9th WORLD CONGRESS

DIGITAL OLFACTION SOCIETY

DECEMBER 9 & 10, 2026



DIGITAL OLFACTION SOCIETY

Welcome to Digital Olfaction 2026

Welcome to Tokyo for the ninth World Congress on Digital Olfaction. Our meeting connects researchers, clinicians, engineers and innovators working to make chemical information useful in science, technology and everyday life.

Smell offers a rich source of information about our bodies and surroundings. By combining biological understanding with sensing, computation and interactive devices, digital olfaction can support new tools for healthcare, food systems, environmental monitoring and multisensory experience.

Across two days, we will examine how odours are measured and represented, explore emerging applications, and test working systems through demonstrations and discussion. We invite participants to share evidence, compare approaches and build collaborations across disciplines.

Reliable progress also depends on reproducibility, compatible data and technologies, and thoughtful consideration of ethics and public benefit. Together, we can move promising ideas towards dependable systems that address practical needs.

We look forward to welcoming you in Tokyo.



Prof. Jesús Lozano Rogado
President of the Digital Olfaction Society, University of Extremadura, Spain

Day one - Digital Olfaction: From Science to Intelligent Systems

Sensing, Biology and Perception

Wednesday, December 9, 2026

Opening Address



09h00 – 09h30

17 Years of Digital Olfaction: From Paris 2010 to Tokyo 2026
Jesús Lozano Rogado, *President of the Digital Olfaction Society, University of Extremadura, Spain*

Session 1: Intelligent Odor Sensing and Digital Technologies



09h30 **AI-Powered Gas Sensors for the Next Generation of Digital Olfaction**
Inkyu Park, *Korea Advanced Institute of Science & Technology (KAIST), Korea*



10h00 **Advanced FAIMS Technologies for Next-Generation Digital Olfaction**
Katsuya Ujimoto, RICOH Company, Japan

10h30 – 11h15 Coffee Break & Poster Session

Session 2: Understanding Olfaction: From Receptors to the Brain



11h15 **From the Biology of Smell to Digital Olfaction: Understanding the Olfactory Brain**
Laura López-Mascaraque, *Instituto Cajal – CSIC, Spain*



11h45 **Decoding the Human Brain Response to Odors**
Masako Okamoto, *The University of Tokyo, Japan*

12h15 – 12h25 Short Oral Presentations - Perception and Odor Quality - 10 minutes each (7 min + 3 min Q&A)

Beyond Pleasantness and Intensity: Mapping Odour Quality onto Affective and Somatosensory State
Hildelith Leyser, *McGill University, Canada*

12h25 – 12h45 **Discussion - Connecting Biological Olfaction with Digital Systems**

12h45 Lunch Break & Poster Session



13h45 **Wearable Olfactory Displays: From Odor Delivery to Interactive Experiences**
Takamichi Nakamoto, *Institute of Science Tokyo, Japan*

Session 3: Digital Olfaction: From Delivery to Human Experience



14h15 **Digital Olfactory Displays: Bringing Smell into Human–Machine Interaction**
Philipp Müller, *Tampere University, Finland*



14h45 **Playing with Smell: Digital Olfaction in Games, Immersion and Training**
Simon Niedenthal, *Malmö University, Sweden*

15h15 Coffee Break & Poster Session

Session 3: Emerging Technologies and Scientific Applications

16h00 – 17h30 Short Oral Presentations - 10 minutes each (7 min + 3 min Q&A)

MIMOSA: A Moisture-Inspired Molecular Sensing Architecture for Enhanced Digital Olfaction
***Lawrence Nsubuga**, University of Southern Denmark, Denmark*

Designing Electronic Noses for Universal Odor Recognition and Contextual Interaction
***Gang Yu**, Tsinghua University, China*

Global and Local Temporal Features for Generalizable Chinese Medicine Herbs Classification
***Xueyi Zhou**, Hanyang University, South Korea*

Comparing Electronic-Nose Monitoring and Gas Chromatography to Assess Hydrochar Stability
***Silvia Román Suero**, University of Extremadura, Spain*

Synchronized Digital Scent Delivery in VR: A Multichannel Ultrasonic Olfactory Display Evaluated in a Virtual Cafeteria Scenario
***Pedro K. Diniz**, Advanced Knowledge Center for Immersive Technologies – AKCIT, Brazil*

Wearable Electronic Nose Ecosystems for Odour Monitoring: Development of Artificial Olfactory Devices for Anosmia People
***Cristina Brugera Salas**, University of Extremadura, Spain*

Mapping the Smellscape with Electronic Noses
***David Kadish**, Malmö University, Sweden*

Digital Visualization of Layered Smellscapes for Cultural Heritage Tourism: Smartphone Applications in Japan and Germany
***Yoko Iwasaki**, Kyoto-saga Art College, Japan*

From Space to Self: Personal Olfactory Microenvironments for Psychophysical Well-Being
***Anna Barbara**, Politecnico di Milano, Italy*

17h30 – 18h00 **Dedicated Poster Session:** Authors available for discussion

18h00 **End of Day 1**

Day two - Digital Olfaction Live: Demonstration & Interaction

Thursday, December 10, 2026

09h00 – 09h30 **Welcome and Demonstration Day Introduction**

09h30 – 10h00 **Digital Scent in Action: Interactive Media, Games and Brand Experiences**
Jim Huang / Demonstration Team, *ScentRealm, China*

10h00 – 10h30 **Wearable Olfactory Displays: Live Demonstration**
Nakamoto Research Team, *Institute of Science Tokyo*

10h30 – 10h50 **Questions, Technical Instructions and Preparation**

10h50 Coffee Break & Networking Session

11h35 – 12h20 **Guided Demonstrations**

12h20 Lunch Break & Poster Session

13h50 – 14h20 Hands-On Demonstrations - Part I

14h20 – 14h50 Hands-On Demonstrations - Part I I

14h50 – 15h50 Roundtable - What Actually Works in Digital Olfaction Today?

15h50 – 16h10 Conclusions and Future Priorities

16h10 – 16h40 DOS Awards 2026

16h50 – 17h20 DOS Roadmap & Closing Remarks

17h20 Networking, Drinks and Appetizers

18h00 End of the Congress