

8th WORLD CONGRESS OF

DIGITAL
OLFACTION
SOCIETY

A circular inset image showing a night view of the Tokyo skyline. The Tokyo Skytree tower is the central focus, illuminated with blue and white lights. The city lights below are a mix of warm and cool tones. The background of the entire poster features abstract, flowing blue and purple wave patterns.

TOKYO,
JAPAN

DEC.
5 & 6
2024

8th Digital Olfaction Society Annual Meeting



December 5-6, 2024 – Tokyo, Japan

AP Tokyo Yaesu Dori – Convention Center
KPP Yaesu Building, Chuo-ku, Kyobashi 1-10-7, 104-0031, Tokyo

Conference Agenda

Day 1 – December 5, 2024

8h00 Welcoming of attendees & Material Distribution

8h50 Welcome Note & Introductory Remarks

Jesus Lozano Rogado, President of DOS, University of Extremadura, Spain

Marvin Edeas, Founder of DOS, Institut Cochin, INSERM U1016, Université de Paris, France

Session 1: Advances in Olfaction Science



9h00 15 Years of Digital Olfaction: From Paris 2010 to Tokyo 2024
Jesús Lozano Rogado, University of Extremadura, Spain



9h25 Olfactory Insights: Unveiling the Biology of Smell in the Digital Era
Laura López-Mascaraque, Cajal Institute, Spain



9h50 Olfactory Perception and Order Code in the Olfactory Bulb
Dmitry Rinberg, New York University Langone Health, USA

10h15 Coffee Break & Network Session

Session 2: Innovations in Scent-Based Diagnosis and Treatment



11h00 AI-enabled Low Dimensional Materials-based Electronic Olfaction Sensors and Their Applications
Shirong Huang, Technische Universität Dresden, Germany



11h25 Identifying Chemicals Based on Ion and Differential Mobility Spectrometry Measurements
Philipp Müller, Tampere University, Finland



11h50 Opportunities and Challenges for Drone-Based Odour Monitoring: Development and Maintenance of Calibration Models

Santiago Marco, University of Barcelona, Spain

12h10 Lunch Break & Network Session



13h30 Gas source localization with a mobile robot

Javier Gonzalez-Jimenez, University of Malaga, Spain



13h55 TranScEnt the Education: Designing VR Meditation through Digital Incense for the Youths

Meikei Lai, Macao Polytechnic University, China



14h20 Feasibility of Digital Olfaction to Identify Corpses in Natural Disasters

Hamed Karami, Institute for Bioengineering of Catalonia, Spain

Session 3: Digital Olfaction: The Current State and Future



14h45 Bionic Olfaction Sensing and Digital Recognition Algorithm

Ping Wang, Zhejiang University, China

15h10 Coffee Break & Network Session



15h40 Olfactory Diversity: Subtractive Mixing for Versatile Odor Creation

Haruka Matsukura, University of Electro-Communications, Japan



16h05 Stopping to Smell the Roses: Capturing and Using the Scents of Everyday Life

Qi Lu, Tsinghua University, China



16h30 Olfactory Interfaces for Smell Testing and Training: Innovations from a Human-Computer Interaction (HCI) Perspective

Marianna Obrist, University College London, United Kingdom

16h55 Short Oral Presentations of DOS 2024

General Discussion

What are the main technological challenges in the digitization, transmission, and accurate restitution of scents?

- *What obstacles exist in converting scents into digital formats, transmitting them accurately, and ensuring faithful reproduction at the destination?*
- *How can emerging technologies like AI aid in overcoming these challenges?*

Discussion with the participation of Speakers, Scientific Committee Members, and Demonstrators.

18h00 End of the first day

19h30 **Speakers Dinner (for ticket holders only)**
Contact us if you wish to register.



Day 2 – December 6, 2024

8h50 Opening of the second day

Session 4: Digital Olfaction Demonstration Showcase at DOS 2024

9h00 General Presentation of Each Demonstration

Before the practical demonstration, we invite each team to present orally their technology and the process of demonstration (10 minutes by team).

10h30 Coffee Break & Network Session

11h10 DOS Displaying & Demonstrations

Practical demonstration for each team. Each team will have a dedicated space to show, demonstrate, explain and discuss about the project.

12h40 Lunch Break & Network Session

Among Accepted Demonstrations

Scout3 Case Study: Nespresso Capsule Similarity Profiling

Lucas Lopez, UAB Volatile Technologies, Lithuania

Aryballe's New Technology Demonstration

Cyril Herrier, Aryballe, France

Miniature Wearables for Digital Olfaction: Smart Necklaces and Smartwatches for Scent Detection

Jesús Lozano Rogado, University of Extremadura, Spain
José Pedro Santos, University of Extremadura, Spain

Consumers' Preferences through Digital Olfaction

Monica Bordegoni, Politecnico di Milano, Italy

15h25 Coffee Break & Network Session

Update on DOS Tokyo-Worldwide Challenge: The Updates

We are experiencing delays as the project is proving more complex than anticipated. Additionally, we are seeking funding to support the initiative. Despite these challenges, we remain hopeful to achieve our goal by the end of 2025.

About the Project: The Digital Olfaction Society (DOS) is leading a global initiative to capture, digitize, and transmit scents from cities worldwide for reproduction in Tokyo. This project aims to represent the cultural diversity of different locations through their unique fragrances. DOS invites global teams, whether from major cities or any location with distinctive aromas, to participate by digitizing scents that embody the essence of their area. Tokyo-based teams will work on accurately reconstituting these digital scent signatures, with the goal of unveiling this innovative technology in 2025.

Concluding Remarks & Awards 2024

17h30 End of the 8th DOS Annual Meeting 2024