

1. Record Nr.	UNINA9910786700503321
Titolo	Advances in computational mechanics : selected, peer reviewed papers from the 1st Australasian Conference on Computational Mechanics (ACCM 2013), October 3-4, 2013, Sydney, Australia // edited by Grant P. Steven, Qing Li and Zhongpu (Leo) Zhang
Pubbl/distr/stampa	Zurich, Switzerland : , : TTP, , 2014 ©2014
ISBN	3-03826-449-0
Descrizione fisica	1 online resource (862 p.)
Collana	Applied Mechanics and Materials, , 1662-7482 ; ; Volume 553
Disciplina	620.100151
Soggetti	Mechanics, Applied - Mathematics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references at the end of each chapters and indexes.
Nota di contenuto	Advances in Computational Mechanics; Preface and Conference Organizers; Table of Contents; Chapter 1: Advanced Materials and Multiscale Modelling; Tuneable Resonance Properties of Graphene by Nitrogen-Dopant; Finite Element Modelling of Stress-Induced Fracture in Ti-Si-N Films; Fictitious Elastic Stiffness Parameters of Zero-Thickness Finite Elements at Bi-Material Interfaces; Crystal Plasticity Simulation of the Bauschinger Effect of Polycrystalline AA7075 through a Texture-Based Representative Volume Element Model Understanding the Threshold Conditions for Dislocation Transmission from Tilt Grain Boundaries in FCC Metals under Uniaxial Loading Effect of Pressure on Dry and Hydrated Self Assembled Monolayers: A Molecular Dynamics Simulation Study; Atoms to Assemblies: A Physics-Based Hierarchical Modelling Approach for Polymer Composite Components; Finite Element Analysis of Residual Stresses in Metallic Coatings through a Compound Casting; Digital Material Representation and Testing of Metal Foams; Molecular Dynamics Simulation of the Deformation of Single Crystal Gallium Arsenide Modeling of Grained Heterogeneity with Voronoi Tessellation in Microforming Process Computational Analysis of Compressive Strain Hardening Exponents of Bimetal with Pearlitic Steel and Low Carbon

Steel; Implementation of a Non-Orthogonal Constitutive Model for the Finite Element Simulation of Textile Composite Draping; Finite Element Simulation of the Hot Deformation Behavior of AA7075 Using a Coupled Thermo-Mechanical Crystal Plasticity Constitutive Model; Morphology of Irradiated Adjacent Single-Walled Carbon Nanotubes  
A Variable Diffusivity Model for the Drying of Spherical Food Particulates  
Modeling of Steel-Reinforced Concrete Panels under Blast Loads; Chapter 2: Computational Fluid Dynamics and Thermofluids; Magnetic Convection Heat Transfer in an Open Ended Enclosure Filled with Paramagnetic Fluids; Analysis of Dissipative Particle Dynamics Fluid in Sheared Regimes; Numerical Simulation of Flow, Heat and Moisture Transfer in Heat and Moisture Exchanger (HME) Devices; Thermal Management of Data Centres - Effect of CRAC Location and Flow Rate on the Performance of Data Centres  
A Fully Coupled Scheme for Viscous Flows in Regular and Irregular Domains Using Compact Integrated RBF Approximation  
Comparison and Development of Equation of State Laws in Smoothed Particle Hydrodynamics; Three-Dimensional Direct Numerical Simulation of Unsteady Transitional Round Fountains in a Homogeneous Fluid; Investigation of the 3D Flow in Hemodialysis Venous Air Traps; Transient Analysis of Rising Bubble Using Image Analysis; Numerical Simulation of Tank Discharge Using Smoothed Particle Hydrodynamics; CFD Flow Model and its Effects on the Calculations of High Pressure Sprays  
Development of an Effective FVLBM Code for the Study of Turbulent and Multiphase Flows

---

Sommario/riassunto

Collection of selected, peer reviewed papers from the Australasian Conference of Computational Mechanics 2013 (ACCM 2013), October 3-4, 2013, Sydney, Australia. The 139 papers are grouped as follows: Chapter 1: Advanced Materials and Multiscale Modelling, Chapter 2: Computational Fluid Dynamics and Thermofluids, Chapter 3: Aerospace and Vehicle Engineering, Chapter 4: Biomechanics, Biomimetics and Biomedical Engineering, Chapter 5: Geomechanics and Geotechnics, Chapter 6: Structural and Solid Mechanics, Chapter 7: Vibration and Dynamics, Chapter 8: Fracture and Damage, Chapter 9: Impact and Ex

---