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Nota di contenuto	Frontmatter -- Preface -- Contents -- 1. Finite Element Fundamentals -- 2. Grids and Finite Elements -- 3. Assembly -- 4. Solvers -- 5. Error Estimation -- 6. Mesh Refinement -- 7. Multigrid -- 8. Elastomechanics -- 9. Fluid Mechanics -- A. Grid Data Structure -- B. Function Reference -- Bibliography -- Index
Sommario/riassunto	All relevant implementation aspects of finite element methods are discussed in this book. The focus is on algorithms and data structures as well as on their concrete implementation. Theory is covered only as far as it gives insight into the construction of algorithms. In the exercises, a complete FE-solver for stationary 2D problems is implemented in Matlab/Octave. Contents:Finite Element FundamentalsGrids and Finite ElementsAssemblySolversError EstimationMesh RefinementMultigridElastomechanicsFluid MechanicsGrid Data StructureFunction Reference