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 4(1) of this special issue selects 11 excellent papers about three categories of sensors and materials fields:


(2) Related Technologies: “Establishment of Biometric Verification System Based on Design Science Research Methodology and Sensing System for Smart Border Control” presented by Lin and Hung, “Genetic-algorithm-based Local Binary Convolutional Neural Network for Gender Recognition” presented by Lin et al., “Surface Roughness Prediction and Parameter Selection for Grinding Process with Computer Numerical Control” presented by Lin et al.,

(3) Sensor Applications: “Use of Sensor Technologies in Online Courses in Post-COVID-19 Era” presented by Wu et al.

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Teen-Hang Meen  
Distinguished Professor, Department of Electronic Engineering  
National Formosa University, Taiwan

Wenbing Zhao  
Professor, Department of Electrical Engineering and Computer Science  
Cleveland State University, USA

Hsien-Wei Tseng  
Professor, College of Artificial Intelligence  
Yango University, China