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Nota di contenuto	Part 1: Research on the secondary-tertiary transition -- Chapter 1. Self-regulated learning of first-year mathematics students -- Chapter 2. The societal dimension in teacher students beliefs on mathematics teaching and learning -- Chapter 3. The Organization of Inter-level Communities to Address the Transition Between Secondary and Post-secondary in Mathematics -- Chapter 4. Framing mathematics support measures: goals, characteristics and frame conditions -- Part 2: Research on university students' mathematical practices -- Chapter 5. “It is easy to see”- tacit expectations in multivariable calculus -- Chapter 6. University Students’ Development of (Non-) Mathematical Practices: A Theory and its Implementation in a Study of one Introductory Real Analysis Course -- Chapter 7. A theoretical account of the mathematical practices students need in order to learn from lecture -- Chapter 8. The choice of arguments: considering acceptance

and epistemic value in the context of local order -- Chapter 9. Supporting students in developing adequate definitions at university: The case of the convergence of sequences -- Chapter 10. Proving and defining in mathematics - Two intertwined mathematical practices -- Part 3: Research on teaching and curriculum design -- Chapter 11. Developing mathematics teaching in university tutorials: an activity perspective -- Chapter 12. Conceptualizations of the role of resources for supporting teaching by university instructors -- Chapter 13. The rhetoric of the flow of proof – Dissociation, presence and a shared basis of agreement -- Chapter 14. Teaching Mathematics Education to Mathematics and Education -- Chapter 15. Inquiry-Oriented Linear Algebra: Connecting Design-Based Research and Instructional Change Theory in Curriculum Design -- Chapter 16. Profession-specific curriculum design research in mathematics teacher education: The case of abstract algebra -- Chapter 17. Leveraging Collaboration, Coordination, and Curriculum Design to Transform Calculus Teachingand Learning -- Part 4: Research on university students' mathematical inquiry -- Chapter 18. Real or fake inquiries? Study and research paths in statistics and engineering education -- Chapter 19. Fostering inquiry and creatity in abstract algebra: the theory of banquets and its reflexive stance on the structuralist methodology -- Chapter 20. Following in Cauchy's footsteps: student inquiry in real analysis -- Chapter 21. Examining the role of generic skills in inquiry-based mathematics education: the case of extreme apprenticeship -- Chapter 22. On the levels and types of students' inquiry: the case of calculus -- Chapter 23. Students prove at the board in whole-class setting -- Chapter 24. Preservice secondary school teachers revisiting real numbers: a striking instance of Klein's second discontinuity -- Part 5: Research on mathematics for non-specialists -- Chapter 25. Mathematics in the training of engineers: Contributions of the Anthropological Theory of the Didactic -- Chapter 26. For an institutional epistemology -- Chapter 27. Modeling and multiple representations: Bringing together math and engineering -- Chapter 28. The interface between mathematics and engineering in basic engineering courses -- Chapter 29. Modifying tasks in mathematics service courses for engineers based on subject-specific analyses of engineering mathematical practices. Chapter 30. Learning mathematics through working with engineering projects -- Chapter 31. Challenges for research about mathematics for non-specialists -- Chapter 32. Establishing a National Research Agenda in University Mathematics Education to Inform and Improve Teaching and Learning Mathematics as a Service Subject -- Chapter 33. Tertiary mathematics through the eyes of non-specialists: engineering students' experiences and perspectives.

Sommario/riassunto

This edited volume presents a broad range of original practice-oriented research studies about tertiary mathematics education. These are based on current theoretical frameworks and on established and innovative empirical research methods. It provides a relevant overview of current research, along with being a valuable resource for researchers in tertiary mathematics education, including novices in the field. Its practice orientation research makes it attractive to university mathematics teachers interested in getting access to current ideas and results, including theory-based and empirically evaluated teaching and learning innovations. The content of the book is spread over 5 sections: The secondary-tertiary transition; University students' mathematical practices and mathematical inquiry; Research on teaching and curriculum design; University students' mathematical inquiry and Mathematics for non-specialists.