

International Symposium on Intelligent Biomedical Systems 2024 Summer, Sendai, Japan

Website

<https://www.rii.med.tohoku.ac.jp/int-symp-on-intel-biomed-sys-2024-summer/>

Date and time

- 13:00 – 17:00, August 23rd, 2024 (Japan Standard Time; UTC+9:00)

Venue

- Onsite
Large lecture room (#109),
[Ground floor, School of Health Sciences Building A \(B12\),](#)
[Tohoku University Graduate School of Medicine,](#)
2-1 Seiryomachi, Aoba-ku, Sendai, Miyagi, 980-8575, Japan
- Online
Zoom URL will be provided via online registration form.

Registration

- Registration form: <https://forms.gle/jXfqJAYXzeEXiwki9>

Program

Special Lectures: 13:00 – 14:15

Moderator: Dr. Noriyasu HOMMA (Professor, Tohoku University, Japan)

- **Special Lecture 1:**
“**AI-based Anti-Doping: Longitudinal Analysis of Athlete Profiles**”
Dr. Wolfgang MAASS (Professor, Saarland University, Germany)
- **Special Lecture 2:**
“**Towards Automated Voice Pathology Detection: A Machine Learning Approach**”
Dr. Jan VRBA (Assistant Professor, University of Chemistry and Technology, Prague, Czech Republic)

Student Session: 14:25 – 16:15

(8 mins and 2-3 mins for presentation and discussion, respectively)

Session A: 14:25 – 15:20

Moderator: Dr. Yuwen ZENG (Assistant Professor, Tohoku University, Japan)

- SS-A-1 “**Evaluating Topic models with BERTopic on Taiwanese E-participation Platforms**”
Moritz Sontheimer (PhD student, National Taiwan University of Science and Technology, Taiwan)
- SS-A-2 “**COVID-19 Policy Development under Unequal Isolation and Booster Shot in the Presence of Virus Variants: System Dynamics Model**”
Zakka Ugih Rizgi (PhD student, National Taiwan University of Science and Technology, Taiwan)
- SS-A-3 “**Energy Management in Nearly Zero Energy Building (nZEB)**”
Jui Lin Wu (Eric) (Graduate student, National Taiwan University of Science and Technology, Taiwan)
- SS-A-4 “**Academic Knowledge Management: A RAG-Based System for Effective Knowledge Storage and Retrieval**”
Nguyen An Binh (Brian) (Graduate student, National Taiwan University of Science and Technology, Taiwan)
- SS-A-5 “**Enhancing Conformance Checking of Self-Cleaning Procedures through Skeleton-Based Approaches and Action Completion**” (Online)
Ingwer Ludwig (Graduate student, National Taiwan University of Science and Technology, Taiwan)

Session B: 15:30 – 16:15

Moderator: Dr. Kei ICHIJU (Lecturer, Tohoku University, Japan)

- SS-B-1 “**Building Robust Feature Set for Machine Learning-Based Voice Pathology Detection**”
Jakub Steinbach (PhD student, University of Chemistry and Technology, Prague, Czech Republic)
- SS-B-2 “**Adaptive Region-Oriented Masked Vision Retentive Network for Predicting Macrovascular Invasion in Hepatocellular Carcinoma**”
Kengo Takahashi (PhD student, Tohoku University, Japan)
- SS-B-3 “**Vision Transformer-Based Breast Mass Diagnosis in Mammography Using Bilateral Information**”
Tianyu Zeng (PhD student, Tohoku University, Japan)

- SS-B-4 Canceled

Panel Discussion: 16:25 – 16:55

“Future Perspective for Advancing Intelligent Biomedical Systems Research in Multidisciplinary Collaborations”

Moderator: **Dr. Shuo-Yan CHOU** (Professor, National Taiwan University of Science and Technology, Taiwan)

- **Keynote lecture:**

“Ventilation control on Diffusion of Aerosols in Dormitories of Senior Care House”

Dr. Chih-Hung HUANG (Professor, National Taipei University of Technology, Taiwan)

- **Panelists:**

- **Dr. Ivo BUKOVSKY** (Associate Professor, University of South Bohemia in České Budějovice, Czech Republic)
- **Dr. Chih-Hung HUANG** (Professor, National Taipei University of Technology, Taiwan)
- **Dr. Yeou-Feng LI** (Professor, National Taipei University of Technology, Taiwan)
- **Dr. Wolfgang MAASS** (Professor, Saarland University, Germany)
- **Dr. Norihiro SUGITA** (Professor, Tohoku University, Japan)
- **Dr. Jan VRBA** (Assistant Professor, University of Chemistry and Technology, Prague, Czech Republic)
- **Dr. Emi YUDA** (Associate Professor, Tohoku University, Japan)
- **Dr. Xiaoyong ZHANG** (Associate Professor, National Institute of Technology, Sendai College, Japan)

(in alphabetical order on the surnames)

Closing remarks: 16:55

- **Dr. Makoto YOSHIZAWA** (Emeritus Professor, Tohoku University, Japan)

Organizer:

- Department of Radiological Imaging and Informatics, Tohoku University Graduate School of Medicine & Intelligent Biomedical Systems Engineering Laboratory, Graduate School of Biomedical Engineering, Tohoku University
E-mail: secretary@rii.med.tohoku.ac.jp

Co-sponsors:

- Human Welfare Engineering Division, Smart Aging Research Center, Tohoku University
- AI Applied Medicine Division, ART, Tohoku University Graduate School of Medicine