

## **September 10 (Wed.)**

### **Keynote Lecture**

Kobe International Conference Center 1F [Main Hall]

9:00-10:00

Chairman: Harumitsu Suzuki (Japan Foundry Society, Inc.)

Keynote Lecture **The H3 Launch Vehicle: Overcoming the Setback of the First Test Flight - Insights into the Rebuilding of the Project Amidst Adversity -**

Chikara Ishikawa (Japan Aerospace Exploration Agency(JAXA))

### **Market**

Kobe International Conference Center 1F [Main Hall]

10:30-12:00

Chairman: Yuki Nobori (CASTEM Co.,Ltd.)

**M-1 North America Market Review**

Timothy C. Sullivan (Investment Casting Institute)

**M-2 European Investment Casting Market**

Carlos Olabe (European Investment Casters' Federation AISBL)

**M-3 Japan Market Review**

Shotaro Ishida (Japan Foundry Society, Inc)

**M-4 Investment Casting industry in Chinese Mainland**

Zhang Yun (Investment Casting Branch Association of China Foundry Association)

**M-5 Latest Market Trend of Taiwan**

Jhewn-Kuang Chen (Taiwan Foundry Society)

**M-6 Korea Market Report**

SungJin Kang (SCM Co., Ltd.)

### **R&D**

Kobe International Conference Center 1F [Main Hall]

13:30-15:30

Chairman: Toshiki Horiuchi (IHI Corporation)

**R-1 R & D Trends on Investment Casting for Aerospace Applications**

Julio Aguilar (Safran Aircraft Engines)

**R-2 MHI gas turbine development and related topics on castings**

Yoshitaka Uemura (Mitsubishi Heavy Industries, Ltd.)

- R-3      Historical Development of Superalloys and their Contributions to Aeroengines and Land-based Gas Turbines for the Future  
Hiroshi Harada (National Institute for Materials Science)
- R-4      Key Factors For Driving Forward A Precision Investment Casting World Class Foundry  
Carlos Olabe (European Investment Casters' Federation AISBL)

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**CAE**

Kobe International Conference Center 3F [301]

10:30-12:00

- Chairman: Koki Nishizaki (Daido Castings Co.,Ltd.)
- T-1      The Impact of Machine Learning on Defect Prediction in Casting Simulation  
Yuki Ishimatsu (IHI Corporation)
- T-2      In Situ Observation of Filling and Blowhole Formation Prediction in Scaled-Up Countergravity Low-Pressure Casting of Titanium Aluminides  
Takanori Matsuki (Daido Steel Co., Ltd.)
- T-3      Combining process and simulation data to train machine learning models for defect prediction in investment castings  
Jakumeit Jürgen (Access e.V.)

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**Shell 1**

Kobe International Conference Center 3F [301]

13:30-15:00

- Chairman: Tomoki Hattori (Nalco Japan G.K.)
- T-4      Fundamental Analysis Into Properties Affecting Investment Casting Shell Strength  
Gavin Dooley (REMET UK Ltd.)
- T-5      A New Approach to Evaluate Green Shell Strength Properties to Better Understand Shell Cracking  
Carel Wegman (Ransom & Randolph)
- T-6      Controlling process variability on successful vacuum investment casting  
Iñaki Vicario (Consarc Engineering Ltd.)

## **September 11 (Thu.)**

### **WAX**

Kobe International Conference Center 3F [301]

9:00-10:30

Chairman: Shotaro Ishida (Blayson Japan Co., Ltd.)

**T-7 Surface energy of wax patterns: the parameters and developments**

John Machielse (Paramelt B.V.)

**T-8 Investment Casting Wax Through Time**

Gavin Williams (The Blayson Group Ltd.)

**T-9 Modernizing the Wax Room — Unlocking the Full Value of Foundry Tooling and Equipment —**

Aaron Phipps (MPI, Inc.)

### **Shell 2**

Kobe International Conference Center 3F [301]

10:45-12:15

Chairman: Nobuo Tomura (AGC Ceramics Co., Ltd.)

**T-10 Properties of 3D ceramic material for core and shell with improved heat resistance**

Koichiro Nabetani (AGC Ceramics Co., Ltd.)

**T-11 Investment casting shell raw materials - Possibilities and challenges connected with sustainable handling of raw materials and mining areas**

Michael Weissenbacher (Imerys Villach GmbH)

**T-12 An AI-Powered Digital Framework for Automated Ceramic Shell Defect Detection in Investment Casting**

Wenchao Tang (Access e.V.)

### **Business & Manufacturing Solution**

Kobe International Conference Center 3F [301]

13:45-14:45

Chairman: Junya Fujioka (KINSEI MATEC CO., LTD.)

**T-19 Achieving Lasting Business Results in Investment Casting Industry**

Nipendra (Nip) Singh (S&A Consulting Group LLP)

**T-20 Smart Solutions for Investment Casting**

Barry Huang (DS Technology)

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**AM & Ceramic core**

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Kobe International Conference Center 3F [301]

15:00-16:00

Chairman: Nobuki Sato (EBARA CORPORATION)

**T-21 Study of the Impact of Applying Pt Pins for Ceramic Core Support in Aeroengine Blade Investment Casting**

Junghyun Choi (Hanwha Aerospace Co., Ltd.)

**T-22 Advances in 3D Printed Patterns for Investment Casting Parts from Pixels +**

Patrick Dunne (3D Systems Corporation)

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**Process Control ,IoT**

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Kobe International Conference Center 3F [Reception Hall]

9:00-10:30

Chairman: Koji Inukai (NORITAKE CO., LIMITED)

**T-13 Leveraging IOT to Drive Foundry Process Improvements Through the use of Machine Learning**

Batuhan AK (Yamaha Marine Precision Propellers, Inc.)

**T-14 Advances in Master Alloy Ingot Production for Premium Superalloy Castings**

George Bernhard (Consarc Engineering Ltd.)

**T-15 LSTM for Temperature & Humidity Prediction and Comparison between PID and MPC Control of Temperature and Humidity.**

Xiaofan Yang (Wollmann Technology Zhangjiagang Co., Ltd.)

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**Superalloy**

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Kobe International Conference Center 3F [Reception Hall]

10:45-12:15

Chairman: Yuhi Mori (Honda R&D Co.,Ltd.)

**T-16 Precision Casting Technology for Superalloy Transfinite Components**

Jun Wang (Shanghai Jiao Tong University)

**T-17 Evaluation methods of plastic strain in investment-cast single-crystal superalloys.**

Ryosuke Naito (IHI Castings Co., Ltd.)

**T-18 Controlling the high reactivity of nickel-based superalloys containing hafnium and optimizing casting methods for sustainability**

Thomas Tan Kok Wee (ST Engineering Aerospace Precision Products Pte. Ltd.)

## Program

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### Material 1

Kobe International Conference Center 3F [Reception Hall]

13:45-14:45

Chairman: Yosuke Saito (TAENAKA KOGYO CO., LTD.)

**T-23     Use of Recycled Glass in Investment Casting of Aluminum**

Victor Okhuysen (Cal Poly Pomona University)

**T-24     A Study on Enhancing Tensile Ductility in Al-Si-Cu-Mg (C355) Investment Castings**

Roger Lumley (AWBell Pty Ltd.)

### Material 2

Kobe International Conference Center 3F [Reception Hall]

15:00-16:30

Chairman: Issei Ishida (JUKI AIZU CORPORATION)

**T-25     Factors Influencing the Mechanical Properties of Stabilized Ferritic Stainless Cast Steel**

Rie Nishio (HINODE Holdings Co., Ltd.

University of Tsukuba, Graduate School of Science and Technology (Doctoral Student))

**T-26     Understanding Alpha-Case Formation in Titanium Castings as Influenced by Aluminum Content**

Byung-il Kang (Sungkyunkwan University)

**T-27     Mechanical Property Modeling of As-cast MM246**

Ryoga Soeda (Daido Steel Co., Ltd.)