



# The Japan Society for Precision Engineering

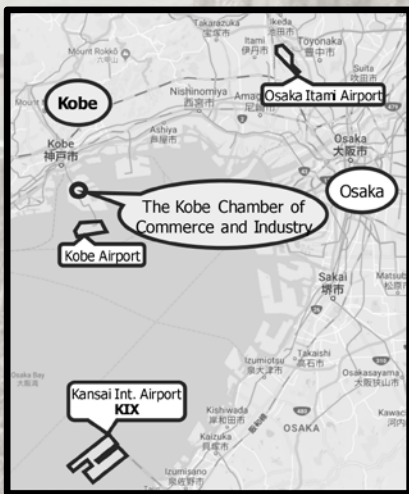
## Call for Papers of ICPE2020

<http://icpe2020.jspe.or.jp/>

The 18th International Conference on Precision Engineering (**ICPE2020**) will be organized by the Japan Society for Precision Engineering (JSPE) and held on **23-27 November 2020 in Kobe, Japan**. The conference will be held at **The Kobe Chamber of Commerce and Industry** located in the Kobe port island which is artificial island at the port of Kobe.

### Location

**Kobe** is located right in the center of Japan. This city has prospered as a port for overseas trade since ancient times, and has adopted various western cultures since its opening in 1868.



### Conference topics:

- Digital design and manufacturing systems
- CAD/CAM technologies
- Advanced cutting technologies
- Advanced grinding technologies
- Micro/Nano machining and figurings
- Nano-scale surface finishing
- Non-traditional machining and additive manufacturing
- Energy beam processing
- Advanced die/molding and polymer processing
- Advanced machine tools and elements
- Robotics and mechatronics
- Nano-scale measurements and calibrations
- Surface metrologies of nano-scale structures
- Mechano photonics engineering and optical applications
- Advanced image processing and applications
- Micro fabrications for functional surfaces
- MEMS/NEMS etc.

### Important dates:

- Submission of 100 to 200 words abstract: **March 23, 2020**
- Notification of abstract acceptance: **April 20, 2020**
- Submission of manuscript for paper review: **June 15, 2020**
- Notification of final acceptance: **August 17, 2020**
- Submission of Camera-ready manuscript: **September 14, 2020**

### Conference committee:

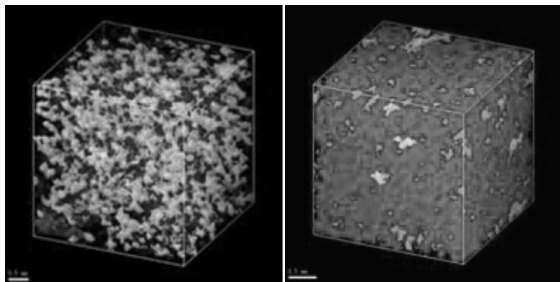
- Conference Chair: Keiichi SHIRASE, Kobe University
- Conference Co-chair: Atsushi MATSUBARA, Kyoto University
- Conference Co-chair: Yasuhiro TAKAYA, Osaka University
- Conference Secretary: Ryuta SATO, Kobe University
- Program Chair: Kazuya YAMAMURA, Osaka University
- Program Co-chair: Yasuhisa SANO, Osaka University
- Supervisor: Hideki AOYAMA, Keio University
- Supervisor: Katsuyoshi ENDO, Osaka University
- Supervisor: Takashi MATSUMURA, Tokyo Denki University

## Introduction of JSPE Young Engineer Award 2019

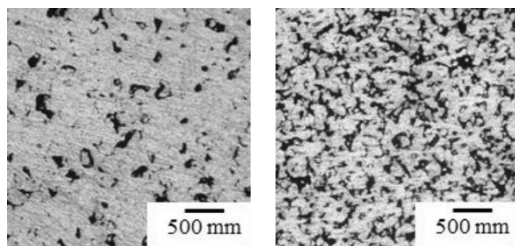
**Keita SHIMADA (Tohoku University)**

### ***Fabrication of rhizoid porous structures for conferring functionality via metal additive manufacturing***

This research proposes a method of controlling the distribution and orientation of pores by adjusting the building conditions of additive manufacturing process. This study clarifies the relationship between building conditions and the strength of the structure with varied porosity. The method enables to build structures with functionally graded strength and/or strength directivity and to manufacture implants with reduced strength as low as living bones, resulting in stress relaxation, and is thus worthy of the Young Engineer Award.



**Figure 1.** Internal pores visualized with X-ray CT; the red part indicates the largest connected pore in the cube, and the laser scanning speeds were 100 mm/s (left) and 340 mm/s (right).



**Figure 2.** Surface topographies of MAMed structures, the laser scanning speeds were 100 mm/s (left) and 430 mm/s (right).

## Introduction of FA Foundation Award

[Paper Awards 2018]

### **1. Development of five DoF HEM<sup>2</sup> using parallel link mechanism**

*Takuya MATSUNAGA, Koyo YU and Kouhei OHNISHI*  
J. JSPE, Vol.83, No.8, pp.802-810

### **2. 3D-2D matching of line features for spherical camera localization in man-made environment**

*Tsubasa GOTO, Sarthak PATHAK, Yonghoon JI, Hiromitsu FUJII, Atsushi YAMASHITA and Hajime ASAMA*

J. JSPE, Vol.83, No.12, pp.1209-1215

## Introduction of The 40th Machine Tool Engineering Foundation Award

[Paper Awards 2018]

### **1. Optimization of polishing conditions for reducing thickness variation of wafer in double-sided polishing**

*Katsunari FUKUI, Kenji HIROSE, Urara SATAKE, Toshiyuki ENOMOTO and Tatsuya SUGIHARA*

J. JSPE, Vol.84, No.3, pp.277-283

### **2. Sensor-less on-line chatter detection in turning process based on phase monitoring using power factor theory**

*Shuntaro YAMATO, Takayuki HIRANO, Yuki YAMADA, Ryo KOIKE and Yasuhiro KAKINUMA*

Precision Engineering, Vol.51, pp.103-116

### **3. A novel technique for slicing SiC ingots by EDM utilizing a running ultra-thin foil tool electrode**

*Yonghua ZHAO, Masanori KUNIEDA and Kohzoh ABE*

Precision Engineering, Vol.52, pp.84-93

### **4. Method for generating CNC programs based on block-processing time to improve speed and accuracy of machining curved shapes**

*Toshiaki OTSUKI, Hiroyuki SASAHARA and Ryuta SATO*

Precision Engineering, Vol.55, pp.33-41