

# Contents

Journal of the Japan Society  
for Precision Engineering  
Vol.90 No.12 December 2024

Special Issue

## Environmentally Friendly Approaches in Precision Fabrication

### Review

- Pseudo Direct LiDAR Image Sensors Based on Multitap Charge Modulators with Multipath Interference Immunity

Keiichiro KAGAWA, Keita YASUTOMI and Shoji KAWAHITO ..... 871

### Lecture

- Technique for Generating Spectrally Separated Burst Pulses and Its Application to Ultrafast Imaging

Keitaro SHIMADA and Keiichi NAKAGAWA ..... 876

- A Model-Based 3D Vibration Measurement Method Using High-Speed Camera

Kohei SHIMASAKI, Feiyue WANG and Idaku ISHII ..... 880

- Event-Based Vision Sensor and Its Applications to High-Speed Image Processing

Tomohiro TAKAHASHI ..... 886

- Measurement of High-Speed Deformation Behavior by Digital Image Correlation Method

Masahiro NISHIDA ..... 891

- 4D X-Ray Tomography with Millisecond Temporal Resolution

Wataru YASHIRO ..... 896

- My Experience in Precision Engineering

Toshiyuki OBIKAWA ..... 907

- Gravure & Interview

MAEDA INDUSTRY Co., Ltd. ..... 867

Toshimitsu MAEDA

Interview : Satoru EGAWA

- Introduction to Precision Engineering

Precision Engineering and Artificial Hearts/Yoshinori MITAMURA ..... 901

- Introduction of Laboratories

Manufacturing and Machine Tool Laboratory, Saitama University ..... 905

### ● Awards

JSPE Prize

JSPE Technology Award

JSPE Young Engineer Award

JSPE Monozukuri Award ..... Following pages

● Information ..... 912

● JSPE Affiliate News ..... 908

● Corporate Members ..... 913

● From the Lecture Committee ..... 告 12-1

● Editor's Note ..... 告 12-8

# Selected Papers for Special Issue on Industrial Application of Image Processing

- 3D Heatmap Visualization of Gaze Distribution Measured from Observers Predicting Dynamism of Subject's Movement 915  
Fuyuko IWASAKI, Shouta HIOKI, Shunsuke YONEDA, Michiko INOUE and Masashi NISHIYAMA
- Estimation of the Person's Position Using Video Sequences and Radio Wave Strengths in a Space with Temporary Shielding 924  
Yuji MAKIMURA, Daichi HAYASHI, Teppei KOBIKI, Shouki SAKEMOTO and Masashi NISHIYAMA
- 3D Rotational Robustness Improvement Method for Pixel Selection Template Matching 933  
Osamu NASU and Manabu HASHIMOTO

※The journal papers listed above are published on J-STAGE (Japan Science and Technology Information Aggregator, Electronic).  
<https://www.jstage.jst.go.jp/browse/jjspe/-char/en/>