



# The Japan Society for Precision Engineering

## Introduction of JSPE PRIZES 2020

This award is presented to individuals who have achieved innovation in research, technology, or education in the field of precision engineering and have contributed significantly to its development.

### 1. **Tsunemoto KURIYAGAWA (Tohoku University)**

Prof. Tsunemoto Kuriyagawa, who has a background in machining, has been promoting studies on pico- & nano-precision machining from the perspective of "value creation." He is a pioneer in exploring new research fields in manufacturing and a leader in forming collaborations across the industry, academia, and government agencies for practical realization of manufacturing technologies. His research works are characterized by technological innovations in terms of processability and functionality. He has also made significant contributions to the systematization of M4 (micro/meso mechanical manufacturing) process.

In recent years, he has focused on working toward the practical utilization of powder jet deposition, a completely new film formation technology in fields such as dental treatment. These results are excellent achievements in interdisciplinary research combining precision machining and medicine.

In addition, he has made outstanding contributions toward the activities of the Japan Society for Precision Engineering for many years, as the chairman of the Technical Committee for Nano-precision Mechanical Manufacturing, vice chairman of the headquarters, and director of the Tohoku branch. Furthermore, as a member of the Science Council of Japan, Fellow of the Japan Society for Precision Engineering, Fellow of the Japan Society of Mechanical Engineers, Director of the Japan Society for Abrasive Technology, Fellow of the International Society for Nano-Manufacturing, and Director of the International Committee for Abrasive Technology, he played an important role in the activities of these organizations and development of academic associations.

Through these efforts, he has contributed immensely toward the research and development in precision engineering technology, especially in the manufacturing sector. Thus, in recognition of his achievements, we hereby present the JSPE Prize to Prof. Kuriyagawa.

### 2. **Hiroyuki TSUJI (NGK Insulators, Ltd.)**

Mr. Hiroyuki Tsuji has been consistently engaged in the development of new production technologies and solutions for ceramic products. His contribution toward the development and practical application of precision processing technology in NGK Insulators Ltd., especially, has been a major step in the same direction. In collaboration with machine tool builders and super-abrasive wheel manufacturers, he has contributed immensely toward raising the level of technology in the field of precision engineering. In NGK Insulators, he applied the latest processing and measurement technologies to commercialize the company's products, such as piezoelectric microactuators, optical communication parts, chip-type ceramic secondary batteries, and composite substrates for SAW filters. In addition, he has played a major role in enlightening academic societies about the latest trends and unique issues related to ceramics processing through presentations and joint research with universities.

Mr. Tsuji has also contributed toward facilitating higher performance of automobile exhaust gas purification catalyst carriers through the fine structuring of molds.

From the industry standpoint, he has made positive proposals for academic society-related activities and actively worked to revitalize the traditional society as a manufacturing society.

Thus, through his work, Mr. Hiroyuki Tsuji has striven to create a fusion of ceramic material technology and precision engineering technology. His research and development efforts and social achievements in the area are expected to contribute to the development of the manufacturing and precision engineering industry in Japan.



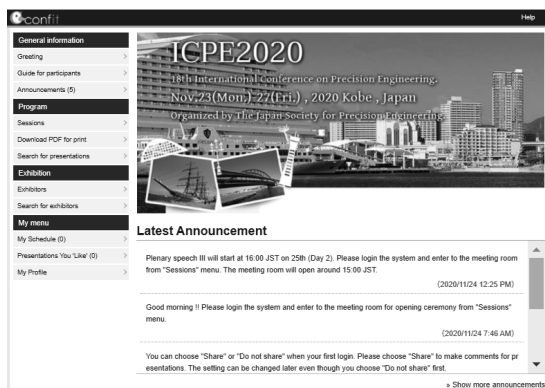
**Fig. 1.** Tsunemoto Kuriyagawa



**Fig. 2.** Hiroyuki Tsuji

## Report of 18th International Conference on Precision Engineering (ICPE2020)

The 18th International Conference on Precision Engineering (ICPE2020) was held on 24th to 26th November, 2020 as a virtual conference from Kobe, Japan. Initially, ICPE2020 was planned to hold in Kobe. However, due to the COVID-19 pandemic continues to be a global issue, the conference committee had to decide to cancel the face-to-face conference and transition to the virtual conference. ICPE is the principal international conference organized by the Japan Society for Precision Engineering (JSPE). The first ICPE was held in 1974 in Tokyo and the ICPE is held every two years since 2006.



Top page of ICPE2020 virtual conference

ICPE2020 consisted of plenary, oral and poster sessions. Five distinguished speakers, Prof. Yusuf Altintas (The University of British Columbia, Canada), Prof. Fengzhou Fang (Tianjin University, China), Prof. Christian Brecher (RWTH Aachen University, Germany), President Shinichi Inoue (Makino Milling Machine Co., Ltd., Japan) and Prof. Dae-Eun Kim (Yonsei University, Korea) gave their excellent presentations.

189 papers were presented in oral session, and 38 papers were presented in poster session. All participants were able to see proceedings and videos or posters of all papers from 8:00 JST on 24th to 17:00 JST on 30th November at the virtual conference. 368 participants were registered, they accessed the virtual conference 40,625 times and played the video of oral presentations 1391 times.

At the opening ceremony on 24th November, Prof. Takamasu who is a president of JSPE gave his opening address, and Prof. Shirase who is a conference committee chair gave his welcome address. In the welcome address, history of ICPE and Kobe were introduced. Also, gourmets and sweets famous in Kobe were introduced. Unfortunately, the banquet dinner had been canceled

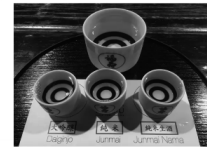
due to the COVID-19 pandemic, memorable Kobe and ICPE2020 souvenirs were delivered for all participants.



### Gourmets & Sweets of Kobe



Kobe beef



Sake brewed in Nada-gogo



Keiichi Shirase (主席)

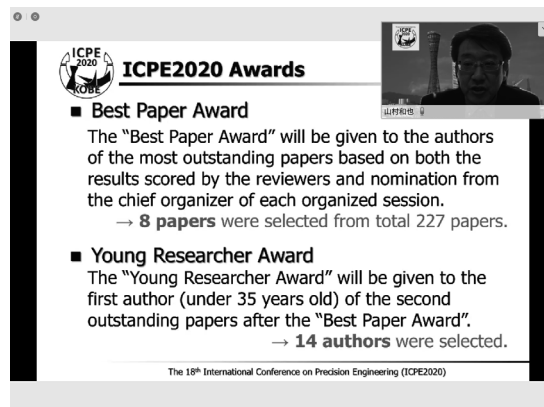


Kobe sweets

Introduction of gourmets and sweets famous in Kobe

A special lecture “Sustainable sake brewing through tradition and innovation” was given by President Takenosuke Yasufuku (Kobe Shushinkan Brewery) on 25th November.

At the closing ceremony on 26th November, Prof. Yamamura who is a program committee chair introduced the Best Paper Award and the Young Researcher Award. 8 papers were selected from total 227 papers and received the Best Paper Award. 14 young authors were selected and received the Young Researcher Award.



Introduction of awardees of ICPE2020 Awards

Announcement of the 19th ICPE (ICPE2022) was given by Prof. Matsubara who is a conference committee co-chair of ICPE2022. ICPE2022 will be held on 29th November to 2nd December, 2022 in a historical city Nara.

Finally, Prof. Hiraoka who is a vice-president of JSPE gave his closing address, and ICPE2020 was finished successfully.