### Keynote Speech

**Date:** March 27  
**Time:** 10:10-12:10  
**Room:** D  
**Chair:** Rong Zhang, Nishinippon Institute of Technology, Japan

**KS-1**  
**Title:** Improve Contents Access by In-Network Caching and Multipath Transfer  
**Speaker:** Jinlei Jiang

**KS-2**  
**Title:** Selenium-contained Materials with Industrial Application Potential  
**Speaker:** Lei Yu

**KS-3**  
**Title:** The “Coal to Electricity” Project in North China - A Big Challenge to Smog  
**Speaker:** Zheng Xu

### Session 1

**Date:** March 27  
**Time:** 14:00-15:20  
**Room:** A  
**Chair:** Shota Nakashima, Yamaguchi University, Japan

**GS1-1**  
**Title:** Investigation of Brain Activity During Listening to and Imagining Music  
**Speakers:** Yusuke Mitani, Takuya Kubo, Yuya Chiba, Yoshikko Maruyama, Kenji Moriya, Masahiro Nakagawa

**GS1-2**  
**Title:** Growth and Body Movement Analysis Using Image Processing in Early Stages of Chick Embryos Under Hypoxic Environment  
**Speakers:** Asahi Yokota, Koki Tenma, Yuya Tiba, Kenji Moriya

**GS1-3**  
**Title:** Development of Minimum Toe Clearance Detector for a Tripping Prediction  
**Speakers:** Daiki Hamada, Shota Nakashima, Tomohiro Morio, Tatsuya Sugimura, Kazuo Hanayama

**GS1-4**  
**Title:** Proposal of Leaving the Bed Motion Detection Method Corresponded at Night using Obrid-Sensor  
**Speakers:** Daichi Hamasuna, Shenglin Mu, Shota Nakashima

### Session 2

**Date:** March 27  
**Time:** 14:00-15:20  
**Room:** B  
**Chair:** Shenglin Mu, Ehime University, Japan

**GS2-1**  
**Title:** Modeling Phase Transformation for Residual Stress Study in Selective Laser Melting Processes by Finite Element/Matlab Integration  
**Speakers:** Shih-Chun Chen, Kuo-Shen Chen, Tz-Cheng Chiu

**GS2-2**  
**Title:** Design and Realization of a Sensing Module for Machine Tools Status Monitoring by Multiple MEMS Accelerometers Integration  
**Speakers:** I Chun Sun, Jui-Min Tsai, Kuo-Shen Chen, Yun-Hui Liu, Tian-Shiang Yang, Mi-Ching Tsai

**GS2-3**  
**Title:** General Dual Wiimote 3D Localization Scheme: Sensitivity Analysis and Its Application on Robot Arm Attitude Detection  
**Speakers:** Sing-Chi Hsu, Ting-Hao Li, Hui-Yuan Chan, Kuo-Shen Chen

**GS2-4**  
**Title:** Application of Homography Transformation for Assisting Machine Vision in Automatic Guided Vehicles  
**Speakers:** Ching-Wei Lee, Yi-Chan Pei, Kuo-Shen Chen, Sen-Yung Lee

### Session 3

**Date:** March 27  
**Time:** 14:00-15:20  
**Room:** C  
**Chair:** Fumiaki Ehara, National Institute of Technology, Ube College, Japan

**GS3-1**  
**Title:** Synthesis, Characterization and Acetone Sensing Performance of ZnFe2O4 Hollow Spheres/RGO Composites  
**Speakers:** Kaidi Wu, Yifan Luo, Chao Zhang

**GS3-2**  
**Title:** Recent Progress on Room Temperature Gas Sensors for NO2 Detection  
**Speakers:** Chao Zhang, Xin Geng, Yifan Luo

**GS3-3**  
**Title:** Cavitation Erosion of NiTi Composite Coating Deposited by Atmospheric Plasma Spraying  
**Speakers:** Dejia Zhu, Xinlong Wei, Chao Zhang

**GS3-4**  
**Title:** An Investigation on Self-polymerization and Co-polymerization Properties of Lead Methacrylate  
**Speakers:** Yujuan Zhang, Jing Xu, Mengting Duan, Danran Zhu, Defeng Wu, Ming Zhang, Chunhong Wang
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<td>Session 4</td>
<td>15:40-17:00</td>
<td>A</td>
<td>Hideaki Orii, Fukuoka University, Japan</td>
<td>Design and Synchronization of Large-scale Random Number Generators</td>
<td>Design of Frequency Phase Measurement System</td>
<td>Wireless Temperature and Humidity Acquisition System Based on Z-Stack Protocol Stack</td>
<td>A Study on Robot Tracking based on Deep Learning and Monocular Vision</td>
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<td>GS4</td>
<td>GS4-1</td>
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<td>Liao, Pei-Yen Wan, Shih-Chie Tseng, Jun-Juh Yan</td>
<td>Li, Lifeng Zhang</td>
<td>Zhu, Shengrong Gong, Zhenjiang Qian, Gaofei Sun, Lifeng Zhang</td>
<td>Chen, Wanpei Chen, Lifeng Zhang</td>
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<td>Session 5</td>
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<td>B</td>
<td>Akira Yamawaki, Kyushu Institute of Technology, Japan</td>
<td>Wafer Probe Yield Prediction Modeling based on General Regression Neural Network to Improve DRAM Processes</td>
<td>An Empirical Study on Machine Assembly Efficiency Improvement based on Lean Six Sigma Technique</td>
<td>Evaluation of Absorption Characteristics for Corrugated Fiberboard Using Design of Experiment Approach</td>
<td>Design and Realization a Versatile Performance Test Platform for Motorcycle Anti-lock Braking System</td>
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<td>Wang, Chi-Hung Kuo, Bing-De Wu</td>
<td>Wang, Yu-Hsun Li, Chun-Ting Li Liu</td>
<td>Wang, Hsin-Tzu Chang, Chin-Hua Chen</td>
<td>Guo, Chun-Hung Wu, Kuo-Shen Chen</td>
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<td>Session 6</td>
<td>15:40-17:00</td>
<td>C</td>
<td>Lifeng Zhang, Kyushu Institute of Technology, Japan</td>
<td>Design of Routing Algorithm for Wireless Sensor Networks based on Clustering Structure</td>
<td>Research on the Denoise Method of Speckle Image Contour and Background</td>
<td>Research on Fatigue Driving State based on Multi-source Information Fusion</td>
<td>Research on Flower Retrieval Based on Deep Learning</td>
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<td>GS6</td>
<td>GS6-1</td>
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<td>Zhang, Zheng Gong, Jie Xu, Jiafeng Zhang</td>
<td>Yin, Xinglong Zhu</td>
<td>Xinyue, Jiang Ming, Shen Hui, Chen Jingxin</td>
<td>Niu, Xuelong Hu, Shuhan Chen, Chenhui Yang</td>
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<td>Room A</td>
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<td>Chair</td>
<td>Makoto Miyauchi, National Institute of Technology, Kitakyushu College, Japan</td>
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**GS7-1**
*An X-Y Table Control System using the Dual Loop PLL Motion Controller*
Hidekazu Machida, Michinobu Kambara, Takihiro Hirota

**GS7-2**
*One-Dimensional Standing and Sitting Interface Based on Relative Distances*
Geunho Lee, Yuki Fujito, Go Yanako, Hiroki Tamura, Etsuo Chosa

**GS7-3**
*Construction of Low Temperature Control Device and Management System*
Yoshie Takewaka, Sonichirou Hida, Makoto Miyauchi

**GS7-4**
*Study on Learning in Intelligent Control using ABC Type Neural Network*
Shoulin Mu, Satoshi Shibata, Yamanoto Tonomori, Kanya Tanaka, Shotaka Nakashima

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<td>Bikash Lamsal, Kajima Corporation, Japan</td>
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**GS8-1**
*Box-Scan: An Efficient and Effective Algorithm for Box Dimension Measurement in Conveyor Systems using a Single RGB-D Camera*
Ho-Min Park, Arnout Van Messem, Wesley De Neve

**GS8-2**
*High-Speed Pattern Matching Algorithm with CPU/GPU Cooperation for Network Intrusion Detection Systems*
Chun-Liang Lee, Guan-Zhang Chen, Kai-Ping Lu

**GS8-3**
*Virtual Agents using Sequence to Sequence Models for Sentiment Analysis to deal with Anxiety and Depression*
Bishal Thapaliya, Swagat Niroula, Bikash Lamsal

**GS8-4**
*Measurement of Resistance Force of Conveyor Belt Passing on Carrier Roller (Development of Substitutive Method with Self-traveling Roller)*
Kanata Miyazaki, Kazuya Okubo, Kiyotaka Obunai

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<td>Chair</td>
<td>Seiichi Serikawa, Kyushu Institute of Technology, Japan</td>
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**GS9-1**
*Detection of Dozing Students from an Ordinary Classroom Scene with CV technique*
Taichi Kuriyama, Akira Suganuma

**GS9-2**
*Study on Hand Tracking with IMU*
Takuma Miyazaki, Yuhki Kitazono

**GS9-3**
*Improvement of Extinguish Way of Extensive Automatic Fire Extinguishing System for Residential Use*
Shotaro Sadaishi, Kosuke Ando, Masahiko Hanada, Kanya Mizuguchi, Hiromichi Hanada, Seiichi Serikawa, Yuhki Kitazono

**GS9-4**
*Development of the 3D User Interface Using the Hand Gesture*
Wataru Nishimoto, Yuhki Kitazono
PS-1 Development of Operation System for Electric Wheelchair by Voluntary Movements of Head  
Taisei Kusakabe, Kohei Watanabe, Shota Matsuhashi, Ryoji Onodera, Michiaki Shishido

PS-2 An Intelligent Cloud-based Health Care Architecture for Long-term Care  
Zheng-Yang Lin, I-Ching Hsu

PS-3 Further Development Towards High Performance DC Power Supply  
Keju Matsui, Eiji Oishi, Masayoshi Umeno, Mikiyo Yasubayashi, Yuichi Hiratea, Sudip Adhikari, Masaru Hasegawa

PS-4 Estimation for the Number of Sound Sources Using Directional Histogram of Observed Mixture Signals  
Yuta Kawkamiki, Takaaki Ishibashi

PS-5 Blind Source Separation Based on Rotation of Joint Distribution Without Inversion of Positive and Negative Sign  
Masato Ikawa, Takaaki Ishibashi

PS-6 Nasal Expiration Image Detection on Mirror Surface Using Alternating Optimization  
Kosuke Nakahara, Kazu Mishiba, Rieko Doi, Katsuya Kondo

PS-7 Evaluation of Input Method by Myoelectric Potential Sensor for Eye-Tracking System  
Naoto Mukai, Hisano Goto

PS-8 Information Extraction for IoT-based Indoor Monitoring Platform using Big Data Analysis  
Ye Tian, Gaofei Sun, Xiaoshuang Xing, Zhenjiang Qian, Miaomiao Zhu

PS-9 Environmental Measurement in Greenhouse by Mobile Robot using ROS  
Hikaru Kumamoto, Kenichi Iida, Shigeto Nakamura, Etsuko Ueda

PS-10 Selenium-catalyzed Oxidation of Alkenes with Industrial Application Potential  
Lei Yu

PS-11 Proposal of Distance Measurement using Ceiling Light and Two Photodiodes to Compensating Light Variation  
Yuhki Kitazono, National Institute of Technology, Kitakyushu College, Japan

PS-12 A Study of Dynamic Partial Reconfiguration on FPGA of High-level Synthesized Hardware  
Takuma Sono, Akira Yamawaki

PS-13 Performance Evaluation of Dynamic Partial Reconfiguration on FPGA by Hardware Time Division Execution  
Satoshi Yonemitsu, Akira Yamawaki

PS-14 Proposal of a Method to Detect Size of Overlapping Cardboard Boxes Using Plural Lightings  
Ryota Iwaizono, Shiyuan Yang, Seiichi Serikawa

Miki Suetsugu, Kanako Kinoshita, Shiyuan Yang, Seiichi Serikawa