

1. Record Nr.	UNINA9910790325503321
Titolo	Coupled problems and multi-physics / / edited by Moussa Karama
Pubbl/distr/stampa	Durnten-Zurich, Switzerland ; ; Enfield, New Hampshire : , : Trans Tech Publications, , [2011] ©2011
ISBN	3-03813-613-1
Descrizione fisica	1 online resource (127 p.)
Collana	Advanced materials research, , 1022-6680 ; ; volume 274
Altri autori (Persone)	KaramaMoussa
Disciplina	620.11
Soggetti	Coupled problems (Complex systems) - Numerical solutions Transients (Dynamics) - Mathematical models Numerical analysis Engineering mathematics Computational complexity
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	"Special topic volume with invited peer reviewed papers only."
Nota di bibliografia	Includes bibliographical references and indexes.
Nota di contenuto	Coupled Problems and Multi-Physics; Preface; Table of Contents; Simulation of a Wall Jet Flow over a Rectangular Cavity; Study of Thermo-Chemical Non-Equilibrium Phenomena behind Strong Shock Waves at Atmospheric Reentry; Simulation and Analysis of the Structure of Laminar Premixed Flame; Rheological Characterization of the Systems Clay-Polymer. Drilling Fluids Application; Delta Wing-Fuselage Interactions - Experimental Study; Study of the Interaction of Shock Wave / Laminar Boundary Layer; The Effect of Longitudinal Slope's Variation on Sedimentation in a Meandering River Modeling a Discrete Interaction Jets/Wall Flow. Effect of CurvatureThermomechanical Couplings in Aircraft Tire Rolling/Sliding Modeling; Reliability-Based Design and Heuristic Optimization MPSO-SA of Structures; A New Methodology for the Reliability Based Particle Swarm Optimization with Simulated Annealing; Comparison Study of Different Reliability-Based Design Optimization Approaches; Keywords Index; Authors Index
Sommario/riassunto	The objective of Coupled Problems is to present and discuss the state-of-the-art mathematical models, numerical methods and

computational techniques used for solving coupled problems of a multidisciplinary nature in science and engineering. The goal of the conference was to take a step forward, in the formulation and solution of real-life problems, with a multidisciplinary vision; accounting for all of the complex couplings involved in the physical description of the problem. Simulation of multifaceted physics problems is a common task in applied research and industry. Often a suitable solver
