely been assumed to serve as a framework for foundational issues, as well as new material elaborating on the univalent foundations, considering an approach based on homotopy type theory (HoTT). The third section then builds on this and is centred on philosophical questions connected to the foundations of mathematics. Here, the authors contribute to discussions on foundational criteria with more general thoughts on the foundations of mathematics which are not connected to particular theories. This book shares the work of some of the most important scholars in the fields of set theory (S. Friedman), non-classical logic (G. Priest) and the philosophy of mathematics (P. Maddy). The reader will become aware of the advantages of each theory and objections to it as a foundation, following the latest and best work across the disciplines and it is therefore a valuable read for anyone working on the foundations of mathematics or in the philosophy of mathematics.