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Nota di contenuto	General Solution Technique for Electroelastic Problems in Green Materials.- Lattice Boltzmann Method for Turbulent Flows. - Development of Ultra-Low Emission Multi-Fuel Boiler System Using Plasma Hybrid Clean Technology.- Supply Chain Network Design with Dynamic Scheduling and Cooperative Negotiation.- Advanced Manufacturing Systems – Autonomous Distributed Architecture and Standardization.- Optical elements with subwavelength structured surfaces for optical measurements.- Thermal control of the open

Cathode Type PEMFC to use MPC and PID.- Independent Power Development Using 1 kW PEMFC and Battery Hybrid System.- Power Optimization and Over-temperature Protection of Open Cathode PEM Fuel cell System by Air Regulation.- Two-Vectors-Based Model-Free Predictive Current Control of a Voltage Source Inverter.- Application of Fuzzy Sliding Mode Control to Automatic Landing System.- Automatic optical, mechanical, and electrical c haracteristics inspection technology for flexible displays.- Dynamic visual positioning control for robot arm.- Fruit calorie analysis by using an automatic visual image mass measurement method.- Implementation of a biomimetic flapping-wing robot based on internet of things technology.- Internet of things technology applies to two wheeled guard robot with visual ability.- Development of projection fringes phase shifting technology based optical system for small object surface profile fast scanning.
- The development of in situ measurement technique for ship.- Human Co-working Robot control for MIS endoscope positioning.- Application of the LM-HLP neural network to automatic smartphone test system.
- Application of a multirotor unmanned aerial vehicle to automatic inspection of object surface Simulation and Experiment of Terahertz Non-destructive Testing of marine protective coating.- Simulation Study of Two-phase Flo w in the Siphon Pipeline Molecular Dynamics Simulations on Nanoindentation Experiment of Single-layer MoS2 Circular Nanosheets.- A Review of Model Based Online Identification Methods for Robotic Systems.- Mechanical Properties of Single-layer Molybdenum Disulfide with Single Molybdenum Vacancy defects.
- First-Principles Investigation of Lithiation, Sodiation, and Magnesiation Ion Adsorptions and Diffusions on Monolayer MoS2 for Energy Storages.- Molecular Dynamics Studies on Vibration of SLMoS2 Nanoresonantor under Different Boundary Conditions.- Multi-objective evolutionary algorithms for solving the optimization problem of the surface mounting.- Circularly polarized Terahertz surface wave on the helically grooved metal wire.- Tunable Ultrasensitive Terahertz Sensing Based on Surface Plasmon Polariton of Doped Monolayer Graphene -- Vision-based Measurement System for Structural Vibration Monitoring and Damage Detection.- Noninvasive continuous blood pressure measuring method based on SWT and ANN.- Finger vein image segmentation based on Hessian matrix.- Curvature Radius Measurement of Lens Basedon Two-Dimensional Spectral-Domain Optical Coherence Tomography.- Task Execution Based-on Human-Robot Dialogue and Deictic Gestures.- A General Kinetostatic Model based Stiffness Estimation for Tripod Parallel Kinematic Machines with Prismatic Actuators.- A multi-layer microchip for high-throughput integrated single-cell research.- Hybrid Proton Exchange Membrane Fuel Cell/Lithium-ion Battery System Power Management Strategy Design for Lifetime Extending of the Main Power Source.- Terahertz bandpass filter fabricated by femtosecond laser micro machining.
- Effects of sample tilt on Vickers indentation hardness.- A Novel Ventricular Assist Miniscule Maglev Nutation Pump: Structure design, 3D Modelling and Simulation.- The Workspace Analysis and Simulation of A Novel Dexterous Hand FZU-I -- Relationships among K, J, C(t) and Ct for Nonhomogeneous.- Impact of the Sensitivity of a Single Load Sensor on the Total Output of Combinatorial Structures.- Crossmodal, Experience-based Learning of Service Robot Systems. .

Sommario/riassunto

This book includes more than 30 papers from the first FZU-OPU-NTOU Joint Symposium on Advanced Mechanical Science and Technology for the Industrial Revolution 4.0, held at Fuzhou University, China, in December 2016. The symposium was organized by Fuzhou University (FZU), Osaka Prefecture University (OPU) and National Taiwan Ocean

University (NTOU). The authors include several professors from universities in China, Japan, and Taiwan as well as four distinguished invited professors from Canada, Korea, Japan, and Taiwan. The book covers all important aspects related to the 4.0 industrial revolution: robotics and mechatronics; sensors, measurements, and instrumentation; mechanical dynamics and controls; mechanical design; vehicle systems and technologies; fluid mechanics; monitoring and diagnosis, prognosis, and health management; advanced signal processing; and big data; all of which are subjects with great potential in the field of mechanical engineering.