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Titolo	Monitoring, controlling and architecture of cyber physical systems : their applications in aerospace, robotics, manufacturing systems, mechanical engineering, biomechatronics, neurorehabilitation and human motility : selected, peer reviewed papers from the International Conference on Aerospace, Robotics, Manufacturing Systems, Mechanical Engineering, Neurorehabilitation and Human Motility (ICMERA 2014), October 24-27, 2014, Bucharest, Romania // edited by Adrian Olaru
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Collana	Applied Mechanics and Materials, , 1662-7482 ; ; Volume 656
Disciplina	003
Soggetti	System theory
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Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and indexes.
Nota di contenuto	Monitoring, Controlling and Architecture of Cyber Physical Systems; Preface, Committee and Sponsors; Table of Contents; Chapter 1: Materials Research and Technology; Tribological Behavior of Composite Electrodes for Spot Welding; Tensile Characterizations of Optical Fiber Embedded in Epoxy Glass Composite; SEM and EDAX Study of Pretreated Rice Husk for the Sorption of Cu(II) from Wastewater; Experimental Research Regarding the Development of Ecological CuSnP Powder; Armor with Hyper-Entropic Behaviour and Self-Protection An Experimental Approach to the Robotized Fabrication of WC-Co Based LayersAn Experimental Method for Erosion Evaluation for a Roller Coaster's Carriage; Chapter 2: Combustion and Flow Dynamics; CFD Analysis of Hypersonic Combustion of H2-Fueled Scramjet Combustor with Cavity Based Fuel Injector at Flight Mach 6; Effect of Blockage Ratio on Detonation Flame Acceleration in Pulse Detonation Combustor Using CFD; Finite Volume Particle Method for Incompressible Flows; Modeling and Simulation of the Gas Absorption Process in the Liquid Phase Cavitation Avoidance in Nitrous Oxide Rocket Engines Using the

Efficient Transient 1D Downwind Prediction Analysis of Normal Combustion Waves in CH₄-Air System; Starting Transient Experiments in the MEC-80 Rocket Engine Scaled Ignition Device; Chapter 3: Design, Modeling and Simulation; Research on the Possibility of Replacing Oil with Water in Hydrostatics Units of Machine Tools; Multi-Criteria Dynamic Optimization of a Front Wheels Suspension System; The Ring-Tool Profiling in CATIA Graphical Environment Based on the Family of Substituting Circles Method

Robotized Montage Unit which Uses an Anthropomorphic Gripper with Five Fingers: CAD Modelling and Simulation Adaptive Robotics; Design of Geometrical Parameters for Walking Mechanism Leg with Use of Matlab Algorithm and SimMechanics; Generalization of the Lagrange Equations Formalism, for Motions with Respect to Non-Inertial Reference Frames; Study of the Enwrapping Profiles Associated with Rolling Centroides by the Minimum Distance Method - Graphical Solution Developed in the CATIA Design Environment; Research Regarding Software Developing for Machining Parameters Optimization Calculus

Analyse of Possibility of Form Tools Manufacturing Using Wire Cutting EDM Automation of CNC Machine Tool Programming Using STEP-NC (ISO 14649); Prediction of Forces and Damage at Forming Sheet on Multipoint Die; Modeling and Simulation of the Multiple Robot's Applications; Optimum Design of Balancing Systems with Cylindrical Helical Extension Springs; Integrating Decentralized Thermal-Solar Systems in the District Thermal Network; Behaviour Analysis of Hexapod Structure for Integrated Design; Modeling of Minimal Thickness Cutting Layer Influence on Surface Roughness in Turning Theoretical Contributions to the Accuracy of Parts by Moulding and Injection Moulding

Sommario/riassunto

Collection of selected, peer reviewed papers from the International Conference on Mechanical Engineering, Robotics and Aerospace (ICMERA 2014), October 24-27, 2014, Bucharest, Romania. The 75 papers are grouped as follows: Chapter 1: Materials Research and Technology, Chapter 2: Combustion and Flow Dynamics, Chapter 3: Design, Modeling and Simulation, Chapter 4: Detection, Monitoring, Measurements and Control, Chapter 5: Engineering Management and Assessment, Chapter 6: Human Motility Research. Scientists and engineers look at cyber-physical systems in the contexts of materials research and te
