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	Nota di contenuto	Part I. Introductory -- 1. Preview (Sven Ove Hansson) -- 2. Introduction (Sven Ove Hansson) -- Part II. The historical connection -- 3. The mathematics of craftspeople (TBD) -- 4. Mathematics and Mechanical Computation (Doron Swade) -- 5. The concept of computation in the medieval and modern era (Sara Uckelman) -- 6. Leibniz and the calculus ratiocinator (Wolfgang Lenzen) -- 7. The impact of WWII cryptology on post-war mathematics (Sandy L. Zabell) -- 8. The mathematical origins of modern computing (Mark Priestley) -- Part III. Technological uses of mathematics -- 9. Mathematical optimization in technology (Serkan Kiranyaz) -- 10. Mathematics at technological universities (Sven Ove Hansson) -- 11. Mathematical models of technological and social complexity (Ronald R. Kline) -- Part IV. Technological and mathematical computability -- 12. The Epistemology

of Computer-Mediated Proofs (Selmer Bringsjord) -- 13. The physical Church-Turing thesis (Sven Ove Hansson) -- 14. Quantum information (Laura Felline) -- 15. Quantum Reflections on Computational Complexity (Michael Cuffaro) -- Part V. Philosophical reflections on the connection -- 16. What the applicability of mathematics tells us about its philosophy (Phillip L. Wilson) -- 17. The unreasonable effectiveness of mathematics in technology (Tor Sandqvist) -- 18. Practical limits to the effectiveness of mathematics (Johannes Lenhard).

Sommario/riassunto	This volume is the first extensive study of the historical and philosophical connections between technology and mathematics. Coverage includes the use of mathematics in ancient as well as modern technology, devices and machines for computation, cryptology, mathematics in technological education, the epistemology of computer-mediated proofs, and the relationship between technological and mathematical computability. The book also examines the work of such historical figures as Gottfried Wilhelm Leibniz, Charles Babbage, Ada Lovelace, and Alan Turing.