

SFO - ELECTIONS 2021

Results of the SFO board of directors Members elected for the period 2021-2025 (Alphabetical order)



Yannick DUMEIGE
Institut FOTON
University of Rennes 1



Claude FABRE
The Kastler-
Brossel Laboratory



Aurélie JULLIEN
Institut de Physique
de Nice



François SALIN
CEO of Ilasis Laser
Bordeaux



**Marie-Claire
SCHANNE-KLEIN**
École Polytechnique

MEMBERS ELECTED FOR THE PERIOD 2019-2023

- ✓ **Nicolas BONOD**
(Institut Fresnel, Marseille)
- ✓ **Arnaud BRIGNON**
(Thales R&T, Palaiseau)
- ✓ **Sébastien CHÉNAIS**
(LPL, Université Paris 13)
- ✓ **Agnès DESFARGES -
BERTHELEMOT**
(XLIM, Université de Limoges)
- ✓ **Sylvain GIGAN**
(LKB, UPMC Paris)
- ✓ **Ariel LEVENSON**
(C2N, Université Paris Saclay)
- ✓ **Inka MANEK - HÖNNINGER**
(CELIA, Université de Bordeaux 1)

Results of ICO Bureau Elections 2021



Congratulations to our dear Nathalie, she is elected as ICO vice president. As you know, Nathalie Westbrook is Professor at Institut d'Optique and at the head of the Biophotonics group at Laboratoire Charles Fabry. She has been an elected member of the SFO executive Board for several years as vice-president.

OPTIQUE DIJON 2022: VENEZ À NICE

Save the date! The mobilization is strong around the OPTIQUE Nice 2022. This congress will take place in Nice from the 4th to the 8th of July 2022.

We have the commitment of more than 13 clubs and committees of the French Optical Society :

1. Guided Optics, Optical Fibers and Networks (JNOG Club)
 2. Lasers and Quantum Optics (COLOQ club)
 3. Crystals for Optics (JNCO club)
 4. Nanophotonics
 5. Optics and Photonics diagnostic (CDOP club)
 6. Photonics and life science (PSV club)
 7. Optics horizons (HORIZONS club)
 8. Adaptive Optics (JRIOA club)
 9. Lidar
 10. Organic Photonics (JNPO club)
 11. Physics and optical imaging (PIO club)
 12. Teaching committee
 13. Women in optics committee: to promote parity in optics
- N.B. PAMO club of SFP (Atomic, Molecular, and Optical Physics) is invited*

The congress facilities at Saint Jean d'Angély campus are well located and easy to reach. Université Côte d'Azur is ideally located between the coast and the mountains in a region known for its quality of life. At the heart of Europe, with easy access to the Nice Côte d'Azur International Airport, it is an open door to the photonic-optics community, academic and industrial world. The local organizing committee orchestrated by **Sébastien TANZILLY** is very happy to welcome hundreds of participants.



We invite you to submit and present your research and to make friendships in friendly atmosphere. Welcome to OPTIQUE Nice 2022!

Follow us: <https://www.sfoptique.org/>

OPTIQUE Nice 2022 in few figures

- 9th edition of the SFO congress
- 600 expected attendees
- 40 stands of companies in the ecosystem of optics and French photonics
- 10 educational stands
- 7 hours of plenary session
- 70 hours of specific sessions in parallel
- 5h30 dedicated to the industrial sector.
- 10 Thematic sessions

SFO and International Commission Optique sans frontière Solar workshop for professional training in Ouagadougou from July 2 to 4, 2021.



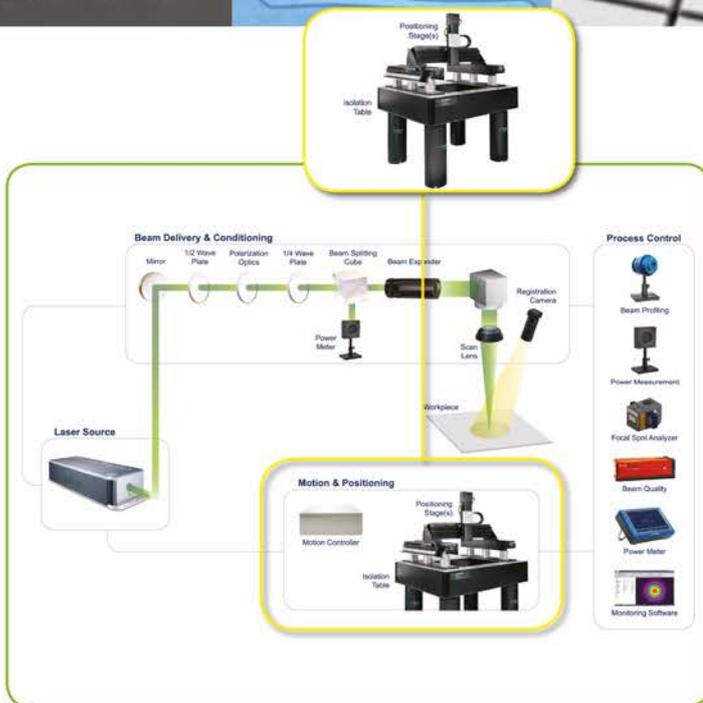
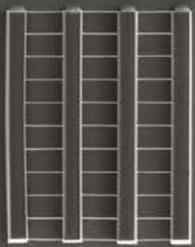
The workshop went very well with 25 persons attending (university lecturers and high school teachers). The aim of the workshop was to build solar panels from solar cells and to characterize their performances. A second workshop will take on battery charge with application to led lighting and smartphone charge.

Arouna Darga, Lecturer at Sorbonne University organized this training.

This first "Experiment action" in Burkina Faso, was carried by SFO - Optique Sans frontière.

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- Actuators
- Hexapods
- Motion Controllers
- OEM Motion Solutions

For more information visit <http://www.newport.com>

NewSkin project : apply for the Open Calls and get free access to the upscaling and testing facilities!

Launched in April 2020, the Horizon 2020 NewSkin project brought together 35 European partners, including the ALPHA-RLH cluster. Dedicated to nanotechnologies, the project is devoted to the development of technological platforms. The objective of these platforms is to provide SMEs and research laboratories with services to develop and test new nanotechnological products and processes on prototypes and thus improve the performance of surfaces (including metals, polymers, ceramics, graphene etc.). They will allow the industrialization of nano-structuring processes by laser, CVD, PVD, HiPIMS technology and others. Finally, organizations developing new nanotechnological solutions will be able to test them via the NewSkin's testing facilities (Antifouling, Anti-icing, Antimicrobial, testing in aggressive industrial environments, etc.). Register on the project platform: <https://platform.newskin-oitb.eu/> and apply for the open calls before 31 December to take part in the NewSkin project, obtain free access to our facilities and accelerate the industrialization of innovative nanotechnologies.

CONTACT: Romain Herault
r.herault@alpha-rlh.com

UPCOMING INTERNATIONAL EVENTS

■ **Formnext exhibition**
November 16-19 in
Frankfurt (Germany)

■ **Webinar "NewSkin Project"**
November 23 (online)

■ **Webinar "Choosing Canada
in your international
development priorities"**
November 25 (online)

■ **EMAF exhibition**
December 1-4 in Porto (Portugal)

■ **Photonics West exhibition**
January 25-27, 2022
in San Francisco (USA)

A UNIQUE EUROPEAN TRAINING PROGRAMME DEDICATED TO PHOTONICS TECHNOLOGIES!

PhotonHub Europe project*, whose ALPHA-RLH is one of the partners (linked third party), just launched the **European Photonics Academy**, a unique training programme dedicated to photonics technologies.

Several technical centers among Europe offer a wide range of photonics training courses, adapted to newcomers as well as more skilled professionals. The objective is to support the companies in the adoption and development of innovative photonics-based solutions to some of society's biggest challenges.



Three types of training courses are available: a half-day online training, geared towards new entrants to the photonics sector, one-day training courses on-site with a focus on applications, and three-day or five-day training courses, with a strong focus on lab-based activities and hands-on working.

Training catalogue direct link: https://ecosystem.photonhub.eu/trainings/?filter_empty

Introduction to PhotonHub Europe training courses:

<https://www.photonhub.eu/our-services/#Training>

Join the platform community: <https://spaces.fundingbox.com/c/photonhubeeurope/>

* Launched last 24th February 2021, PhotonHub Europe gathers 54 partners from 15 European countries for a total budget of €19M for 4 years.

Advanced materials for Defence

Electronics, Photonics and Materials are key technologies for the Defence sector. They offer a huge potential, notably for propulsion, as well as high-performance ballistic protection for missiles, aircraft, helicopters, land vehicles and combatants.



ALPHA-RLH and the European ceramics cluster "Pôle Européen de la Céramique" co-organized, on September 9th, in Limoges, an event dedicated to the challenges of materials for defence which gathered around 100 attendees.

The programme included presentations by large companies such as Dassault Aviation, Saint-Gobain Aerospace, Nexter, MBDA and CEA, as well as pitches by SMEs offering cutting-edge technologies. 110 BtoB meetings were organized and should lead to future collaborations and projects!

Launch of the Women Leadership Programme



To further support the role of women in innovation and tech, the European Innovation Council (EIC) is offering a skills enhancement and networking programme for EIC-supported women entrepreneurs and researchers: the "Women Leadership Programme" officially launched in October.

A call for applications was brought out in March to select mentors. Isabelle Tovena Pécault, PhD, Head of International & European projects at ALPHA-RLH, has been selected to be one of the European Mentor in this new EU programme.

Photonic Online Meetings: Registrations are open!

Following the success of our first three events in 2020 and 2021, the fourth edition will be held on 23 November with the stated objective of targeting Europe and the international market.



Targeting this time mainly major industrial contractors, this edition has a clearly defined theme: MANUFACTURING.

The ambition is to offer our participants the opportunity to meet new companies, and to create or strengthen their business with European partners.

In a single day, key accounts, technology and service providers, investors, institutions, public and private partners will meet through the organisation of qualified BtoB meetings completed by conferences and product & service webinars.

More than 350 entities are expected !

MORE INFORMATIONS AND REGISTRATION AT:

www.onlinemeetings.photonics-france.org

Website "Orientation Photonics"

We will soon launch our website to promote photonics to young French people.

Presentation of photonics, web series on the use of photonics in pop culture, educational resources and interviews on jobs.

If you have educational resources, conferences, videos, testimonies, teaching tools, please contact us! contact@photonics-france.org

Project supported by the Ministry of Employment



NEW MEMBERS

Photonic France now has 177 members! Welcome to : ALEDIA – ALTIMET – BM-OPTO – EXYTE – GLOPHOTONICS – HEPPELL PHOTONICS FRANCE – HUMMINK – ICON PHOTONICS – MATHYM – MERSEN BOOSTEC – MITUTOYO – ORANGE LABS – PRYSMIAN – STERIXENE – TELEDYNE – UV BOOSTING.

Start-ups in the spotlight at Photonic France

On the occasion of the BestForm21, Photonic France highlights the start-ups that have joined them since 2020. And no less than 13 French start-ups in the photonics industry have joined the federation in less than two years to promote and highlight their expertise:

ALEDIA, GLOPHOTONICS, GOYALAB, GREENTROPISM, HUMMINK, ICON PHOTONICS, MICROLIGHT, NEOVISION, PHASELAB INSTRUMENT, QUANDELA, TRIDIMEO, UV BOOSTING et VISIONAIRY.

AGENDA

■ "Les RDV Carnot", partnership business convention
Lyon - November 17-18

■ Photonics Online Meetings #4,
Online - November 23

■ Business Meeting "Environment",
Paris - December 7

■ Photonics West, exhibition partnership
San Francisco - January 25-27

■ Photonics Europe, exhibition partnership
Strasbourg - April 3-7

■ Laser World of Photonics, Pavilion
Munich - April 26-29

TO CONTACT
PHOTONICS FRANCE

contact@photonics-france.org
www.photonics-france.org

Diplôme d'ingénieur: Institut d'Optique's flagship degree in Optical science and engineering

Institut d'Optique Graduate School is a leader in France for research and higher education in optical science and engineering, based on 3 campuses: Paris-Saclay, Bordeaux and Saint-Etienne. Its flagship degree is the "Diplôme d'ingénieur", a highly selective and demanding integrated Master degree, translated to 'Master of Science in Engineering' (MScEng). In France, this kind of programme usually recruits students after two years of undergraduate studies at least, for the 3-year long MScEng programme itself, covering the equivalent of final year of bachelor and two years of master. The main feeder for Institut d'Optique's MScEng programme is the scientific Classes préparatoires system (www.scei-concours.fr/concours.php). After 2 years of intensive undergraduate education in Maths, Physics and Engineering sciences, students sit for



Amphitheater university Paris Saclay

nation-wide competitive exams to enter the Grandes Ecoles, among which Institut d'Optique. Institut d'Optique has also developed an alternative admission scheme, enabling students from regular bachelor or master programmes in French universities to join its MScEng. Applicants are selected by screening their application materials, and if applicable by sitting exams at Institut d'Optique, including oral exams and interviews. Bachelor students can apply for an admission in first year whereas master students can apply directly for an admission in second year. For this Diplôme d'ingénieur (MScEng) programme, Institut d'Optique Graduate School has developed, in addition to its traditional student admission schemes in France, an international recruitment for students from foreign universities. This is enabled by the offer of courses taught in English in our Master level years. Abroad, Institut d'Optique recruits students through its own double-degree schemes, such as the 3+3 double-degree programme with Huazhong University of Science and Technology in China.

Additionally, Institut d'Optique participates in the ParisTech admission programme where 7 French Grandes Ecoles in Science and Engineering join forces to offer a common platform for applicants from abroad. ParisTech operates admission programmes in China, Brazil, Russia, Argentina, Colombia, and since 2021 several Asian territories. This enables Institut d'Optique to recruit students who are finishing their Bachelor into its 2 final years of the MScEng programme. The most represented nationalities are China, Brazil and Russia. Students from the MScEng programme at any of Institut d'Optique's 3 campuses can also follow MSc programmes from local universities in parallel and get both degrees in the end. Around 1 graduate out of 3 chooses to continue towards a PhD, while the others join directly companies with an employment rate exceeding 87% two months after graduation, in France or abroad.

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www.institutoptique.fr



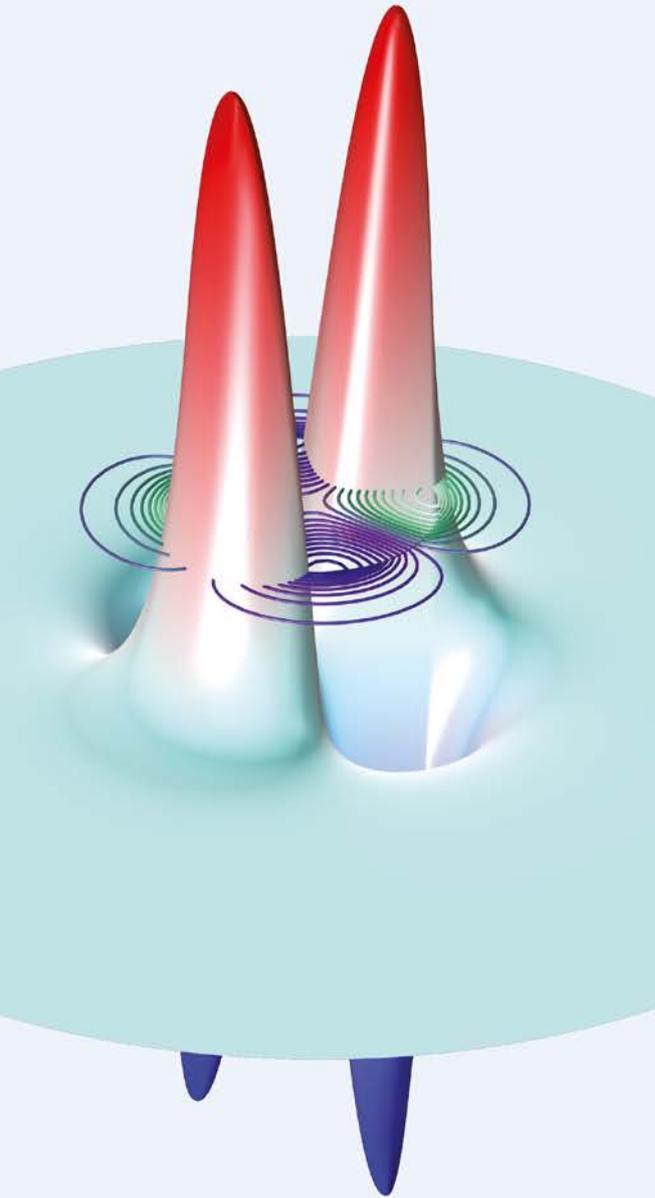
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SIMULATION CASE STUDY

Simulate today what Bartholinus observed through a crystal in 1669

In order to optimize anisotropic materials, you need to first gain an in-depth understanding of the physics at play. In 1669, Professor Erasmus Bartholinus observed birefringence using a piece of Icelandic calcite crystal. Today, you can run qualitative and quantitative analyses using simulation software.

LEARN MORE comsol.blog/anisotropic-media



The COMSOL Multiphysics® software is used for simulating designs, devices, and processes in all fields of engineering, manufacturing, and scientific research.

Le Verre Fluoré is part of the Horizon 2020 European project PASSEPARTOUT

The objective of this project is to develop and deploy a network of miniature, hyperspectral optical based sensors, mounted on drones, vehicles and stationary devices, in order to monitor environmental air quality in urban areas. The project will help in combating climate change by monitoring pollution and forecasting air quality to the public. LVF will develop for the project fibers designed for ICL and QCL pigtailling and will contribute to the development of fibre combiners for the multiplexing of the multiple laser sources.

Prolann creates Luzilight, new member of Photonics Bretagne

The Covid crisis forced Prolann to adopt a strategic repositioning of the company. Based on corporate know-how, it has defined three axes to energize the activity: more robots, new product development proper to the infrasound section and glass machining operations. Within this context, Prolann has created Luzilight (new member of Photonics Bretagne), a company specializing in glass and ceramics machining intended for photonics and the military Defense market.

AGENDA

■ **Photonics PhD Day**
2 December 2021, Lannion
(France)

■ **Photonics West**
25-27 January 2022, San Francisco
(United States)

■ **Laser World of Photonics**
26-29 April 2022, Munich
(Germany)

Focus on quantum technologies at Photonics Bretagne General Assembly

Another great annual meeting for Photonics Bretagne with the general assembly of the association which took place in Trébeurden on the 24th of September. 88 attendees were captivated by the focus on quantum technologies including a presentation of Neil Abroug, National Coordinator of the Quantum Strategy, detailing the last news on the French Quantum national plan, and Eleni Diamanti from the Sorbonne University who presented some hints of the future European Quantum telecommunication network. Most of the 7 new members who joined the cluster (gathering now 118 members) at this occasion had the opportunity to pitch in order to briefly present their activity. Punctuated by many networking sessions, the event was a success and allowed the photonics community to finally meet face-to-face!



Photonics for Agrifood in the spotlight of a Bretagne-Netherlands webinar

In the context of the Dutch-French Innovation Mission 2021-2022, Photonics Bretagne and Photonics Netherlands co-organized last September a webinar on Photonics for Agrifood. The program included skilled speakers from Breton and Dutch companies/institutes which shared their experiences in the field of agrifood in order to initiate collaborations between parties on this emerging topic. These European developments are an engine of growth and financing for the Brittany ecosystem including Photonics Bretagne currently partner of 8 Europeans projects: H2020 (PROMETHEUS, BESTPHORM21, PHOTONHUB), Interreg (OIP4NWE, STEPHANIE), Eurostar (HARMONY), the recently accepted COSME (PHOTONICS4INDUSTRY), and the bi-regional project CAFCA co-funded by Wallonia and Brittany regions.

A PIONEER LOW LATENCY HOLLOW-CORE CABLE

TO SAVE NANoseconds IN HIGH-SPEED TRADING APPLICATION

IDIL and Photonics Bretagne launch a new range of anti-resonant Hollow-core fiber optic cables. They combine low latency data transmission, high bandwidth connections and low loss; three features highly sought after by high frequency trading. The cable was presented at the ECOC Exhibition in Bordeaux which gathered the whole telecom community from Brittany (Photonics Bretagne, IDIL, iXblue Photonics, Cailabs, BKTEL PHOTONICS, Ekinops, Idea Optical, EXFO, WAVETEL TEST SOLUTIONS, Orange Labs, CNRS Foton....)

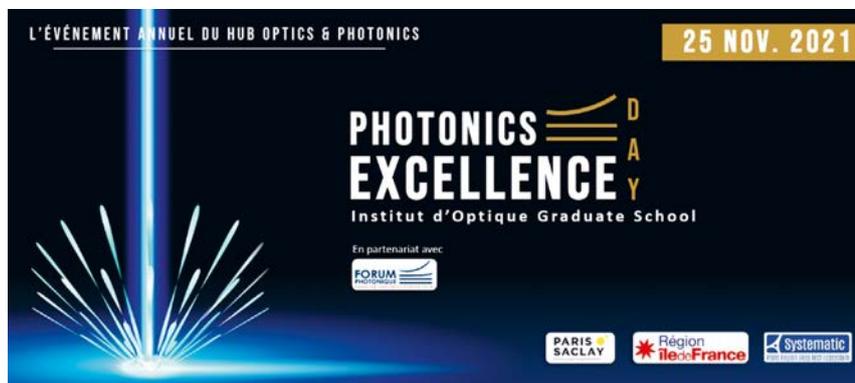
Photonics Excellence Day 2021: November, time to register!

For its 3rd edition, we are very pleased to announce the return of the Photonics Excellence Day in person!

Organized in partnership with the Photonics Forum, we invite you to join us on November 25, 2021 for the annual Photonics Excellence Day at the Institut d'Optique Graduate School in Palaiseau.

Discover the new uses of photonics through exclusive demonstrations, discuss the latest innovations with key players in the industry and build your network, these are just some of the great promises this day has in store for you!

-> Program online and registration open.



100% EUROPE: CLUSTERS AT THE HEART OF EUROPE'S CHALLENGES

If you are an actor of the European research and innovation landscape, please join us on Thursday 18 November for an exceptional event with high value-added conferences and B2B meetings featuring Systematic's growing European ecosystem!

Systematic, European Deep Tech cluster, invites you to its latest edition of 100% Europe, with two major sequences:

10:00 - 13:00 | CONFERENCE - Clusters at the heart of Europe's challenges

- the twin transition - green and digital transition - under Horizon Europe
- hear about experiences with EU-funded projects from your peers
- have a chance to present for the next phase of Horizon Europe topics

14:00 - 18:00 | 1 TO 1 BUSINESS MEETINGS with our bespoke matchmaking platform

-> Program online and registration open.



At a glance

Lytid – New Member

Lytid develops commercial cutting edge photonics products for science and industry. Applications range from medical imaging, NDT for industry 4.0, industrial sensing or ultra-broadband telecom. From SWIR to Terahertz don't wait to discover their products!

Nanovation – New Member

World leader in the manufacture of thin-layers, nanostructures and oxide-based semiconductors, Nanovation joins the cluster and brings its expertise in fire/UV detection and space environment control, welcome!

PSHA – New Member

Located in the heart of Paris-Saclay, the PSHA Accelerator is a key player in industrial innovation. From idea to solutions, including design, prototyping, industrialization, pre-production, or simply take a step back in your project they will be the perfect partner for your innovative projects.

AGENDA

■ 100% Europe

November 18, online

■ Photonics Online Meetings

November 23, online

■ Photonics Excellence Day

November 25, 9h30-17h30,
Palaiseau, France

www.systematic-paris-region.org/evenements/



Want to join the Optics & Photonics Hub of Systematic? Don't wait any longer and contact: Lola Courtillat, Hub Coordinator

lola.courtillat@systematic-paris-region.org

AGENDA

■ Upcoming events

EPIC is organising meetings on various topics.

See below an overview of some upcoming events. For a full overview of events, please visit www.epic-assoc.com

■ EPIC Online Technology Meeting on White Lasers and Supercontinuum Generation 1 November 2021

■ Product Release November 2 November 2021

EPIC Online Quantum Technology Meeting on Ion Traps, Gravimeters and other Quantum Sensors 3 November 2021

EPIC Online Technology Meeting on 3D Printed Optics: State of the Art and Applications 15 November 2021

EPIC TechWatch on Laser and Photonics Applications at COMPAMED HIGH-TECH FORUM by IVAM, MEDICA 16 November 2021

EPIC Online Technology Meeting on Advanced Laser Manufacturing for Automotive 22 November 2021

EPIC Virtual Company Tour – Canada Special I (in cooperation with OPTONIQUE) 23 November 2021

EPIC Online Technology Meeting on Mid-IR Technologies for Security & Surveillance (in cooperation with MidIR Alliance) 24 November 2021

Product Release December 30 November 2021

EPIC Online Quantum Technology Meeting on Large Scale Qubit Generation 1 December 2021

EPIC Online Technology Meeting on Medical Devices 6 December 2021

EPIC Virtual Company Tour – Canada Special II (in cooperation with OPTONIQUE) 7 December 2021

EPIC Online Technology Meeting on Challenges for LED/MiniLED/MicroLED 13 December 2021

EPIC Online Technology Meeting on Photonics for the Food & Beverage Industry 20 December 2021

Shaping the New Future

EPIC continues their virtual journey and slowly restarts physical events



It's been a busy closing quarter of 2021 for EPIC - European Photonics Industry Consortium. Currently, in the middle of the Season 5 of the very successful EPIC Online Technology Meetings, we have a full calendar filled with both online and physical events until the end of the year. The new season of online technology meetings started strong in September with the largest meeting to date: the first event after the summer break – the Online Technology Meeting on New Developments in FMCW LIDAR, attracted more than 200 registrations. In this period, the world's largest photonics association introduced a series focussing on mid-infrared technologies at all levels of the supply chain. Shortly after the official launch of the Mid-IR Alliance in May, three EPIC online technology meetings on Mid-IR technology were announced. Additionally, EPIC members and end-users joined meeting on Industrial Manufacturing in July and a meeting on Environmental Monitoring in September.

On 24 November the EPIC Online Technology Meeting on Mid-IR Technologies for Security & Surveillance will take place. The key aim of this and previous events is to provide a platform to exchange ideas among laser and detector manufacturers, developers of Mid-IR cameras and sensors, manufacturers of Photonic Integrated Circuits and software for modelling and packaging services. As the travel restrictions eased internationally in the second half of 2021, EPIC finally took part in several European photonics exhibitions. The first show of 2021, attended in-person by the EPIC team, was ECOC 2021 in Bordeaux, France. EPIC was able to reconnect with their member companies after busy 18 months of online activities and organized the Association's annual TechWatch and VIP Party in conjunction with the ECOC event. There was a lot of positive energy in the exhibition hall in the South of France and all visitors and exhibitors were looking forward to face-to-face exhibitions and conferences finally becoming more frequent.



EPIC team as the dissemination partner of PIXAPP and JePPIX Pilot lines at ECOC 2021 in Bordeaux, France

THE LARGEST PHOTONICS INDUSTRY ASSOCIATION IN THE WORLD



By dedicating ourselves to serving
the photonics industry, we have
become the largest photonics
industry association in the world.

Thank you to all our members
for making this happen.



A Graduate School of excellence "Nano-optics & Nanophotonics" recently opened in France

Interested in a degree program to jumpstart a career in a high-tech company or an academic institution that is interested by light and associated innovation? There's a new graduate school in France 100% taught in English that could be right for you.

Nano-optics and Nanophotonics are rapidly growing and, given the connections to the fields of energy, telecommunications, security, health and environment, nanophotonics is at the crossroads of different key enabling technologies defined by the European Commission as a priority of its industrial policy. A new international graduate school "NANO-PHOT" opened in 2020. It is an "Ecole Universitaire de Recherche" supported by the French government within the frame of the "programme d'investissement d'avenir (PIA)". NANO-PHOT offers an unparalleled 5-year program of excellence (master + PhD), with an international dimension and in direct contact with scientific and socioeconomic stakes related to the use of light, on a nanometric scale. NANO-PHOT aims at training the next generations of researchers and professionals at the cutting edge of nanophotonic's sciences and technologies, bringing a genuine structuration in the Champagne area of France (region Grand-Est) by providing a new coherence to photonics and nanotechnology courses and involving several research units.



Partners and network

The leading partner is the University of Technology, Troyes (UTT, www.utt.fr) founded in 1994. Its 5 laboratories address most of the current technological and scientific challenges. Among these laboratories, the L2n leads NANO-PHOT (Light, nanomaterials, nanotechnologies). More than 90 people work on new concepts and approaches on nanoscale optics. The main local partner is the multidisciplinary University of Reims Champagne Ardenne (URCA, www.univ-reims.fr) involving more than 25 000 students. Six of its laboratories (LRN, BIOSPEC, FARE, MEDYC, SEBIO, ITheMM) offer complementary domains of science and application in nano-optics: biotechnology, cellular biology, nanoelectronics, environment, materials for building engineering, etc... The French National Centre for Scientific Research (CNRS), an official partner, is among the world's leading research institutions. Its scientists explore the living world, matter, the Universe, and the functioning of human societies in order to meet the major challenges of today and tomorrow.

Program

The program consists of 2 year-master and 3-year PhD. The last master semester is dedicated to a research internship. Each semester gathers interdisciplinary and specialized/tailored courses, as well as research projects and soft skills, and includes the participation of world-class experts. The NANO-PHOT program

consists of lectures, tutorials, practical works and projects, all taught in English and awarded by ECTS credits.

Research activities are structured by four scientific main themes: i) Emerging materials for nano-optics, ii) Nano(spectro)scopy, nanosensors & nanodevices, iii) Fundamental phenomena in nano optics, iv) Nanofabrication for nano-optics. NANO-PHOT promotes international mobility and multilingual training environments and activities. The involvement of students in research projects starts from the first semester of the master program, until the thesis defense. Through its control at the nanoscale, light can be fully exploited within a sustainable development approach, based on the latest and major scientific and technologic progress to which the students will contribute in real time.

Recent updates

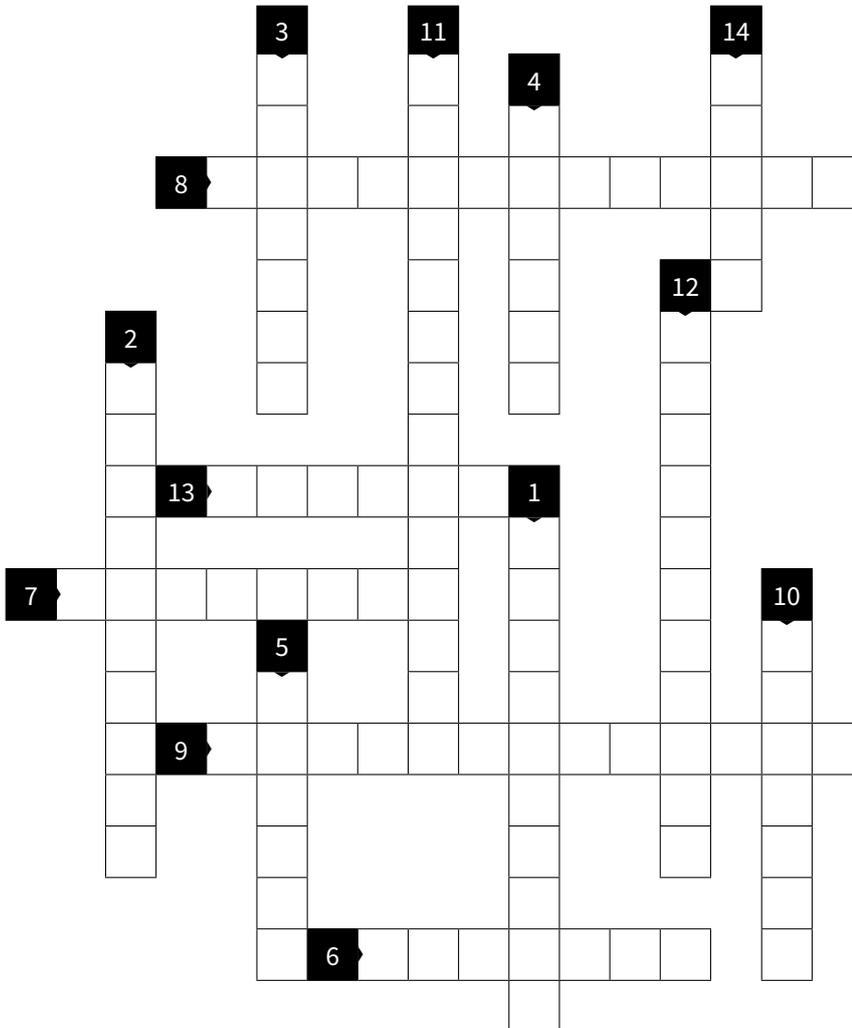
The first student promotion has been recruited: 20 master students including 35% of foreigners. The official inauguration of NANO-PHOT took place at UTT on Sept 20, 2021. Many world-renowned persons attended. Among them: Prof. Naomi Halas (Rice University, USA), patron of NANO-PHOT and UTT doctor honoris causa, and Prof. Peter Nordlander (Rice University, USA), new member of the NANO-PHOT international advisory board.

Should you wish to join the NANO-PHOT graduate school? get detailed information? start a win-win collaboration with NANO-PHOT?



CROSSWORDS ON BEAMS AND MATERIALS

By Marie-Claire Schanne-Klein (LOB-CNRS)



- 1 Rayleigh or Mie?
- 2 Bends light
- 3 At a metal-dielectric interface
- 4 Beam carrying OAM
- 5 Self-healing beams
- 6 Aberrant polynoms
- 7 The shape of usual beams
- 8 Light at nanoscales
- 9 Artificial and smart materials
- 10 Wave building on dispersion and nonlinearity
- 11 Broadband and similar to incoherent light
- 12 Unavoidable with waves
- 13 Optical resonator
- 14 Thinnest width of a beam

SOLUTION ON
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KALEO MTF, THE KEY TO COMPLEX HIGH CRA LENSES

The everlasting demand for sharper images using smaller devices, especially in automotive, smartphone and AR/VR industry, is driving the specifications of optical assemblies to new boundaries: more resolution, larger field of view, smaller camera modules, and therefore higher chief ray angle (CRA) and lower F#. This challenge has led Phasics to focus its efforts on developing a brand new test station dedicated to this type of lenses: Kaleo MTF.

Indeed, this station allows a complete characterization of optics, measuring **on and off-axis MTF and wavefront error at multiple wavelengths**. Suitable for many different types of lenses, even with high CRA or large field of views, it can be used in both R&D laboratories or production facilities. After an easy and fast selection of the desired measurement parameters, Kaleo MTF quickly and automatically acquires the sequence, with no alignment required. And thanks to its complete wavefront measurement, Kaleo MTF can generate all kind of analysis, like for example, MTF or OPD vs field angle. ●



PHASICS

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