

# ICAA18

## TOYAMA JAPAN 2022

The 18th International Conference on Aluminium Alloys

*Aluminium and Its Alloys for Zero Carbon Society*

**First Announcement**

**September 4-8, 2022**

**Toyama International Conference Center,**

**ANA CROWNE PLAZA TOYAMA**

**Toyama, Japan**



Organized by The Japan Institute of Light Metals

Sponsored by The Light Metal Educational Foundation, Inc.  
Japan Aluminium Association  
Japan Light Metal Welding Association  
Kobe Steel Co., Ltd.  
Mitsubishi Aluminum Co., Ltd.  
Nippon Light Metal Co., Ltd.  
Showa Denko K.K.  
UACJ Corporation

# Invitation to ICAA18



## Shinji Kumai

Chairman of the organizing committee of ICAA18  
Professor, Tokyo Institute of Technology

Welcome to ICAA18! We are very grateful for the opportunity to host the 3rd ICAA in Japan. The conference is organized by the Japan Institute of Light Metals (JILM), which is a world-renowned academic society specializing in light metals and will celebrate its 70th anniversary in 2021. We aim to organize ICAA18 taking into account the Covid-19 situation with the help of participants from all over the world.

Aluminium and its alloys have been utilized for both structural and functional applications. In addition, we need to focus on their excellent potential as an eco-friendly material. The use of light aluminium alloys in automobiles is an effective way to reduce the emission of CO<sub>2</sub> while driving. We can produce recycled aluminium ingots with substantially smaller fabrication energy and a lower greenhouse gas emission rate, compared to that of the virgin aluminium. The active use of recycled aluminium should be recommended for global environmental protection. Now is our opportunity to make use of the results of both basic and applied research studies of aluminium and its alloys so that we can achieve a sustainable society. "Aluminium and its alloys for zero carbon society" is the main theme of ICAA18. We hope that ICAA18 will allow participants from all over the world to get to know and inspire each other, and to encourage young researchers and students who will lead the future of aluminium.

We look forward to your attendance at ICAA18 in Toyama, Japan!

## Welcome to Toyama



## Kenji Matsuda

Chairman of Steering Committee  
Professor, University of Toyama

I am honored to announce that the 18th International Conference on Aluminium Alloys (ICAA18) will be held from 4th to 8th of September, 2022 in Toyama, Japan.

Thanks to abundant and clean water, an inexpensive, stable power supply, fewer natural disasters, and convenient transportation, Toyama has developed as one of the leading manufacturing prefectures and it has various industries such as metals, machinery, pharmaceuticals, chemicals, textiles and IT. And the aluminium industry in Toyama has evolved based on Takaoka copperware casting technology and stable

power supply. Toyama has become the site of the leading aluminium industry in Japan and a global fastener manufacturer. Toyama also has a variety of natural rich terrain from the 1,000 meters depth of Toyama Bay to the 3,000 meters crest of Tateyama Mountains in the northern Alps. It is characterized by a vast forest area, one of the country's leading hydropower and geothermal resources, and a high potential for renewable energy.

Toyama also supports Sustainable Development Goals (SDGs) and as one of its plans for environmentally-friendly future, it has a strategy to create a Compact City by restructuring public transportation.

Please come and see eco-friendly, Amazing Toyama.

### Organizing Committee

Shinji Kumai	Katsumi Koyama	Katsuaki Masuda
Toshiya Anami	Keitaro Yamaguchi	Kenji Matsuda
Yoshimasa Takayama	Hideki Araki	Hirofumi Toda
Hiroki Tanaka		

### Steering Committee

Kenji Matsuda	Minoru Hino	Shohei Iwao
Kouji Hisayuki	Yoshihiro Nakayama	Tomoo Yoshida
Shoichi Hirose	Makoto Kobashi	Tetsuo Aida
Takayuki Narushima	Naobumi Saito	Susumu Ikeno
Masahiro Kubota	Yoko Mitani	Kiyofumi Uno
Hiroki Tanaka	Hidetoshi Uchida	Takenori Hashimoto
Yoshihito Kawamura	Manabu Nakai	Masahiro Araki
Tadashi Minoda	Toshiya Shibayanagi	Seiichi Hirano
Katsushi Matsumoto	Mayumi Suzuki	Akihiko Tatsumi
Yasushi Nakazawa	Tomoyuki Homma	Osamu Kume
Toru Kitsunai	Shigeru Kuramoto	Seungwon Lee
Katsuhiko Nishimura	Keitaro Horikawa	Atsushi Saiki
Hideki Ono	Hiroki Adachi	Ken Kimura
Koichi Kitazono	Masakazu Kobayashi	Taiki Tsuchiya
Takumi Haruna	Takeshi Handa	

### International Committee (As of June 2018)

Alexis Deschamps	France
Richard Hamerton	USA
Jürgen Hirsch	Germany
Christopher Hutchinson	Australia
Rustam Kaibyshev	Russia
Shinji Kumai	Japan
Qing Liu	China
Knut Marthinsen	Norway
Irina Matveeva	Russia
Ashim Kumar Mukhopadhyay	India
Warren Poole	Canada
Joseph Robson	UK
Christophe Sigli	France
Birgit Skrotzki	Germany
Hiroki Tanaka	Japan
Hai Zhang	China



## Important Dates

---

- December 1, 2021: Deadline for online submission of abstract within 300 words
- January 16-31, 2022: Notice to authors
- May 31, 2022: Deadline for online submission of one-page abstract (Mandatory)
- May 31, 2022: Deadline for submission of manuscript for special issue on Materials Transactions (Not mandatory)
- May 31, 2022: Deadline for early registration
- September 1, 2022: Start for download of a conference abstract book
- September 4-8, 2022: ICAA18 Conference
- December 1, 2022: Publication of a special issue on Materials Transactions Vol. 63, electronic edition

## Registration Fees (tentative)

---

Participant (Early)	JPY 90,000	Students (Late, On-site)	JPY 50,000
Participant (Late, On-site)	JPY 100,000	Accompanying person	JPY 15,000
Students (Early)	JPY 40,000		

## Call for 300 Words Abstracts

---

ICAA18 invites all interested individuals to submit 300 words abstracts to be considered for Oral or Poster presentation. Due date is December 1, 2021.

## One Page Abstract

---

The one page abstract will be required for all of presenters after registration of 300 words abstract for presentation. Due date is May 31, 2022.

## Topics

---

- ① Modeling & simulation
- ② Casting, solidification, recycling & refining
- ③ Additive manufacturing
- ④ Foams & composite materials
- ⑤ Mechanical properties & advanced processing
- ⑥ Thermomechanical processing, texture & recrystallization
- ⑦ Heat treatment, phase transformations & precipitation
- ⑧ Corrosion & surface treatments
- ⑨ Joining, emerging processes & multi material
- ⑩ Advanced characterization
- ⑪ Aluminium & its alloys for zero carbon society

## Special Issue

---

The special issue published on Materials Transactions (MT), which co-managed by the Japan Institute of Metals will be concerned for the authors who would like to publish their paper on MT. That information also will be announced on the conference website.

## Exhibition

---

There will be a technical exhibition about aluminium industry in Japan and Toyama in conjunction with the conference at the venue. Details will be announced on the conference website.

## Early Career Researchers (ECR) & Poster Awards

---

Following the same spirit as ICAA international committee, ECR awards will be distributed on the basis of the quality of their scientific research and on their ability to communicate these results. The poster award is also distributed for poster presentation. The information of awards will be announced on the conference website.

## Excursion & Technical Visits

---

Toyama is surrounded three sides by steep mountains and faced to the deep sea, Toyama is blessed with rich nature where people can enjoy sublime scenery and tasty foods at the same time. Also, more than 80 companies concerned with aluminium industry are located in Toyama.

Excursion and technical visits will take place after the conference. Participants are required to go through specific procedures. Details will be announced on the conference website.

## About Toyama

### 1. Aluminium in Japan

The first practical applications of aluminium took place at the Osaka Arsenal in 1894. Since then, aluminium has become a foundation of Japanese infrastructure such as transport (e.g. Shinkansen), heat exchangers, construction (e.g. LNG tanks), electrical engineering (e.g. hard disks), and packaging (e.g. cans). This lightweight, 100 percent-recyclable metal is growing significantly in importance toward the sustainable society in Japan.



### 2. Toyama & Aluminium

Toyama prefecture's abundant industrial water and stable power supply are the reasons for development of Japan aluminium industry in this region since 1930s. At present, 27% of aluminium extruded materials and 35% of architectural aluminium materials are produced in Toyama Prefecture. These aluminium products from Toyama were used in TOKYO SKYTREE® that is the tallest tower and the second tallest structure in the world.

### 3. World Heritages: Historic Villages of Gokayama

The beautiful mountain scenery created by rice paddles, fields, stone walls and these thatched-roof houses is the original scenery of Japan. Houses with thatched roofs known as "gassho-style" are an extremely rare form of dwelling which can only be seen in this part of Japan.



### 5. Blessing of nature, a Treasure Trove of Food

Toyama Bay has a prime location for marine life, and nutrient-rich water washed out to sea from the 3,000m-high Tateyama Ranges makes for plump seafood, and with only a short distance between the fishing grounds and the port, the fish have no time to lose their freshness – It's just like taking fishes from a fish tank!



### 4. Tateyama Kurobe Alpine Route— "Roof of Japan"

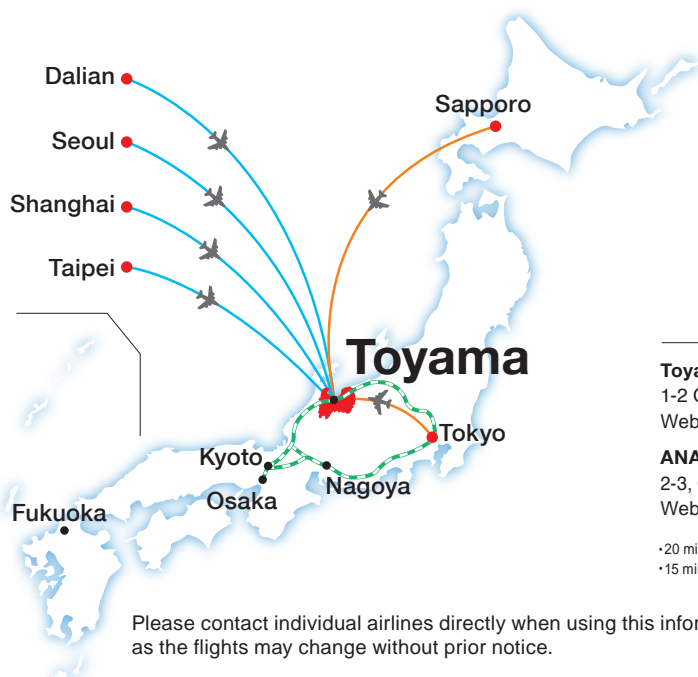
The Tateyama Kurobe Alpine (pronounced "Alpen") Route passes through the dynamic scenery of Mt. Tateyama in the Japan Alps. It is traversed using a variety of vehicles with an elevation change of 2400 meters from Toyama Prefecture to Nagano Prefecture.

#### Climate in Toyama

It will be steady and comfortable weather during the conference (September). However, the temperature might vary between different regions, especially high-altitude mountains, please bring some warm clothes with you during the outdoor events.

- Average temperature: 24.0°C
- Average precipitation: 125mm
- Highest temperature: 28.2°C
- Lowest temperature: 20.3°C

## Access to Toyama



**Tokyo⇄Toyama**

✈ Haneda Airport⇄Toyama Airport: 55 min by Plane

🚄 Tokyo Station⇄Toyama Station: 2hr by Bullet Train

**Osaka⇄Toyama**

✈ Kansai Airport⇄Osaka Station: 1hr by JR Line

🚄 Osaka Station⇄Toyama Station: 3hr by JR Line

**Nagoya⇄Toyama**

✈ Central Japan Airport⇄Nagoya Station: 30min by Train

🚄 Nagoya Station⇄Toyama Station: 3.5hr by JR Line

## Venue

#### Toyama International Conference Center

1-2 Ote-machi Toyama-city Toyama 930-0084, Japan

Website <https://www.ticc.co.jp/english/>

#### ANA CROWNE PLAZA TOYAMA

2-3, Ote-machi, Toyama-city, Toyama, 930-0084, Japan

Website <https://www.anacrownplaza-toyama.jp/>

• 20 minutes from Toyama airport by Airport line bus.

• 15 minutes from Toyama (JR) station by tram every 5 minutes.



\*Free Wi-Fi is available in TICC.

Please contact individual airlines directly when using this information as the flights may change without prior notice.

## Contact



Secretariat of ICAA18

c/o PCO Co., Ltd.

120 Kosugi Toyama-city Toyama 939-8063, Japan

E-mail: [sec.icaa18@pcojapan.jp](mailto:sec.icaa18@pcojapan.jp) Website: <https://www.icaa18.org>

