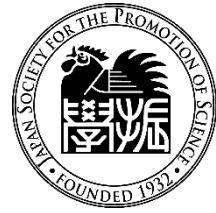




**TUHH**  
Technische Universität Hamburg



# 16<sup>th</sup> Annual German-Japanese Colloquium

## **Process Engineering**

*'New Materials for Future Reactors  
in Process Engineering'*

**December 9-10, 2019**

Hosted by

Hamburg University of Technology Germany

Kobe University Japan

JSPS Bonn Office

## The Conference Venue

Hamburg University of Technology,  
Denickestrasse 22, 21073 Hamburg



## Colloquium Venue

Building I  
Room 0053/4

## Public Transport:

Closest station: S-Bahn Harburg Rathaus

You reach the TUHH by S 3 / S 31; exit at station Harburg-Rathaus, please follow the signs (Eißendorfer Straße)

# Programme Overview

## Sunday, December 8, 2019

**19:00**                    **Scientific networking meeting/get together among PIs  
at Café Oktober**  
Schloßmühlendamm 23, 21073 Hamburg

## Monday, December 9, 2019

**08:30**                    **Registration**

**09:00 – 09:10**        **Welcome and opening remarks**

**09:10 – 09:25**        **Special greeting**

**09:25 – 12:45**        **Session I**

**-Lunch-**

**13:45 – 15:30**        **Scientific TUHH campus tour**

**15:30– 18:00**        **Session II**

**18:00**                    **Closing remarks day 1**

**19:00**                    **Social event**  
Sightseeing-tour through the historic City of Hamburg  
Hamburg Christmas Market  
Conference Dinner within the Gröninger Brauhaus

## Tuesday, December 10, 2019

**9:25 – 12:45** **Session III**

**-Lunch-**

**14:15 – 17:15**        **Session IV**

**17:15**                    **Final discussion and concluding remarks**

**19:00**                    **Farewell and dinner meeting Japanese participants**  
Restaurant Al Limone  
Lämmertwiete 12, 21073 Hamburg

# Presentation Guidelines

## Presentation Time

The presentation time for talks is 30-35 minutes followed by 15-10 minutes of discussion/Q&A (**total time per speaker: 45 minutes**).

## Preparation of Presentation Materials

All speakers must use **electronic files (PowerPoint or pdf)** to present at the conference.

**PowerPoint is available on the prepared PC.**

The file name should include the number of your session and your name like “#IV\_Meier”.

All the speakers should submit their presentation files in their **media (via either email or USB flash-memory)** to the **organization team**.

Please upload your file to the appointed folder in **the prepared computer**.

Open your file and make sure whether it displays appropriately on the computer monitor.

Our staff will assist you.

If you use your own PC, please prepare connectors and adapters necessary to connect with the projector equipment.

**All the files uploaded in the prepared computer will, of course, be deleted after the conference.**

# Detailed Programme

## SUNDAY, DECEMBER 8, 2019

**19:00**                    **Scientific networking meeting/get together among PIs**  
Café Oktober  
Schloßmühlendamm 23, 21073 Hamburg

## MONDAY, FEBRUARY 9, 2019

**08:30**                    **Registration**

**09:00**                    **Welcome and opening remarks**  
Prof. Dr. Akio Tomiyama (Kobe University)  
Prof. Dr. Michael Schlüter (TUHH)

**09:10**                    **Special greeting**  
Prof. Dr. Ed Brinksma (President of TUHH)

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### Session I – Bubble dynamics for process engineering

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**Chair: Prof. Akio Tomiyama**

**09:25**                    **Bubble clustering in a bubbly drink**  
Prof. Kazuyasu Sugiyama (Osaka University, Japan)

**10:10**                    **Continuum Thermodynamics of Mass Transfer across Fluid Interfaces**  
Prof. Dieter Bothe (TU Darmstadt, Germany)

**10:55 – 11:15 Coffee break**

**11:15**                    **Some Experimental Studies on Bubble Dynamics for Multiphase CFD**  
Prof. Akio Tomiyama (Kobe University Japan)

**12:00**                    **Tailor made 3D structures for optimized operation conditions in bubble columns**  
Prof. Michael Schlüter (TU Hamburg, Germany)

**12:45 – 13:45 Lunch break**

**13:45 – 15:30 Scientific TUHH campus tour**

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## Session II

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Chair: Prof. Michael Schlüter

- 15:30**            **Introduction of JSPS programme**  
Yu Watanabe (JSPS Bonn office)
- 15:45**            **Discussion of possible joint projects and student exchange**
- 16:45**            **Closing remarks day 1**
- 17:30**            **Social event**  
Sightseeing-tour through the historic City of Hamburg  
Hamburg Christmas Market  
Conference Dinner at the “Gröninger Brauhaus”

## TUESDAY, DECEMBER 10, 2019

- 9:00**            **Welcome and opening remarks**

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## Session III - Materials for process engineering

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Chair: Prof. Bodo Fiedler

- 9:25**            **Nb-Doped Rutile TiO<sub>2</sub>: a Novel Anode Material for Next-Generation Rechargeable Battery**  
Prof. Hiroyuki Usui (Tottori University, Japan)
- 10:10**            **Computational assisted Mg anode design for post Li energy storage devices**  
Dr. Daniel Höche (Institute of Materials Research, Helmholtz-Zentrum Geesthacht, Germany)
- 10:55 – 11:15 Coffee break**
- 11:15**            **Ionic conduction in porous active materials for batteries**  
Prof. Minoru Mizuhata (Kobe University)
- 12:00**            **Highly porous and modified carbon electrodes for energy storage**  
Prof. Bodo Fiedler (TU Hamburg, Germany)

**12:45 – 13:45 Lunch break**

**13:45 – 14:15 Group photo**

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## Session IV - Materials for electric devices

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Chair: Prof. Thorsten Kern

**14:15**                    **Formation and optical characteristics of rare-earth-doped ZnO nanowires towards photovoltaic applications**  
Dr. Jun Tatebayashi (Osaka University, Japan)

**15:00**                    **Soft and solid state actuation**  
Prof. Dr. Helmut F. Schlaak (TU Darmstadt, Germany, Department of Electrical Engineering and Information Technology)

**15:45 – 16:15 Coffee break**

**16:15**                    **Route to high conversion efficiency solar cell utilizing quantum nanostructures**  
Prof. Takashi Kita (Kobe University, Japan)

**17:00**                    **Impedance tomography with sensor-materials in future reactors**  
Prof. Thorsten Kern (TU Hamburg, Germany)

**17:45**                    **Final discussion and concluding remarks**  
Prof. Dr. Akio Tomiyama & Prof. Dr. Michael Schlüter  
Prof. Dr. Masahiko Hayashi (JSPS Bonn office)

**19:00**                    **Farewell and dinner meeting Japanese participants**  
Restaurant Al Limone  
Lämmertwiete 12, 21073 Hamburg