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Titolo	Technology and engineering reviews and research advances I : selected, peer reviewed papers from the 5th International Graduate Conference on Engineering, Science & Humanity (IGCESH 2014), August 19-21, 2014, Skudai, Malaysia / / edited by Denni Kurniawan, Fethma M. Nor and Rozzeta Dolah
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ISBN	3-03826-798-8
Descrizione fisica	1 online resource (358 p.)
Collana	Applied Mechanics and Materials, , 1662-7482 ; ; Volume 735
Disciplina	620.00711
Soggetti	Engineering - Study and teaching Engineering - Study and teaching - Technological innovations Electronic books.
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	Technology and Engineering Reviews and Research Advances I; Preface; Table of Contents; Chapter 1: Advanced Materials, Manufacturing Technologies and Engineering, Equipment; Effect of Chitosan-Grafted-Poly (Methyl Methacrylate) Content on Mechanical Properties and Thermal Degradation of Poly (Vinyl Chloride) Composites; Effects of Halloysite Nanotubes on Mechanical and Thermal Stability of Poly (Ethylene Terephthalate)/Polycarbonate Nanocomposites; Evaluation of Mechanical Properties of Filled Epoxy Composite for Improving Mould Performance - A Review Metallic Biomaterials for Medical Implant Applications: A Review Effect of Loading Rate on Indentation Behaviour of Fibre Metal Laminates Based on Kenaf/Epoxy; On the Application of Well Stimulation Method in Improvement of Oil Recovery; Synthesis and Characterization of Low-Cost Porous Carbon from Palm Oil Shell via K2CO3 Chemical Activation Process; An Expert System Based on a Hybrid Multi-Criteria Decision Making Method for Selection of Non-Conventional Machining Processes; Computer Aided Design and Analysis of Conical Forming

Dies Subjected to Blast Load

Tensile Properties and Morphology of Polylactic Acid (PLA)/Ethylene Vinyl Acetate (EVA)Tensile Properties and Morphology of Polyamide 6 (PA6)/Ethylene Vinyl Acetate (EVA)/Sepiolite Nanocomposite; Performance Comparison between Dry and Nitrogen Gas Cooling when Turning Hardened Tool Steel with Coated Carbide; Effect of Compatibilizer Content on the Mechanical and Morphological Properties of PET/PP (70/30) Blends; Major Hazards of Process Equipment Failures in the Chemical Process Industry; Comparison on Section Properties and Flexural Behaviour for Cold-Formed Steel Built-Up Section CFD Simulation of Air Temperature inside a Bus Passenger Compartment Sustainable Manufacturing in Injection Molding: Development of Energy Map; Chapter 2: Structural Engineering, Construction and Building Materials, Construction Project Management and Safety; Safety and Health in Refurbishment Works Including Partial Demolition; Evaluation of Coupling Beams Behavior Concrete Shear Wall with Rectangular and Octagonal Openings; Determining the Causes of Delay by Using Factor Analysis in Tehran's Construction Projects; A Simple Algorithm to Assess Structural Performance by PBSD Method Performance of Iron Ore Tailings as Partial Replacement for Sand in Concrete Flexural Strengthening of Structural Timber in the 21st Century: A State of the Art Review; Correlation of Stiffness and Natural Frequency of Precast Frame System; The Impact of Metakaolin on Early Days Strength of Nanotechnology Modified Sandwich ECC; Investigation the Behavior of a Four-Storey Steel Frame Using Viscous Damper; Performance Appraisal Amongst Contractors in Construction Project in Malaysia; Density Currents Dynamics over Rough Beds Environmental Loss Assessment for Gas Pipeline Failure by Considering Localize Factors Using Fuzzy Based Approach

Sommario/riassunto

Collection of selected, peer reviewed papers from the 5th International Graduate Conference on Engineering, Science & Humanity (IGCESH 2014), August 19-21, 2014, Skudai, Malaysia. The 62 papers are grouped as follows: Chapter 1: Advanced Materials, Manufacturing Technologies and Engineering, Equipment; Chapter 2: Structural Engineering, Construction and Building Materials, Construction Project Management and Safety; Chapter 3: Environmental Engineering and Processes Technology, Eco-Friendly Materials, Water Management and Hydrology; Chapter 4: Energy Efficient and Energy Saving, Energy Managem

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Autore	Pfeiffer Friedrich <1935->
Titolo	Multibody dynamics with unilateral contacts [[electronic resource] /] / Friedrich Pfeiffer, Christoph Glocker
Pubbl/distr/stampa	Weinheim, : Wiley-VCH, 2004
ISBN	1-281-84329-6 9786611843298 3-527-61838-4 3-527-61839-2
Descrizione fisica	1 online resource (331 p.)
Collana	Wiley Series in Nonlinear Science ; ; v.23
Altri autori (Persone)	GlockerChristoph
Disciplina	621.8/11 621.811
Soggetti	Machinery, Dynamics of Nonlinear systems
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 (p. 307-314) and index.
Nota di contenuto	MULTIB ODY DYNAMICS WITH UNILATERAL CONTACTS; CONTENTS; PART 1: Theory; 1 Introduction; 1.1 Modeling Mechanical Systems; 1.2 Single-Contact Dynamics; 1.3 Multiple-Contact Dynamics; 2 Multibody Kinematics; 2.1 Geometry and Definitions; 2.2 Time Derivations; 2.3 Velocities and Accelerations; 2.4 Recursive Methods; 3 Dynamics of Rigid Body Systems; 3.1 Equations of Motion; 3.2 Nonlinear Applied Forces; 3.2.1 Some Remarks; 3.2.2 Couplings by Force Laws; 3.2.3 Some Examples; 4 Contact Kinematics; 4.1 Contour Geometry; 4.2 The Distance between Bodies 4.3 The Relative Velocities of the Contact Points4.4 Changes of the Relative Velocities; 4.5 Evaluation of the Contact Kinematics; 4.6 Example: Contact Problem of a Parabola and a Straight Line; 5 Multiple Contact Configurations; 5.1 Superimposed Constraints; 5.2 Minimal Coordinates and Friction; 5.3 Example: The Sliding Rod; 5.4 Example: A Pantograph Mechanism; 6 Detachment and Stick-Slip Transitions; 6.1 Contact Law for Normal Constraints; 6.2 Coulomb's Friction Law; 6.3 Decomposition of the Tangential Characteristic; 6.4 The Linear Complementarity Problem

6.5 Example: The Detachment Transition6.6 Example: The Stick-Slip Transition; 7 Frictionless Impacts by Newton's Law; 7.1 Assumptions and Basic Equations; 7.2 Newton's Impact Law; 7.3 Energy Considerations; 7.4 Example: Impact between Two Point Masses; 7.5 Example: Double Impact on a Rod; 8 Impacts with Friction by Poisson's Law; 8.1 Assumptions and Basic Equations; 8.2 Phase of Compression; 8.3 Phase of Expansion; 8.4 Energy Considerations; 8.5 Conservation of Energy; 8.6 Comparison of Newton's and Poisson's Laws; 8.7 Decomposition of an Asymmetric Characteristic
8.8 An LCP Formulation for Compression8.9 An LCP Formulation for Expansion; 8.10 Remarks on Impacts with Friction; 8.11 Example: Double Impact on a Rod; 8.12 Example: Poisson's Law in the Frictionless Case; 8.13 Example: Reversible Tangential Impacts; 8.14 Example: Poisson's Law and Coulomb Friction; 9 The Corner Law of Contact Dynamics; PART 2: Applications; 10 Introduction; 11 Applications with Discontinuous Force Laws; 11.1 Hammering in Gears; 11.1.1 Modeling; 11.1.2 Evaluation of the Simulations; 11.1.3 Results
11.2 Overloads in Gears due to Short-circuit and Malsynchronization in a Generator11.2.1 Introduction; 11.2.2 The Equations of Motion; 11.2.3 Solution Procedure; 11.2.4 Force Elements; 11.2.5 Synchronous Generator; 11.2.6 Simulation and Results; 12 Applications with Classical Impact Theory; 12.1 Gear Rattling; 12.1.1 Introduction; 12.1.2 Gearbox Model; 12.1.3 Results; 12.1.4 Parameter Dependence of Mean Values; 12.1.5 Experimental Results; 12.2 A Ship-Turning Gear; 12.3 Dynamics of a Synchronizer; 12.3.1 Introduction; 12.3.2 Operation of a Synchronizer
12.3.3 Mechanical and Mathematical Models

Sommario/riassunto

As mechanical systems become more complex so do the mathematical models and simulations used to describe the interactions of their parts. One area of multibody theory that has received a great deal of attention in recent years is the dynamics of multiple contact situations occurring in continuous joints and couplings. Despite the rapid gains in our understanding of what occurs when continuous joints and couplings interact, until now there were no books devoted exclusively to this intriguing phenomenon. Focusing on the concerns of practicing engineers, Multibody Dynamics with Unilateral Contact