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Nota di contenuto	Frontmatter -- Preface -- Contents -- 1. Preliminaries -- 2. Real intervals -- 3. Interval vectors, interval matrices -- 4. Expressions, P-contraction, -inflation -- 5. Linear systems of equations -- 6. Nonlinear systems of equations -- 7. Eigenvalue problems and related ones -- 8. Automatic differentiation -- 9. Complex intervals -- Final Remarks -- Appendix -- A. Proof of the Jordan normal form -- B. Two elementary proofs of Brouwer's fixed point theorem -- C. Proof of the Newton-Kantorovich Theorem -- D. Convergence proof of the row cyclic Jacobi method -- E. The CORDIC algorithm -- F. The symmetric solution set - a proof of Theorem 5.2.6 -- G. A short introduction to INTLAB -- Bibliography -- Symbol Index -- Author Index -- Subject Index
Sommario/riassunto	This self-contained text is a step-by-step introduction and a complete overview of interval computation and result verification, a subject whose importance has steadily increased over the past many years. The author, an expert in the field, gently presents the theory of interval analysis through many examples and exercises, and guides the reader from the basics of the theory to current research topics in the mathematics of computation. Contents Preliminaries Real intervals Interval vectors, interval matrices Expressions, P-contraction, -inflation Linear systems of equations Nonlinear systems of equations Eigenvalue problems Automatic differentiation Complex intervals

