

1. Record Nr.	UNISALENT0991002011099707536
Autore	Chung, T. J., 1929-
Titolo	Computational fluid dynamics / T.J. Chung
Pubbl/distr/stampa	Cambridge ; New York : Cambridge University Press, 2010
ISBN	9780521769693
Edizione	[2nd ed.]
Descrizione fisica	1034 p. : ill. ; 26 cm
Disciplina	532.05
Soggetti	Fluid dynamics - Data processing
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Machine generated contents note: Part I. Preliminaries: 1. Introduction; 2. Governing equations; Part II. Finite Difference Methods: 3. Derivation of finite difference equations; 4. Solution methods of finite difference equations; 5. Incompressible viscous flows via finite difference methods; 6. Compressible flows via finite difference methods; 7. Finite volume methods via finite difference methods; Part III. Finite Element Methods: 8. Introduction to finite element methods; 9. Finite element interpolation functions; 10. Linear problems; 11. Nonlinear problems/convection-dominated flows; 12. Incompressible viscous flows via finite element methods; 13. Compressible flows via finite element methods; 14. Miscellaneous weighted residual methods; 15. Finite volume methods via finite element methods; 16. Relationships between finite differences and finite elements and other methods; Part IV. Automatic Grid Generation, Adaptive Methods and Computing Techniques: 17. Structured grid generation; 18. Unstructured grid generation; 19. Adaptive methods; 20. Computing techniques; Part V. Applications: 21. Applications to turbulence; 22. Applications to chemically reactive flows and combustion; 23. Applications to acoustics; 24. Applications to combined mode radiative heat transfer; 25. Applications to multiphase flows; 26. Applications to electromagnetic flows; 27. Applications to relativistic astrophysical flows; Appendices.