

# iSOCS Workshop

1–4 September 2025, Hakodate, Japan



## CHEMICAL SENSING: FROM THE LAB TO THE FIELD

### Day 1 (Monday, September 1)

**10:15 – 10:30 Opening Remarks**

**10:30 – 12:00 Rethinking the E-nose: 40+ years, few successes, many lessons, and the way from promise to practice.** Genki Yoshikawa, National Institute for Materials Science (NIMS)

Lunch at the Venue

**13:00 – 14:30 Methods for successful applications, situations in Europe.**

Yanxia Hou-Broutin, Centre National de la Recherche Scientifique (CNRS)

Coffee Break

**14:45 – 16:15 Contemporary industrial view on fundamental, applied, and commercialization aspects of chemical sensing innovations.** Radislav A. Potyrailo, GE Vernova Advanced Research Center

Dinner at the Hotel

### Day 2 (Tuesday, September 2)

Breakfast at the Hotel

**9:00 – 10:30 Statistical and technical aspects of sampling - focus on odour collection.**

Anne-Claude Romain, Université de Liège

Coffee Break

**10:45 – 12:15 Signal preprocessing for chemical sensing arrays.** Antonio Pardo, Universitat de Barcelona

Lunch at the Venue

**13:15 – 14:45 E-nose applications in the biomedical field: state of the art, challenges, and future perspectives.** Raffaele Dellaca, Politecnico di Milano

Coffee Break

**15:00 – 16:00 Flash presentation from participants (optional)**

**16:00 – 17:00 Poster presentation from participants (optional)**

Dinner at the Hotel

# iSOCS

International Society for  
Olfaction and Chemical Sensing

<https://www.olfactionsociety.org>

# iSOCS Workshop

1–4 September 2025, Hakodate, Japan



## CHEMICAL SENSING: FROM THE LAB TO THE FIELD

### Day 3 (Wednesday, September 3)

Breakfast at the Hotel

**9:00 – 10:30** Odour pollution and instrumental odour monitoring systems: Regulatory framework in Europe, technological and methodological issues, and future perspectives.  
Laura Capelli, Politecnico di Milano

Coffee Break

**10:45 – 12:15** (Online) Miniature electronic nose system and applications.  
Kea-Tiong Tang, National Tsing Hua University

Lunch at the Venue

**13:15 – 14:45** Robotic applications of chemical sensors and utilization of AI in olfactory display technology.  
Haruka Matsukura, The University of Electro-Communications  
Hiroshi Ishida, Tokyo University of Agriculture and Technology

Coffee Break

**15:00 – 16:30** Electronic nose standardization and beyond. Hyung-Gi Byun, Kangwon National University

**Social Event (Dinner at Hakodate Beerhall & Night View Tour to Mt. Hakodate)**

\*The charter bus will depart from the hotel at 18:00.

### Day 4 (Thursday, September 4)

Breakfast at the Hotel

**9:00 – 10:30** Olfactory interface and its application: Odor biosensors, olfactory displays, odor reproduction and scent creation. Takamichi Nakamoto, Institute of Science Tokyo

Coffee Break

**10:45 – 11:45** Challenges and future prospects in business development of olfactive technologies: Medical, industrial, and entertainment cases. Keisuke Kimura, Sony Corporation  
\*Demonstration of the olfactory display developed by Sony is also included.

**11:45 – 12:00** Closing Remarks

Lunch at the Venue

# iSOCS

International Society for  
Olfaction and Chemical Sensing

<https://www.olfactionsociety.org>



## CHEMICAL SENSING: FROM THE LAB TO THE FIELD

### Flash/Poster Presentation Entries (As of July 29)

#### **An Electronic Nose for the Differential Diagnosis of Pneumonia: A Preliminary Study**

Ana Maria Tischer<sup>1</sup>, Emanuele Zanni<sup>2</sup>, Carmen Bax<sup>1</sup>, Stefano Robbiani<sup>2</sup>, Simone Cuocina<sup>4</sup>, Luca Novelli<sup>4</sup>, Simone Vargiu<sup>4</sup>, Jordi Fonollosa<sup>3</sup>, Raffaele Dellacà<sup>2</sup>, Fabiano Di Marco<sup>4,5</sup>, Laura Capelli<sup>1</sup>

<sup>1</sup> Politecnico di Milano

<sup>2</sup> Politecnico di Milano

<sup>3</sup> Universitat Politècnica de Catalunya

<sup>4</sup> Azienda Ospedaliera Socio Sanitaria Territoriale Papa Giovanni XXIII

<sup>5</sup> Università degli Studi di Milano

#### **Study on Odor Reproduction System Utilizing Olfactory White: Fundamental Investigations toward Reproduction of Basic Odors in Daily Life**

Yuki Yoshida<sup>1</sup>, Riku Nomura<sup>1</sup>, Ryusuke Chida<sup>1</sup>, Uta Nakashima<sup>1</sup>, Haruka Matsukura<sup>2</sup>, Hiroshi Ishida<sup>1</sup>

<sup>1</sup> Tokyo University of Agriculture and Technology

<sup>2</sup> The University of Electro-Communications

#### **Detection of Gas Emission from the Ground by Microdrone Using the Fountain Flow**

Yohei Watanabe<sup>1</sup>, Kyohei Yamashita<sup>1</sup>, Takeru Kaji<sup>1</sup>, Kasumi Yoshida<sup>1</sup>, Takeshi Matsubara<sup>1</sup>, Haruka Matsukura<sup>2</sup>, Hiroshi Ishida<sup>1</sup>

<sup>1</sup> Tokyo University of Agriculture and Technology

<sup>2</sup> The University of Electro-Communications

#### **Odor Synthesis from Olfactory White: Improving Odor Synthesis Accuracy with Furfuryl Thiol**

Riku Nomura<sup>1</sup>, Ryusuke Chida<sup>1</sup>, Yuki Yoshida<sup>1</sup>, Uta Nakashima<sup>1</sup>, Haruka Matsukura<sup>2</sup>, Hiroshi Ishida<sup>1</sup>

<sup>1</sup> Tokyo University of Agriculture and Technology

<sup>2</sup> The University of Electro-Communications

#### **Mold Smell Detection in Mineral Water by Amplifying Odor Intensity**

Yuma Okazaki<sup>1</sup>, Koyomi Ando<sup>1</sup>, Daisuke Taniguchi<sup>1</sup>, Yozan Nagashima<sup>1</sup>, Haruka Matsukura<sup>2</sup>, Hiroshi Ishida<sup>1</sup>

<sup>1</sup> Tokyo University of Agriculture and Technology

<sup>2</sup> The University of Electro-Communications

#### **Development of Autonomous Mobile Robot for Outdoor Gas-Source Localization: Comparison of Three Exploration Algorithms**

Hisayoshi Ando<sup>1</sup>, Takumi Haratsu<sup>1</sup>, Motoki Sakaue<sup>1</sup>, Hikaru Kyoya<sup>1</sup>, Haruka Matsukura<sup>2</sup>, Hiroshi Ishida<sup>1</sup>

<sup>1</sup> Tokyo University of Agriculture and Technology

<sup>2</sup> The University of Electro-Communications