



INTERNATIONAL DAY OF LIGHT 2019

INTERNATIONAL CENTRE FOR THEORETICAL PHYSICS ICTP, TRIESTE, ITALY

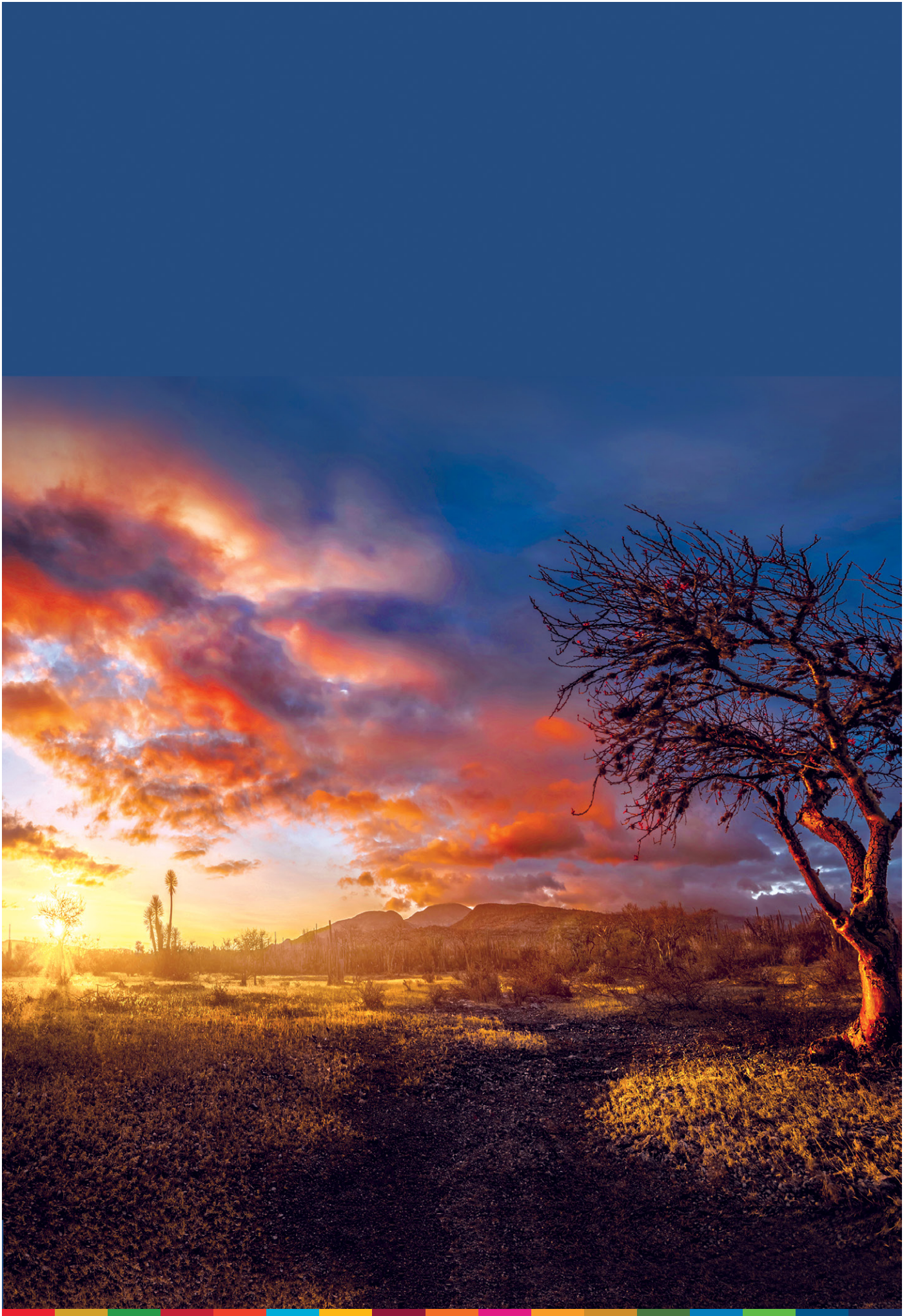
16 MAY 2019



United Nations
Educational, Scientific and
Cultural Organization

International
Day of Light





Photos courtesy: Luis Roberto Lyons Suarez

MESSAGE

FROM MS. AUDREY AZOULAY, DIRECTOR-GENERAL OF UNESCO
ON THE OCCASION OF THE INTERNATIONAL DAY OF LIGHT

16 May 2019



“Do not destroy me before my time, for it is sweet to look upon the light.”

In Euripides, *Iphigenia at Aulis*, Iphigenia begs her father, Agamemnon, not to obey goddess Artemis' order to sacrifice her. Of all the reasons for staying alive, for Iphigenia, the most important is the sweet contemplation of light.

Light here symbolizes life, and it is foremost among all other determinations. Light comes first; light allows us to see the world. Its essential nature makes light a central concern for all civilizations.

The importance of light marks the architecture of World Heritage sites: the rose windows of Notre-Dame de Paris or the very structure of Machu Picchu, designed in accordance with the sun's path in the sky.

Light and its treatment are essential elements of the visual and performing arts, literature, and human thought. Beyond the meaningful symbolism of light in works of art, philosophy, or the human sciences, the conception of light, as evinced in such works, has evolved as our scientific understanding has grown.

Light is a natural phenomenon which science has come to understand and learned to use, and it plays an essential role in all the sciences and their applications. From the birth of the universe to the creation of all kinds of new technologies, from X-rays to radio waves, in fields as diverse as medicine, agriculture, energy, optics, and countless others, light has shaped – and continues to shape – our world. By understanding light, we are able to achieve the greatest of scientific and technological progress.

All its natural benefits and its scientific and technological applications make light an essential part of the daily life of our societies; these benefits and applications make light an important issue for the Sustainable Development Goals of the 2030 Agenda for Sustainable Development.

Particularly crucial are the issues surrounding electrical access to light as a means of improving the standard of living in developing countries, and the issues concerning the optical fibre used to connect the world's citizens through the Internet. The resulting communication networks can lead to more cultural exchanges, more justice, responsibility, and peace.

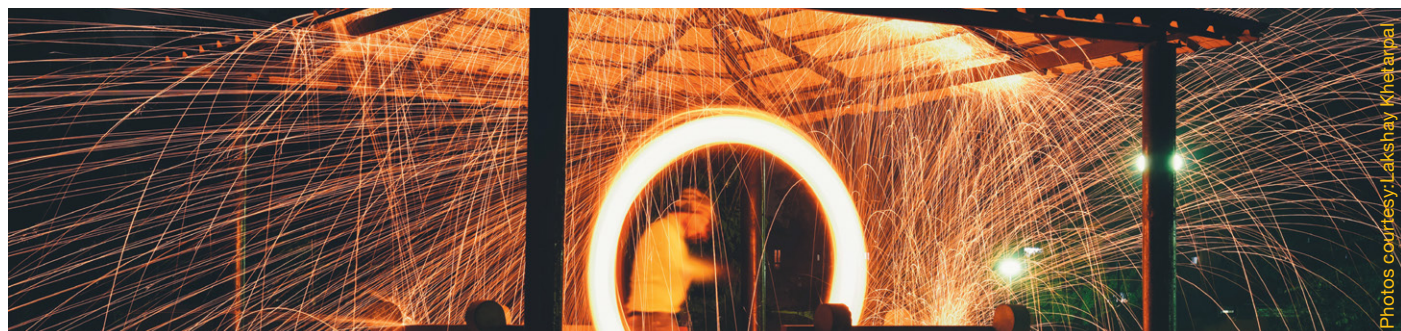
The International Day of Light shows the importance of light in people's lives, its importance in all areas of life. This day was first observed last year in 87 countries. The International Day of Light is being celebrated for a second time this year, and on the occasion of its celebration, UNESCO affirms its commitment to the international scientific community and its work on this most important subject.

Audrey Azoulay



PROGRAMME

ILLUMINATING EDUCATION



REGISTRATION 09:00-10:00

OPENING SESSION 10:00-11:20

WELCOME ADDRESSES 10:00-10:15

Fernando Quevedo

Director of ICTP

Roberta Ramponi

President of the International Commission for Optics (ICO)

OVERVIEW 10:15-10:25

John Dudley from the International Day of Light Steering Committee, will deliver a short introduction to the general **Aims of the International Day of Light**.

OPTICA FANTASTICA 10:25-11:20

Sir Michael Berry, University of Bristol and ICTP Distinguished Lecturer will deliver a keynote presentation entitled **Optica Fantastica**, structured around a series of images to illuminate the physics of light, a topic ideally suited to engage interest and promote science outreach to the public of all ages.

OUTREACH & COMMUNICATION 11:20-12:30

Stephen Pompea, National Optical Astronomy Observatory, will discuss **Astronomy Public Engagement**, based on the many activities originating during the International Year of Astronomy 2009 and the legacy actions taking place during the International Astronomical Union's 100th anniversary in 2019.

Rachel Won, International Editor of Nature Photonics, will talk on a **Career in Science Communications**, discussing her experience as scientific journal editor and the general prospects for getting into science publishing.

Federica Beduini, Outreach and Science Communicator at ICFO, will talk on Participatory Science and the Big Bell Test, a worldwide citizen science experiment that led to over 100,000 people participating in state-of-the-art tests of quantum physics.

LUNCH & NETWORKING 12:30-14:00

WWW.LIGHTDAY.ORG

SCIENCE & DEVELOPMENT SESSION 14:00-16:15

LIGHTING AND THE FUTURE 14:00-15:10

This session will consist of a series of short presentations addressing diverse challenges for science and education. Amongst the topics to be covered will be photonics for sustainable development, the need for improved awareness of lighting quality, and education and sustainability initiatives in the public and private sector.

Participants include: **Sandro Scandolo** from ICTP; **Krisinda Plenkovich**, SPIE; **Brian Liebel**, Illuminating Engineering Society; **John O'Hagan**, CIE; **David Sampson**, University of Surrey; **Prajna Khanna**, Signify Foundation.

DEVELOPMENT CHALLENGES 15:10-15:55

Cather Simpson, University of Auckland, will present a Keynote Talk on **Using Physics to Feed the Planet**, explaining how a greater understanding of light is changing the way we grow food.

DISAPPEARING IN THE DARK 15:55-16:05

Introduced by **Jason Socrates Bardi** from the American Institute of Physics (AIP) and **John Taylor** from The Optical Society (OSA), we preview a new documentary premiering in 2019 on an art installation in Washington, D.C. that opened on the first International Day of Light.

IMAGES FROM THE ROOF OF THE WORLD 16:05-16:15

Saurabh Narang, an award-winning photographer from India will describe his photography in the Himalayan villages of Spiti Valley and the first International Day of Light celebration at the highest village in the world.

COFFEE & NETWORKING 16:15-16:45

CAREER CHALLENGES 16:45-17:35

Jess Wade, Imperial College London will discuss her work on challenging stereotypes, the Institute of Physics efforts to improve gender balance in physics classrooms, and to celebrate the theme of the International Day of Light, she will also describe her research on next-generation OLEDs.

Amna Abdalla Mohammed Khalid, vice-chair of the Next Einstein forum (NEF) Executive Committee, will deliver a presentation on the **Aims and Objectives of the NEF** community of scientists in creating a unified African scientific identity to enable the robust scientific transformation of Africa through fostering an environment for innovative scientific discovery.

STUDENTS & SOCIETIES SESSION 17:35-18:50

This session will see presentations by **student representatives from international networks** of EPS, IEEE, OSA, SPIE, IAPS. Presentations will cover broad topics, including science outreach and how students see their careers in the future.

Participants include: **Ezabo Baron** (IEEE PS); **Roberta Caruso** (EPS); **Xiang Dino Dai** (OSA); **Perla Marlene Viera González** (SPIE); **Duarte Graça** (IAPS); **Kithinji Muriungi** (IEEE PS); **Artemis Tsimperi** (IAPS).

CLOSING REMARKS 18:50-18:55

Joseph Niemela
ICTP & International Day of Light Steering Committee

RECEPTION & NETWORKING 18:55-21:00

ABOUT THE INTERNATIONAL DAY OF LIGHT

The International Day of Light is an annual observance of UNESCO promoting the importance of light and light-based technologies in science, education and culture. It is managed by an international multi-partner Steering Committee & the UNESCO International Basic Sciences Programme.



SPEAKER BIOGRAPHIES

We would like to thank all the speakers in our thematic sessions for their commitment and participation in the International Day of Light. Brief biographies are listed below in alphabetical order.



Jason Socrates Bardi

Jason Socrates Bardi, M.A., M.A., is news director at the American Institute of Physics in College Park, Maryland outside Washington D.C. He leads the editorially-independent nonprofit news service Inside Science (www.insidescience.org), a syndicator of science journalism for the general public. A writer, photographer and documentary filmmaker by training, Bardi reports on the physics of food, health, neuroscience and the use of sound and light-based technologies to solving pressing human problems. He holds graduate degrees in science writing and molecular biophysics from Johns Hopkins University and is author of two general-audience books on science history: "The Calculus Wars" (2006) and "The Fifth Postulate" (2009).



Ezabo Baron

Ezabo Baron is a computer scientist with speciality in artificial intelligence and former Robotics Research Coordinator at Nakawa VTI, an institution under Ministry of Education and Sports Uganda. He was responsible for leading a team of innovators from the institute to the Annual East Africa Robotics Challenge Cup held in Nairobi, Kenya an initiative of Japan International Cooperation Agency (JICA). He is the current Secretary for IEEE Uganda Section, a member of IEEE Photonics Society (PS), Robotics and Automation Society (RAS), Antennas and Propagation Society (AP-S). In physics he is passionate in Optical Sensors, Optocouplers and Photovoltaic technologies that he enjoys to apply in physical computing and internet of things.



Federica Beduini

Federica Beduini is part of ICFO's outreach team, coordinating educational activities to spread the passion for light and photonics among young students. She was born and educated in Italy, but in 2009 she moved to ICFO, where she obtained her PhD after working many years in experimental quantum physics. Among many other programs, she organises the Young Photonic Congress, which takes place every year in ICFO and where students from across Catalonia come to present their photonics projects to other students as well as to investigators of ICFO. She was one of the coordinators of the citizens science experiment The Big Bell Test, in which more than 100.000 people participated in a macro experiment of quantum physics at the international level.



Sir Michael Berry

Sir Michael Berry is a theoretical physicist at the University of Bristol, where he has been for more than twice as long as he has not. His research centres on the relations between physical theories at different levels of description (classical and quantum physics, ray optics and wave optics...). In addition to these deeply mathematical studies, he also delights in finding familiar phenomena illustrating deep concepts – the arcane in the mundane: rainbows, the sparkling of the sun on the sea, twinkling starlight, polarized light in the sky.



Roberta Caruso

Roberta Caruso is first-year post-doc at Università di Napoli Federico II, where she got her Ph.D. in 2018, after defending her thesis on hybrid Josephson junctions. She is the chair of the Young Minds (YM) project of the European Physical Society since May 2018, coordinating the activities of 57 Sections in 30 countries. She has been part of the project since its foundation in 2010, organizing outreach and science communication events within the YM Naples local group. Also, she had managed several local projects during her Bachelor and Master studies.



Xiang Dai

Xiang Dai is a senior student from the electro-optical department at Changchun University of Science and Technology (CUST). He will pursue his study in computational optics at the biomedical engineering department of Duke University. He served as the vice president of The Optical Society (OSA) student chapter of CUST (2017). During his tenure, he successfully applied to hold the 2018 International OSA Network of Students Conference (IONS) in Changchun and worked as the conference secretary. And he helped to build up an annual network meeting with the other student chapters located in Changchun. Under his active promotion, his student chapter achieved long-term cooperation in 2018 with Changchun China optics science and Technology Museum in science outreach, from regular youth education to public speech.



John Dudley

John Dudley is Chair of the International Day of Light Steering Committee. He was born and educated in New Zealand but is currently Professor of Physics at the Université Bourgogne Franche-Comté and the CNRS Institut FEMTO-ST in France. His research interests cover broad themes in optical physics, and he is also strongly committed to the public communication of science. He served as President of the European Physical Society from 2013-2015, and has received recognition as a Fellow of the European Optical Society, a Fellow of the IEEE and a Fellow of the OSA. He is also a laureate of the French CNRS Médaille d'Argent, and has received several honorary degrees and other distinctions.





Duarte João da Costa Graça

Duarte João da Costa Graça is a first year Master's student in Physics at the University of Porto, in Portugal. He has a Bachelor's degree in Physics from UPorto. He holds the office of General Member in the Executive Committee of the International Association of Physics

Students (IAPS), focusing on student advocacy issues and assisting other EC members, currently also managing IAPS Public Relations duties. Also, he participates in the organization of outreach activities by the Physics students nucleus of UPorto - Physik UP. His main interests in Physics are Cosmology and Particle Physics. He has an interest in Science outreach and communication, considering these fundamental for a healthy connection and trust between Science and the general public.



Amna Abdalla Mohammed Khalid

Amna Abdalla Mohammed Khalid is vice-chair of NEF community of Scientist executive committee and NEF ambassador of Sudan. She holds a B.Sc. honour in Physics from Sudan University of Science and Technology and two postgraduates diploma in general Physics and

in Condensed Matter Physics from ICTP, Italy. She obtained her PhD degree from the Doctoral School of Nanotechnology at Trieste University, Italy. She is currently postdoctoral researcher in Biophysics group at Georg August University, Germany. Over the last six years, her researches focus on fundamental biophysical studies of various molecular motors that play critical roles in cell division. Those molecular motors are highly expressed in cancer cells which make them potential candidates for cancer biomarker (diagnosis) and cancer therapies.



Prajna Khanna

Prajna Khanna is Head - Corporate Social Responsibility/Director Signify Foundation. Her education and early career in the field of media and mass communications was associated with prime time programming for CNBC and BBC, and was followed by a transition to the

development sector with roles at Comic Relief and Greenpeace International. Work at the Sustainability team at ING Bank provided experience in the role that business can play in addressing shared global challenges, and this was followed by her appointment at the Signify Foundation. Her work at Signify addresses directly the global challenge that almost one billion people in the world have no access to electric light at night. Her role is to catalyze the sustainable transformations that enhance the quality of people's lives, by simply enabling consistent access to quality light replacing harmful smoky fuels, candles, kerosene, wood or coal.



Brian Liebel

Brian Liebel is the Director of Standards and Research for the Illuminating Engineering Society (IES). He is a Professional Engineer with degrees in Architectural Engineering and Environmental Design, recognized for his work in lighting design, electrical and

controls engineering, lighting education, and light and vision research. His research specialization is the effect of light spectral power distribution on human vision, and how recent discoveries point to a new paradigm to supplant our existing 100-year old photometric measurement system. In his current role, he guides the IES Standards process and advocates for collaboration between all lighting organizations, for a global and unified approach to addressing lighting education and research.



Kithinji Muriungi

Kithinji Muriungi is an Electrical & Electronics Engineering Bachelors student at Moi University, Kenya (Awaiting graduation). He is a Mentor, Global Leader, and a Tech-Enthusiast: IEEE Outstanding Volunteer & Global-Top-Recruiter Awardee in March 2018. He is the

pioneer of IEEE Moi University Student Branch. He also serves as the IEEE Student Representative - Kenya Section, IEEE Photonics Society Membership Development & Outreach Volunteer, and Equity Group Foundation - Wings2Fly volunteer mentor. He has previously volunteered and worked in different capacities with Safaricom PLC, KAA, IBM, SPEED, and Huawei. He aims at creating a lasting impact on the youths and the upcoming generations to provide societal-based solutions which are innovative and entrepreneurial through education & science, cutting-edge technologies, and service to humanity.



Saurabh Narang

Saurabh Narang is an award-winning photographer and an ex-banker based out of Delhi, India. Over the years, he has worked with Fortune 500 companies, renowned NGOs, and government organisations all across the world. Some of his work has been published in various reputed newspapers and journals worldwide.

Throughout the years, Saurabh has chased beautiful night skies in remote villages, has almost been drowned in the Andamans Sea and has survived a deadly wild-bee attack at a hamlet in Madhya Pradesh – keeping true to his belief in the importance of "living the story." Awards include: India Unexplored by Lonely Planet 2014, Sony Alpha Stories Award 2015, HIPA 2017-18 (Finalist), and IPF Portrait Prize 2018.



Joseph Niemela

Joseph Niemela is a senior research scientist (retired) at the Abdus Salam ICTP and a consultant in UNESCO's Natural Sciences Sector. In addition to conducting research in areas of fluid turbulence and low temperature physics, he also directs UNESCO's teacher-

training program in optics and photonics. He serves as Chair of the European Physical Society's Group Physics for Development, Treasurer of the International Commission for Optics, and Secretary of IUPAP C13 commission, as well as a member of the Scientific Council of Centro Fermi. He is a Fellow of the American Physical Society and a recipient of its Dwight Nicholson Medal in 2016.



SPEAKER BIOGRAPHIES



John O'Hagan

John O'Hagan is Director of Division 6 "Photobiology and Photochemistry" of the International Commission on Illumination. He works for Public Health England, heading the Laser and Optical Radiation Dosimetry Group, and is a Visiting Professor at Loughborough University. His research interests cover both

the detrimental and beneficial effects of optical radiation on people. He is on the Scientific Expert Group of the International Commission on Non-Ionizing Radiation Protection, is assisting the World Health Organization on Basic Safety Standards for non-ionizing radiation and is on a number of national and international standards committees covering optical radiation safety and the beneficial effects of light. He is a Fellow of the Institute of Physics and the Laser Institute of America.



Krisinda Plenkovich

Krisinda Plenkovich is the Director for Education and Community Services at SPIE, the International Society for Optics and Photonics where she oversees Education, Outreach, Membership and Public Policy activities. She manages strategic initiatives for SPIE and

represents the Society on a number of collaborative national and international projects including the International Day of Light, ScienceCounts and the US National Photonics Initiative. She is a graduate of Western Washington University with over 25 years of experience in organizational development and non-profit management.



Stephen Pompea

Stephen Pompea is the Observatory Scientist of the U.S. National Optical Astronomy Observatory in Tucson, Arizona and La Serena, Chile, serving as Program Head of Education and Public Outreach. He has led many large national and international science education projects including

Hands-On Optics, *Galileoscope*, *Project STEAM: Colors of Nature*, and now the *Einstein Schools Programme* (with the International Astronomical Union and Leiden University). He has received recognition as a Fellow and prize winner for his science education work from The Optical Society (OSA), SPIE-The International Society for Optics and Photonics, and the American Association of Physics Teachers. He is an Adjunct Professor of Optical Sciences and of Astronomy at the University of Arizona.



Fernando Quevedo

Fernando Quevedo, a Guatemalan national, was appointed director of ICTP in October 2009. Dr. Quevedo is a well-known theoretical particle physicist with wide-ranging research interests in string theory, phenomenology and cosmology. He was awarded the 1998 ICTP Prize in recognition of his important contributions to

superstring theory. In addition to receiving the ICTP Prize, Dr. Quevedo has received various honours including Doctorates Honoris Causa from the Universidad del Valle de Guatemala and the Universidad de San Carlos de Guatemala, the Royal Society Wolfson Merit Award and the John Simon Guggenheim Foundation Fellowship. He was born in 1956 in Costa Rica and obtained early education in Guatemala. He obtained his PhD from the University of Texas at Austin in 1986 under the supervision of Nobel Laureate Steven Weinberg. Following a string of research appointments at CERN, Switzerland, McGill University in Canada, Institut de Physique in Neuchatel, Switzerland, and the Los Alamos National Laboratory, USA, as well as a brief term as professor of physics at the UNAM (Mexican National Autonomous University), Mexico, Dr. Quevedo joined the Department of Applied Mathematics and Theoretical Physics at the University of Cambridge, UK, in 1998, where he is currently Professor of Theoretical Physics and Fellow of Gonville and Caius College. Dr. Quevedo leads a research group on String Phenomenology and Cosmology at ICTP.



Roberta Ramponi

Roberta Ramponi is the director of the Institute for Photonics and Nanotechnologies of the Italian National Research Council and full professor of Physics at the Politecnico di Milano. She has been the President of the European Optical Society in 2006-2008 and is currently

the President of the International Commission for Optics and a member of the Executive Board of the European Public Private Partnership Photonics21. She is the co-author of more than 150 scientific papers. Her research activity includes integrated and nonlinear optics, photonic circuits for quantum optics, and micro-optofluidic devices for biomedical and environmental sensing. She is also engaged in several national and international programs for the promotion and dissemination of Optics and Photonics.



David Sampson

David Sampson is the Vice-Provost, Research & Innovation, at the University of Surrey, United Kingdom and head, Optical+Biomedical Engineering Laboratory, Department of Electrical, Electronic & Computer Engineering, University of Western Australia. He is active in the global optics & photonics community,

as elected Director of the SPIE - The International Society for Optics & Photonics (2017-2019), and is a fellow of SPIE, OSA, and IEEE. He has conducted research for nearly thirty years in photonics, optics, and microscopy, with applications in communications and biomedicine. He is an authority in optical coherence tomography, its implementation in endoscopes and needles, extensions such as elastography, angio- and lymphangiography and polarisation-sensitive contrast, and translational applications in burns, airways and cancer.





Sandro Scandolo

Sandro Scandolo is a computational physicist studying the behavior of materials at the nanoscale. He co-developed one of the most popular softwares for quantum materials chemistry (Quantum-Espresso). He has been professor of condensed matter physics at the

International School for Advanced Studies and visiting researcher at Princeton University. He received the J.C. Jamieson prize in 1998 and is a Fellow of the American Physical Society since 2016. His research papers have received more than 19,000 citations. He is currently the Head of Scientific Programmes and Outreach at the "Abdus Salam" International Centre for Theoretical Physics (ICTP), a UNESCO Category 1 Institute.



Perla Marlene Viera-González

Perla Marlene Viera-González is an Early Career Professional working in the Universidad Autonoma de Nuevo Leon (UANL) in Monterrey, Mexico. She obtained her Ph.D. in January 2019 in the field of Physical Engineering with a thesis about Optical design. Since 2011, she has been an active member of the International

Society for Optics and Photonics (SPIE); she was the treasurer (2011), president (2012) and (2014 - 2015) IYL-representative of the SPIE UANL Student Chapter. Also, she has served as a student committee member of the SPIE since 2015. She is the leader of the Science outreach group "Física Pato2 FCFM" which as conducted several events impacting more than 75,000 people in 5 years.



Cather Simpson

Cather Simpson is a Professor of Physics and Chemical Sciences at the University of Auckland. There, she started the Photon Factory, a laser centre whose mission is to exploit exotic, ultrashort pulsed lasers to enable cross-disciplinary research from the

fundamental to the applied. Cather's research explores how materials convert light into more useful forms of energy. Agriculture is a recent focus, where her work has led to two international award winning companies. Recent accolades include an Ako Aotearoa Tertiary Teaching Excellence award (2013) and in 2016 she won the Silicon Valley Forum 1st-place AgTech medal, was named Primary Industries Champion, Baldwins Researcher Entrepreneur and BNZ Supreme Research Commercialisation winner. She is a Fellow of the Royal Society of New Zealand Te Apārangi and former President of the New Zealand Institute of Physics.



Jess Wade

Jess Wade is a postdoctoral physicist at Imperial College London, where she works on new materials for light emitting diodes. She holds a PhD and Master's degree from Imperial College London. She has been involved in several projects to improve diversity in

science. Jess won the Institute of Physics (IOP) Early Career Communicator Prize (2015), the IOP Jocelyn Bell Burnell Award (2016), the Institution of Materials, Mineral and Mining's 'Robert Perrin Award' (2017), the Imperial College Dame Julia Higgins Certificate (2017) and the IOP Daphne Jackson Medal and Prize (2018), as well as being named by *Nature* as one of the 10 people who mattered in 2018. In 2017, Jess was the UK representative on a US State Department International Visitor Leadership Program. She is a keen Wikipedian, and every day helps to upload the biographies of women, LGBTQ+ and POC scientists - she's made 600 so far.



John Taylor

John Taylor is the Director of the Executive Office at The Optical Society (OSA). He manages programs for community and public engagement and supports the society's strategic initiatives. He participates as a staff liaison to the International Day

of Light Steering Committee and works to ensure that the celebration communicates that optics and photonics is the enabling technology of the 21st century to the day's growing following and the public. For the inaugural day of light in 2018, he coordinated the collaboration of OSA, the American Physical Society (APS) and American Institute of Physics (AIP) with ARTECHOUSE, a Washington, DC, USA, art space, to demonstrate the value of light science and technology through the work of the artist NONTOAK. The exhibition reached 20,000+ visitors.



Rachel Won

Rachel Won is the International Editor of *Nature Photonics*, whose main responsibility is to ensure that the journal publishes top-quality research in all areas of optics and photonics. She also commissions and edits news articles, and writes research highlights, interviews,

editorials and press releases. Rachel is very much into science communications and outreach activities, providing advice to young researchers and promoting thinking outside the box. Before joining Nature Photonics, Rachel worked for Aston University's Business Partnership Unit in Birmingham, UK, as a Medici Fellow, commercializing photonics research. She obtained her PhD from Aston's Photonics Research Group. Prior to that, she worked for Philips Optical Storage in Singapore as an Optics Engineer. She holds a Master's degree from Nanyang Technological University of Singapore and a Bachelor's degree from the National University of Malaysia.



Artemis Tsimperi

Artemis Tsimperi is a Physics student at the Aristotle University of Thessaloniki, and she is planning on attending a master program in medical/biomedical physics as well. Her love for medical physics led her to complete a six-month practice in a local hospital doing radiotherapy. Besides the work she is doing

for the University, she is also trying to be involved in other extracurricular activities such as being a secretary in IAPS and the Hellenic Physical Society as well as invigilating in local and Hellenic physics and math students competitions. She was an active member of her University's Physics Society for one year, and she has attended numerous seminars, workshops and summer school's both in Greece and abroad.



SUPPORTERS

STEERING COMMITTEE

 <p>AIP American Institute of Physics</p>	 <p>APS physics</p>	 <p>BOSCA SPUMANTE DAL 1831</p>	 <p>CIOE CHINA INTERNATIONAL OPTOELECTRONIC EXPO</p>
 <p>CJS THE CHINESE OPTICAL SOCIETY</p>	 <p>cie International Commission on Illumination Commission Internationale de l'Éclairage Internationale Beleuchtungskommission</p>	 <p>ECOP</p>	 <p>EPS</p>
 <p>EPIC European Photonics Industry Consortium</p>	 <p>HAWAIIAN EYE FOUNDATION</p>	 <p>IALD</p>	 <p>ICTP</p>
 <p>IEEE Photonics Society</p>	 <p>IES Illuminating ENGINEERING SOCIETY</p>	 <p>Light Science & Applications</p>	 <p>lightsources.org</p>
 <p>OSA The Optical Society</p>	 <p>SESAME</p>	 <p>signify</p>	 <p>SPIE.</p>
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