Special Issue on Novel Materials and Sensing Technologies on Electronic and Mechanical Devices Part 2(2)

Preface

In recent years, applications of novel materials and sensing technologies in electronic and mechanical devices have become rapidly developing fields. Manufacturing is the economic lifeline of a country and has been regarded as a labor-intensive industry. Therefore, to cut production costs, devices for Internet of Things (IoT) are widely developed. IoT is composed of the most integrated end devices and facilities, such as intelligent sensors for internal control, industrial systems, mobile terminal systems, floor control systems, and home intelligent facilities. Smart devices and external control information are utilized with the hope to attract companies that manufacture high-value-added aerospace, automotive, IT mold, textile, optoelectronic, watch, medical, defense-related, automation, energy, and semiconductor-related parts and components to drive a country's economy. Therefore, the key to keeping up with the competitive advantage of domestic manufacturing in the future is still to rely on the development of advanced manufacturing and precision machinery-related technologies. The scope of this Special Issue "Novel Materials and Sensing Technologies on Electronic and Mechanical Devices" covers fundamental materials of electronic, mechanical, and electrical engineering, including their synthesis engineering, integration with many elements, designs of electronic or optical devices, evaluation of various performance characteristics, and exploration of their broad applications to industry, environmental control, materials analyses, and so forth. Part 2(2) of this special issue selects 14 excellent papers about three categories of sensors and materials fields:

(1) Physical/Mechanical Sensors: "Features of Vibration of Ship Generator Caused by Coupling Effect of Load Fluctuation" presented by Li *et al*.

(2) Related Technologies: "Zeta Converter with Resistor-capacitor-diode Snubber and H-type Snubber to Reduce Switching and Reverse-recovery Losses" presented by Tsai and Chen, "Smart Device Monitoring System Based on Multi-type Inertial Sensor Machine Learning" presented by Zeng *et al*., "Remote Data Transmission Technology Based on BeiDou Satellite Navigation Sensor System Onboard Ship" presented by Zhuang *et al*., "Synergy Effect of Regional Industrial Agglomeration and Urbanization" presented by Wang *et al*., "Processing Cycle Prediction Using Support Vector Regression in Intelligent Manufacturing" presented by Tong *et al*., "Fast Adaptive Low-density Parity Check Coding Based on Confidence Criteria" presented by Gao *et al*., "Adaptive Method to Locate Seed Points Based on Information Entropy

and Quadtree" presented by Du *et al*., "Using Microservice Architecture as a Load Prediction Strategy for Management System of University Public Service" presented by Huang *et al*., "Enhanced Autonomous Navigation of Robots by Deep Reinforcement Learning Algorithm with Multistep Method" presented by Peng *et al*., and "Prediction Model of Working Hours of Cooling Turbine of Jet Engine with Back-propagation Neural Network" presented by Chen *et al*. (3) Sensor Applications: "Evaluation of Effect of Music on Human Nervous System by Heart Rate Variability Analysis Using ECG Sensor" presented by Wu and Chang, "Novel OneM2M Communication Mechanism Based on Labeling of IoT Devices" presented by Chang *et al*., and "Application of Virtual Reality Technology to Display of "Maritime Silk Route" Culture" presented by Hsiao *et al*.

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