



4th World Congress of DIGITAL OLFACTION SOCIETY

December 3-4, 2018
Tokyo, Japan

SCIENTIFIC AGENDA

www.digital-olfaction.com

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Digital Olfaction Society 2018

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... The idea is to create devices which can capture odors, turn them into digital data so as to transmit them everywhere in the world ...

(Marvin Edeas, Founder of DOS, 2013)

Dear Colleagues and Friends,

The Digital Olfaction Society already held three World Congresses (Berlin, 2013 and Tokyo, 2014-2016) and also two congresses on Olfaction & Issues (Paris, 2010 and Milano, 2016).

This year, the scientific committee decided to organize two new complementary events related to olfaction and digital olfaction:

- **3rd World Congress on Olfaction & Issues 2018: Science, Applications & Strategies**

Paris, France – November 8-9, 2018

- **4th Digital Olfaction Society World Congress 2018**

Tokyo, Japan – November 26-27, 2018

Nowadays, visual and auditory information can be digitally captured, stored and reproduced. We are in touch with that information every day. If another important sense such as olfaction is digitally available, our lifestyle might be changed.

During DOS World Congresses, the oral talks were combined to demonstrations of olfactory displays. People were excited about those demos since they enjoyed mysterious experience. We should continue our effort to have digital olfaction in our daily life.

The aims of the 4th Digital Olfaction Society World Congress 2018 are to discuss:

- The advances of digital olfaction Research & Development
- The practical applications of digital olfaction
- The impact of these applications on our life and lifestyle

Digital Olfaction Society World Congress 2018 will highlight:

- The interdisciplinary sciences related to Olfaction and Digital olfaction.
- The way in which we can transfer the concrete breakthroughs of Research & Development towards industrial applications concerned by digital olfaction.
- How to design and extend the applications of digital smell technologies to everyday life?
- Digital Olfaction and Artificial Intelligence: in this session, we will highlight how artificial intelligence will push the digital olfaction into and new level.

Call for Innovations and Demonstrations

The Scientific Committee invites all academics and industries to present their innovations and products in the digital olfaction world by submitting an abstract.

Moreover, the Scientific Committee invites also the academic and industrial teams to present the most innovative appliances, devices, methods, ideas ... during the demonstration session.

We look forward to welcoming you in Tokyo for this particular event.

Yoko Takachi - On behalf of Digital Olfaction Society Committee

Marvin Edeas – Founder of the Digital Olfaction Society

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Preliminary Program

Day 1 – December 3, 2018

7h30 Welcoming of attendees

8h55 Opening Ceremony

**Part 1: Recent Advances of Digital Olfaction Research & Development
Olfaction & Predictive Medicine: Perspectives of Digital Olfaction**

9h00 – 12h30

Olfaction, Obesity & Skin-Ageing: Strategies to modulate olfactory receptors
Digital Olfactory Nanoarrays for Disease Detection from Breath and Skin
A metric approach to olfactory perceptual space
Odor Processing in Biological and Artificial Olfactory Systems
Nanomechanical gas sensor: Recent Advances & Perspectives
Electronic-nose-based analysis

Short oral presentations & Call for innovations

The scientific committee invites the academics and industrials working in the olfaction and digital olfaction fields to present their innovative researches and products.

12h30 Lunch Break & Poster Session

Part 2: Odor Sensing and Odor Visualization

14h00 – 18h00

Development of molecular recognition materials for bioinspired odor cluster sensing
Biochemical gas sensor with fiber-optic fluorometry for odorless formaldehyde vapor
Odor visualization by multispectral fluorescence imaging and odor feature value analysis
“Scent camera” for real-time imaging of breath (body) ethanol after alcohol drinking

Short oral presentations & Call for innovations

18h00 End of the first day

19h30 Digital Olfaction Society Dinner

If you are interested to participate, please register online before November 17.

Day 2 – December 4, 2018

8h55 Opening of the second day

Part 3 – Digital Olfaction & Artificial Intelligence

9h00 – 10h30

New revolution and new ideas

Short oral presentations & Call for innovations

10h30 Coffee Break & Poster Session

Part 4: Olfactory Display & Applications

11h00 – 12h30

- Novel powder based olfactory display
- Programmable, wearable, multi-fragrance olfactory display
- Study of wearable olfactory display using surface acoustic wave device
- Application of starbons on olfactory display
- Reducing the trailing tail of vortex rings by partial scent filling to improve localization performance of scent delivery
- Relationship between scent effects and video content with emotional properties
- Influence of odors on the users' evaluation of industrial products
- Difference of olfactory detection between measuring methods by olfactory display using pulse ejection

Short oral presentations & Call for innovations

12h30 Lunch Break & Poster Session

Digital Olfaction Displaying & Demonstrations

14h00 – 16h30

14h00 General presentation of each demonstrations

Before the practical demonstration, we invite each team to present orally their technology and the process of demonstration (5-10 minutes by team). During Demonstrations Session, each team will have a dedicated space to show, demonstrate, explain and discuss about his project.

If you are interested to present your innovation in this demonstration session, please don't hesitate to contact us.

15h00 Discussion - Questions / Answers about Digital Olfaction

- What is most crucial for progressing the field of digital olfaction forward and to keep it as innovative as possible: new advanced materials? New transducers? Algorithms? Product design? Applications?
- How lab results in digital olfaction could be translated to commercial production, while passing through all regulatory (tough) roles. An example could be given for the case of the use of digital olfaction as a diagnostic tool for diseases.

16h30 Final Discussion & Concluding Remarks

- Perspectives & Opportunities
- Next strategic step for Digital Olfaction Society: Digital Olfaction and Artificial Intelligence: the next tsunami

17h00 End of DOS 2018

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Who will attend DOS World Congress 2018?

People who are interested in digital olfaction are invited to join this congress to gather the information of recent progress, share it with others and spread the information all over the world. Moreover, participants are encouraged to show demonstrations as well as presentations since we can share the experience of digital olfaction together. The goal of this congress is to establish the international link related to digital olfaction among a variety of fields such as biology, medicine, computer science, electronics, chemistry, mechanical engineering, psychology, art etc.

People from industries as well as academics are welcome. The conference will gather international researchers and academics, R&D departments in link with all the field of digital olfaction, chemistry, mathematics, physics, biochemistry, electronics, engineering, computer science, food and cosmetic industries, olfactory intelligent systems companies, marketing managers, investors and all other stakeholders in olfaction and digital olfaction industries in order to answer these questions.

Among hot topics presented at the Digital Olfaction Society Congress 2018

- Devices to capture odors
- Odors turned into digital data
- Restitution of odors by the transmission of these data
- Artificial olfaction and biologically-inspired models
- New Generation of Sensors & E-nose
- High Smell Technologies as electronic noses, neural circuits in olfactory systems, artificial intelligence olfaction systems
- Biosensor systems, software program, chemical engineering, Telecommunication
- Environmental control
- Biomedical applications in olfactory treatments and diagnosis
- Translational Research in Digital Olfaction
- Cancer & Olfaction: from Dogs to Digital Olfaction
- Robotics & Digital Olfaction
- Olfactory Display & its Applications
- Odor Sensing
- The powerful of Olfactive Markers
- Artificial Intelligence and Digital Olfaction

Call for Innovations and Demonstrations

The Scientific Committee will invite all industries to present their innovations and products in the digital olfaction world:

- Digital Scent Media: Scented SMS, e-mail, websites, USB flash driver, CD, DVD, scented-print
- Digital olfaction at the service of Human Health: Pattern mimicking the sniffing dogs, e-romachology, nursing-homes, psychiatric hospitals, smell icons for blind people, olfactory diagnosis
- Formation and Olfactory Memory : Class-rooms, cooking shows
- Olfactory Marketing & Neuromarketing: Olfactive ads, olfactory packaging, interactive website, QR olfacodes, scented-menu....
- Food Industry : Quality & safety control of food products
- Digital Cosmetology : Own fragrance creation on line, smell-E-market
- Olfaction and Jewellery : Revolutionary watches, alarm-radio, scented brooch
- Olfactory Entertainment : Olfactory 3D movie-theaters, home's gadgets, guided-tour in biology & perfumery museums

- Digital scents at the service of Army: Simulating training systems, detection of danger, perfumes of military attack, explosive detection devices
- Interactive scented games : Odorant teddy, video games
- Housekeeping, Coziness & Safety at home
- Olfaction & Auto industry : Olfactive attention assistance for tired driver
- Artificial Intelligence and Digital Olfaction
- And many others...

Digital Olfaction Society - Network Session

The Network Session is organized during DOS demonstrations session.

The objective of the Network Session is to provide a platform which brings together stakeholders involved in olfaction and digital olfaction, and especially in the field the valorization of digital olfaction applications and products:

- Food industries
- Cosmetics
- Phone companies
- Car Industries
- Artificial Intelligence
- Others

DOS 2018 Demonstrations

The Scientific Committee invites all academic & industrial teams to present the most innovative appliances, devices, methods, ideas ... in the digital olfaction field.

You would like to present your innovative devices during DOS Demonstrations 2018?

We remind you that you can submit your project and abstract by the online form **until October 30**.

DOS 2018 Innovation Award

The DOS World Congress will present the most innovative appliances, devices, methods, ideas... that will be judged by a panel of industrial, engineers and members of the press, who delivered the Innovation Award after having had the opportunity to meet and interact with the new equipment.

For more information:

www.olfaction-site.com

