

Community

News

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Impressions from the EOSAM 2018

The Netherlands is a small and green country. When traveling there by train (which is most convenient) you see dairy farms and old towns with red brick houses. The Netherlands is less than a third the size of the state of New York, yet, it has a very strong photonics community and a few companies that even dominate world markets.

My reason for this journey was to attend the Annual Meeting of the European Optical Society (EOS) in Delft. Different to the American optical societies, the EOS is a federation of regional societies with just a small central organization. The EOS holds a number of topical meetings and every second year organizes its EOSAM conference as their biggest convention.

The 2018 conference was organized by Paul Urbach, a professor at the University of Technology Delft (TU Delft), and his team. They were joined by Co-chair Stefan Baeumer from TNO, an organization that I will introduce later.

Stefan Baeumer, a graduate of the Technical University in Berlin, made his career in the Netherlands and so he is a good partner to talk about the photonics community with. Stefan has been with Philips, the former Dutch electronics and photonics giant for many years. ‘They have done a lot in the field of optics, but in recent years they shifted to other fields, mainly healthcare’.

Focused on consumer products and health care, today Philips employs about 74 000 people. This is the direction that Philips moved in when profits for TV sets and mobile audio devices (remember the Walkman?) vanished. Philips Lighting, once the biggest lighting business in the world, was turned into a spin-off and renamed as Signify BV just a few months ago. Today the company looks very successful and still has good competence in the optics industry, which distinguishes them from competitors that sadly disappeared.

Founded in 1984 and nurtured in the Philips ecosystem, ASML is the actual ‘elephant in the room’ here. ‘ASML sells German optics with Dutch precision mechanics,’ Stefan explained to me. With large objectives from Carl Zeiss SMT (where they bought a 1 billion Euro stake)

and their own wafer stepper systems they dominate the world market for lithography systems. EUV lithography is just taking off there. They hired 341 new people only recently in September and plan to add 3000 new staff within 1 year, so an ASML official told me during EOSAM2018.

When asked about the future of EUV, Martin van den Brink, the CTO of ASML answered in a recent interview: ‘We know what we’ll be doing for the next 10 years’.

A strong and well-connected academic infrastructure

As I write this, I sit in the cafeteria of the TU Delft, a nice place with excellent coffee, comfy couches and many wall sockets as I happily acknowledge. The Netherlands has an excellent academic infrastructure. The TU Delft with its Department of Imaging Physics is just one photonics hotspot. You will find others for photonic integration (Eindhoven), biomedical imaging (Rotterdam, Amsterdam) and many more. If you talk quantum, they have QuTech here, an advanced research center for quantum computing and the quantum Internet, a collaboration founded by the TU Delft and the TNO research institute.

Paul Urbach, Co-chair of the EOS conference and head of the Optics Research Group of TU Delft is one of the researchers who work on the cutting edge of measurement technology for lithography systems. ‘Often, we are not really imaging, we are rather sensing and retrieving’. This is how he uses methods such as computational imaging to push the resolution of optical imaging methods far beyond the classical resolution limits, while incorporating *a priori* knowledge.

For students they want to offer bi-national tracks: universities in Jena (Germany) and Delft (NL) plan to offer a common Master’s education on imaging and quantum technologies. ‘We did this without EU money,’ Paul confesses with a smile. On board are the industry partners ASML and Carl Zeiss plus Fraunhofer IOF in Jena and TNO in Delft.

Two years ago, the Dutch Optics Centre (DOC) was founded here as an initiative of TNO and TU Delft. It also became an institute of TU Delft. It aims to stimulate applied optics research and to help the Dutch optics

industry with innovations in photonics. Besides defining research projects, in which academic optics groups and companies from all over the Netherlands participate, DOC helps in valorizing R&D results into projects with high technology readiness levels.

As regards TNO: located on the TU Delft campus it is a 150 people organization that commercializes optomechanical research results for industrial applications. Stefan Baeumer explains: 'We are somehow like Fraunhofer, just with that special Dutch flavor'. That is, a small local organization with a global outreach, for instance, in the Extremely Large Telescope (ELT) project or several satellite missions.

Last but not least, I should say a few words about the conference: EOSAM has traditionally close ties with the optics industry and so this year's program was again organized around core topics such as optical systems design, tolerancing and manufacturing. Of course, the 1-week program included much more than that: tutorials, eight tracks, great plenaries and student prizes and last but not least a session on challenges in photonics on 'Controlling the energy density of light in 3D nanostructures' and 'The dawn of quantum networks'.

Whether this comes to light sooner or rather later, the next EOSAM meeting is certain and will be held in autumn 2020 in Porto, Portugal.



More than 400 people attended this year's EOSAM meeting in the historical Dutch city of Delft, which is famous for its blue pottery (Dutch: Delfts blauw). The conference dinner was held at the 'Delft Blue' Pottery Factory and Museum.

Community

Conference Calendar

November

OSA Laser Congress

Advanced Solid State Lasers Conference

Laser Application Conference

Boston, MA, USA

4–8 November 2018

www.osa.org/Meetings/Global_Calendar/Events/Advanced_Solid_State_Lasers_Conference**OSA Light, Energy and the Environment Congress**

Optical Nanostructures and Advanced Materials for Photovoltaics (PV), Optics and Photonics for Energy & the Environment (E2), Optics for Solar Energy (SOLAR), Solid-State Lighting (SSL)

Sentosa Island, Singapore

5–8 November 2018

www.osa.org/en-us/meetings/osa_meetings/osa_light_energy_and_the_environment_congress/**VISION**

Stuttgart, Germany

06–08 November 2018

www.messe-stuttgart.de/vision/en/**Optics and Photonics for Energy & the Environment**

Sentosa Island, Singapore

5–8 November 2018

www.osa.org/Meetings/Global_Calendar/Events/Optics_and_Photonics_for_Energy_the_Environment

2019

January

SPIE Photonics West

San Francisco, CA, USA

2–7 February 2019

Exhibition: 5–7 February 2019

<http://spie.org/pw>

February

SPIE Advanced Lithography

San Jose, CA, USA

24–28 February 2019

<https://spie.org/advanced-lithography>

March

OFC

San Diego, CA, USA

3–7 March 2019

www.ofcconference.org

April

5. UKP-Workshop

Aachen, Germany

10–11 April 2019

www.ultrakurzpuslaser.de**OSA Biophotonics Congress: Optics in the Life Sciences**

Tucson, AR, USA

15–17 April 2019

www.osa.org/Meetings/OSA_Meetings/OSA_Biophotonics_Congress

May

CLEO

San Jose, CA, USA

5–10 May 2019

www.cleoconference.org

June

Optical Interference Coatings

Santa Ana Pueblo, NM, USA

2–7 June 2019

www.osa.org/Meetings/Topical_Meetings/Optical_Interference_Coatings**OSA Optical Design and Fabrication Congress**

Washington, DC, USA

10–12 June 2019

www.osa.org/Meetings/OSA_Meetings/Optical_Design_and_Fabrication**120. Annual Meeting DGaO**

Darmstadt, Germany

13–16 June 2019

www.dgao.de/de/jahrestagung**LASER World of Photonics**

Munich, Germany

24–27 June 2019

www.laser.de

World of Photonics Congress

European Conferences on Biomedical Optics (ECBO)
Lasers in Manufacturing (LiM)
EOS Optical Technologies
Imaging and Applied Optics (OSA)
Digital Optical Technologies (SPIE)
Optical Metrology (SPIE)
CLEO/EQEC Europe
Munich, Germany
23–27 June 2019
www.photonics-congress.com

July**OSA Advanced Photonics Congress**

29 July–1 August
Burlingame, CA, USA
www.osa.org/en-us/meetings/osa_meetings/advanced_photonics_congress/

September**OSA Laser Congress**

Laser Applications Conference

Advanced Solid State Lasers Conference

Vienna, Austria

29 September–3 October 2019

[www.osa.org/Meetings/Global_Calendar/Events/Advanced_Solid_State_Lasers_Conference_\(1\)](http://www.osa.org/Meetings/Global_Calendar/Events/Advanced_Solid_State_Lasers_Conference_(1))

October**V2019 – Vakuum & Plasma**

Dresden, Germany

8–10 October 2019

www.v-workshopwoche.net

Frontiers in Optics: the 103rd OSA Annual Meeting and Exhibit/Laser Science Conference

Washington, DC, USA

13–17 October 2019

www.osa.org/Meetings/Global_Calendar/Events/Frontiers_in_Optics_the_103rd_OSA_Annual_Meeting

SPIE Optifab

Rochester, NY, USA

14–17 October 2019

<https://spie.org/conferences-and-exhibitions/optifab>

Community

News from the European Optical Society EOS



New Execom directs the European Optical Society

Within the EOSAM 2018 several changes in the EOS Execom were announced:

President: Humberto Michinel (Spain)

President Elect: Gilles Pauliat (France)

Past President: Paul Urbach (The Netherlands)

Treasurer: Patricia Segonds (France)

Secretary to the Board: Andreas Etmeyer (Switzerland)

Furthermore, plans were declared that EOS will get a new website by the end of the year. The new domain is scheduled to be published in December 2018.

New EOS Fellows announced during EOSAM 2018

During EOSAM 2018, the EOS Annual General Assembly and the ceremony for the new EOS Fellows were held after the scientific program. The new compositions of the EOS Board and the Executive committee can be found in www.myeos.org.

Six new fellows of the European Optical Society were announced:

1. Luc Bergé
2. Trevor Benson
3. Riad Haidar
4. Juan Ariel Levenson
5. Pedro Andrés Bou
6. Ralf Bergmann

EOSAM 2018 – a Great Success

The EOS Biennial Meeting (EOSAM), a major European event for the European optics and photonics community, was held in the congress center of TU Delft in Delft, The

Netherlands, October 8–12, 2018. Over 400 attendees took part in the event and over 350 interesting presentations were held on optics and photonics. EOSAM included a whole week of interesting topics and sessions.

The presidents of EOS partner societies, Jun Tanida (Optical Society of Japan) and Youngjoo Chung (Optical Society of Korea) presented the activities of their societies.

EOSAM 2018 at a glance:

1. Over 350 presentations on optics and photonics
2. Over 90 invited speakers
3. 9 Topical Meetings

TOM 1 – Silicon Photonics and Guided Wave Optics

TOM 2 – Freeform Optics for Illumination, Augmented Reality and Virtual Reality

TOM 3 – Optical System Design, Tolerancing, and Manufacturing

TOM 4 – Biomedical Optics

TOM 5 – Metamaterials, Plasmonics and Resonant Nanophotonics

TOM 6 – Frontiers in Optical Metrology

TOM 7 – Organic & Hybrid Semiconductor Materials and Devices

TOM 8 – Adaptive Optics & Information driven optical systems

TOM 9 – Optical tapered fibers for light manipulation on the nanoscale

NEW Tutorials on Topical Meeting topics:

1. Autumn Physics School on Metrology for Thin Film Materials
2. VirtualLab Fusion Seminar
3. Grand Challenges of Photonics Session
4. EU Project result dissemination Session
5. Industrial Exhibition
6. Meet & Greet Event for students and companies
7. Industrial posters highlighting the know-how of the companies
8. EOS Annual General Assembly 2018
9. Welcome Reception, Conference Dinner and other social events

Delft is a perfect place to organize such a meeting. The city center is within walking distance of the congress center, and the facilities are modern with professional staff.

More than 400 people attended this year's EOSAM in this historical city of Delft, which is famous for its blue pottery ('Delfts blauw').

The original factory is very close to the congress center, and the EOSAM conference dinner was held there. The open museum and shop contributed to the relaxed and warm atmosphere as people were free to walk around and enjoy good food and drink, and to network simultaneously.

Several student presentations were held during the week. From these very high-quality presentations the award committee had a difficult task to choose the best student oral and poster presentation. These awards, sponsored by Carl Zeiss, went to Anne de Beurs (Vrije Universiteit Amsterdam) for her talk 'Diffractive shearing and rotational ptychography for extreme ultraviolet imaging' and to Kévin Cognée (Institut d'Optique d'Aquitaine) for his poster 'Substantial improvement of the perturbation for high-Q photonics cavities'. Congratulations to the winners and thank you to the whole committee and

especially to the committee chair, Norbert Kerwien, for his work in the selection of the winners.

Organized already for the third time at EOSAM, tutorials dealing with the topics of the TOMs, interested not only students but also other attendees. EOS plans to continue organizing these popular tutorials in future EOSAM events.

In an effort to bring research closer to industry, EOSAM included an industrial exhibition with some 20 exhibiting companies, industrial posters highlighting the know-how of the companies, and a Meet and Greet event organized for students and companies (hosted by TNO).

A special thanks goes to the EOSAM General chairs Paul Urbach (TU Delft) and Stefan Bäumer (TNO), and the whole TU Delft and Aula Congress staff for their support for EOSAM and ensuring a smooth running of the conference. Sincere thanks also go to the TOM Chairs and their committees, and most importantly, to the attendees for making the EOSAM 2018 such a successful event.

EOSAM will be held next in Porto, Portugal in 2020.