

1st World Congress of

Digital Olfaction Society

From Odor Recording to Digitalized Scent Reproduction

Latest Advances, Applications, Perspectives &

Impact on our Lifestyle



April 11-12, 2013 - Ritz Carlton Berlin, Germany

www.digital-olfaction.com

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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 ...*

Dear Colleagues and Friends,

For several years, researchers and industrialists were interested in sensorial effects of their breakthroughs and products on the human-being. New markets were created, in the field of touch, hearing, taste and vision, with more innovative products. But how about the sense of smell and its digitization? Digital Olfaction Society convention 2013 aims to open up toward a subject with large scientific and industrial potential, called the olfaction digital science.

Why organizing a conference on Digital Olfaction?

Olfaction, a topic of interest in several scientific fields, has gradually become a topic of the future. Following the latest advances in the Research related to olfaction, the challenge is to transfer this knowledge towards innovative technology.

Nowadays, there is no way to escape the digital world whatsoever when using a computer, a mobile phone or even means of transportation. Hearing, vision, touch are currently an integral part of numerous electronic devices which we use on a daily basis. Then, how about digitizing smells? This complex concept aims at turning any odorous source into a digital media which can be applied to our lifestyle.

In order to bring together all scientific data related to digital olfaction, we decided to create an international organization, the **Digital Olfaction Society (DOS)**.

Our desire is to **promote this innovative concept** whose aim is to turn any odorous source into digital media applicable to our lifestyle. As a matter of fact, the idea is to create devices which not only can **record** smells, **turn** them into digital data but also **transmit** them where we like.

In a few words, the objective of DOS is to **gather, share, and complete** the knowledge recently established about olfactory digitization. Our perspective is to **build up constructive links** between leading researchers and industrialists in order to set up appropriate strategies in order to implement Research & Development through practical applications with a high impact on our lifestyle thanks to the potential of olfactory digitization. We want to move from the Stone Age of odorous substance toward a New Age by means of digital fragrance, aroma and smell technologies.

The aim of the first Digital Olfaction Society World Congress 2013 is 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 2013 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.

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 Scientific Committee and Speakers:



Takamichi Nakamoto (JP)
Marvin Edeas (FR)
Jenny Tillotson (UK)
Charles Spence (UK)

Achim Lilienthal (SE)
Dominique Martinez (FR)
Patrick Mielle (FR)
Jesus Lozano (ES)

Yasuyuki Yanagida (JP)
Stephen Trowell (AU)
Valéry Matarazzo (FR)
Brigitte Paulignan (FR)

Among hot topics presented at the Digital Olfaction Society World Congress 2013:

- *Devices to capture odors*
- *Odors turned into digital data*
- *Restitution of odors by the transmission of these data*

Other related fields:

- *Artificial olfaction and biologically-inspired models*
- *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*

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-aromachology, 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: Home-care products, digitized fragrance house diffuser, hazardous odor detection devices*
- *Olfaction & Auto industry : Olfactive attention assistance for tired driver*
- *And many others...*

Network 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
- ...

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

Pr Marvin Edeas

Chairman of the Digital Olfaction Society Committee & Co-Chairman of Scientific Committee

Pr Takamichi Nakamoto

Co-Chairman of Scientific Committee

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Scientific Pre-Programme

Day 1 - April 11, 2013

Session 1: Recent Advances of Digital Olfaction Research & Development

To Highlight Interdisciplinary Sciences Related to Olfaction and Digital Olfaction

9h00 – 12h30

General Introduction of DOS World Congress 2013

Marvin Edeas, Chairman of Digital Olfaction Society, France

Odor Recorder and Reproducer: The Way toward the Remote Olfaction

Takamichi Nakamoto, Tokyo Institute of Technology, Department of Physical Electronics, Japan

Artificial Olfaction and Biologically-Inspired Models

Dominique Martinez, Laboratoire Lorrain de Recherche en Informatique et ses Applications (LORIA), France

Biosensors and Electronic Nose - "Smell the dotcom": A Basic Gas Sensor and ... What else?

Patrick Mielle, Food and Behavior Research Center, UMR INRA – CNRS- AgroSup - uB CSGA, France

12h30 – Lunch & Posters Session

Session 2: Practical Applications Of Digital Olfaction

*Grasp the Way in which we can Transfer the Concrete Breakthroughs of Research & Development
towards Industrial Applications concerned by Digital Olfaction*

14h00 – 17h30

Scentsory Desingn®: Approach of Scent Design

Jenny Tillotson, Central Saint Martins College of Arts and Design, University of the Arts London, United-Kingdom

Mobile Robot Olfaction - Recent Developments and First Practical Applications

Achim Lilienthal, Örebro University, Head of AASS Mobile Robot and Olfaction Lab, Sweden

Advances in Electronic-Nose Technologies for the Wine Producing Industry

Jesus Lozano Rogado, Universidad de Extremadura, Dept. Ingeniera Electrica, Electronica y Automatica, Spain

Cybernose®, a Bio-inspired Electronic Nose: Mutual Learnings for Biological and Digital Olfaction

Stephen Trowell, CSIRO Ecosystem Sciences, Quality Biosensors - Food Futures Flagship, Canberra, Australia

17h30 **End of the First Day**

19h45 **Thursday Dinner between Speakers and Attendees**

Day 2 - April 12, 2013

Session 3: Digital Olfaction & Impact on Our Lifestyle

Design and Extend the Applications of Digital Smell Technologies to Everyday Life

9h00 – 10h30

Crossmodal Attention and Digital Olfaction

Charles Spence, University of Oxford, Crossmodal Research Laboratory, United Kingdom

Virtual Reality and Telexistence: Techniques for Spatiotemporal Control of Olfactory Space

Yasuyuki Yanagida, Meijo University, Department of Information Engineering, Nagoya, Japan

10h30 Break & Posters Session

11h00 Short Oral Presentations for Sessions 1-2-3 (first part)

The Scientific Committee of DOS World Congress 2013 will select short oral presentations upon abstracts submission

12h30 Lunch & Posters Session

14h00 Short Oral Presentations for Sessions 1-2-3 (second part)

The Scientific Committee of DOS World Congress 2013 will select short oral presentations upon abstracts submission

16h00 Breaks & Posters Session

16h30 DOS World Congress 2013 Round Table Discussion*

17h00 DOS World Congress 2013 Awards

17h30 End of DOS World Congress 2013

Network Session



DOS World Congress Attendees, Academics and Industrials, are invited to a warm-up networking session over drinks and snacks.