INTERNATIONAL DAY OF LIGHT 2018
INAUGURATION CEREMONY, UNESCO, PARIS, 16 MAY 2018

JOURNÉE INTERNATIONALE DE LA LUMIÈRE 2018
CÉREMONIE D ’INAUGURATION, UNESCO, PARIS, 16 MAI 2018

United Nations Educational, Scientific and Cultural Organization
International Day of Light
Organisation des Nations Unies pour l'éducation, la science et la culture
Journée internationale de la lumière
This first International Day of Light celebrates the role that light plays in the lives of the citizens of the world.

Building on the successes of the International Year of Light (2015), this global initiative will provide an annual event for the continued appreciation of light and the role it plays in the sciences, culture and the arts, education, and sustainable development.

From gamma rays to radio waves, the spectrum of light provides insights both far-ranging and near, from the origin of the Universe to technologies that have shaped our society, in fields as diverse as medicine, agriculture, energy, and optics for cultural heritage protection.

Light has had significant impact on the visual and performing arts, literature, and human thinking. Studying the connection between light and culture provides valuable insights into the interactions between science, art, and the humanities, and brings greater understanding and appreciation of our cultural heritage. Studying light can inspire science education among young people, as well as stimulating entrepreneurship.

Light can also aid in achieving the Sustainable Development Goals set in the United Nations 2030 Agenda for Sustainable Development. Access to light and energy infrastructure can improve quality of life in the developing world, whilst fibre optics connect the citizens of the world through the Internet. These networks also support accountability to ensure peace, justice, and stronger legal institutions.

UNESCO is delighted to continue strengthening its collaboration with the international scientific community through the important theme of light. And, with this new International Day on the UNESCO calendar, we now have a special opportunity to do so every year.

So together, every year on May 16, let us light up the world!

Audrey Azoulay
PROGRAMME

SESSION 1 14:30 – 16:45
Moderator: Flavia Schlegel,
Assistant Director-General for Natural Sciences, UNESCO

INAUGURATION 14:30 – 14:45
OPENING MUSICAL PERFORMANCE
Katerina Mina, Soprano
Music by Linda Lamon

OFFICIAL INAUGURATION ADDRESS
Audrey Azoulay, Director-General of UNESCO

PERCEPTIONS OF LIGHT (PANEL) 14:45 – 15:00
H.E. Mr. Federico Salas Lotfe (Mexico)
H.E. Ms. Anna Bossman (Ghana)
H.E. Mr. Alexander Kuznetsov (Russian Federation)
H.E. Mr. Ibrahim Albalawi (Saudi Arabia)
Mr. Charles Kingston (New Zealand)

OVERVIEW 15:00 – 15:10
John Dudley, International Day of Light Steering Committee Chair

IMMERSIVE SHOW
(NUNO MAYA, OCUBO) 15:10 – 15:20

SCIENCE FRONTIERS 15:20 – 16:00
EXPLORING THE UNIVERSE WITH GRAVITATIONAL WAVES: FROM THE BIG BANG TO BLACK HOLES
Kip Thorne, Nobel Laureate,
California Institute of Technology

SESSION 2 17:10 – 18:15
Moderator: Ana María Cetto,
Museum of Light and National Autonomous University of Mexico

REFLECTIONS ON LIGHT 16:00 – 16:25
LIGHT AND ATOMS
Claude Cohen-Tannoudji, Nobel Laureate,
Collège de France

SESAME: A SOURCE OF LIGHT IN THE MIDDLE EAST
Khaled Toukan, Director of SESAME

LIGHT FOR CULTURE 16:25 – 16:40
IMPACT WITH LIGHT
Kari Kola,
Light Artist

ILLUMINATING MANUSCRIPTS WITH PHOTONICS
Elhadj Dogheche, Polytechnic University Haut de France

COFFEE BREAK 16:40 – 17:10

WWW.LIGHTDAY.ORG
SCIENCE POLICY (PANEL) 17:40 – 18:15

Facilitator: Ernesto Fernández Polcuch,
Chief of Section, Science Policy and Partnerships,
UNESCO

Luiz Davidovich, President of the Brazilian Academy of
Sciences

Sir Peter Gluckman, Chief Science Advisor to the Prime
Minister of New Zealand

Heide Hackmann, Executive Director of ICSU

Roberta Ramponi, President of the International
Commission of Optics and Photonics
Executive Board Member

Firmin Edouard Matoko, Assistant Director-General of
the Africa Department, UNESCO

SESSION 3 18:15 – 19:30

Moderator: Martiale Gaetan Zebaze Kana,
Chief of Section, Innovation and Capacity Building
Section, Division of Science Policy and Capacity Building,
UNESCO

EXPERIENCING THE UNIVERSE 18:15 – 18:40

LIGHT AS MESSENGER OF THE UNIVERSE
Maria Teresa Ruiz, Universidad de Chile; L’Oreal Women
in Science prize

LIGHT AND THE VISUAL EXPERIENCE
Víctor Palacio, Past President, IALD - International
Association of Lighting Designers

INTERNATIONAL COOPERATION 18:40 – 19:30

SCIENCE AND COLLABORATION OPPORTUNITIES
AT SESAME
Gihan Kamel, Beamline Scientist, SESAME

NO IMPACT WITHOUT PARTNERSHIPS; REFLECTIONS
FROM THE GLOBAL YOUNG ACADEMY
Tolu Oni, Co-Chair of the Global Young Academy

CERN AND GLOBAL SCIENCE COLLABORATION
Charlotte Warakaulle, Director for International
Relations CERN

DIALOGUE OF KNOWLEDGE BETWEEN SCIENCE
AND ART
Maria Guadalupe Ramírez Reyes
(with Angel Emir Zacarias Méndez), Profra. Obdulia
Zamora Martinez Primary School, Nuevo Leon

SESSION 4 19:30 – 22:00

Moderator: Joseph Niemela,
International Centre for Theoretical Physics
(UNESCO ICTP)

PHOTONICS SCIENCE SHOW 19:30 – 20:00

AN EXCITING AND ENTERTAINING SHOW STAGED BY
YOUNG RESEARCHERS FROM BRUSSELS PHOTONICS

CLOSING MUSICAL PERFORMANCE
Katerina Mina, Soprano
Music by Linda Lamon

NETWORKING RECEPTION 20:00 – 22:00

TOUR OF UNAM MUSEUM OF LIGHT AND
OTHER EXHIBITS
BUFFET AND RECEPTION
EXTERIOR LIGHT INSTALLATION
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 Inauguration Ceremony. Brief biographies are listed below in alphabetical order.

Claude Cohen-Tannoudji
Claude Cohen-Tannoudji is Honorary Professor of Atomic and Molecular Physics at the Collège de France in Paris. With his collaborators he has written four books on quantum mechanics, quantum electrodynamics, quantum optics, Lévy statistics and about 200 theoretical and experimental papers on various problems of atomic physics and quantum optics. He is a member of the Académie des Sciences and a foreign associate of several other Academies in the world. He has received honorary degrees from several universities. Many scientific awards have been bestowed upon him, including the Gold Medal of the Centre National de la Recherche Scientifique in 1996, and the 1997 Nobel Prize in Physics, shared with Steven Chu and William Phillips, for his work on the development of methods to cool and trap atoms with laser light.

Ernesto Fernández Polcuch
Ernesto Fernandez Polcuch is Chief of Section for Science Policy and Partnerships in the Natural Sciences Sector of UNESCO. He manages UNESCO programmes in STI Policy, Science Communication, Gender and STEM, Science Diplomacy, and Science-Policy-Society linkages, including the UNESCO Global Observatory of STI Policy Instruments CO-SPIN, the UNESCO Science Report, the L’Oréal UNESCO For Women in Science Programme, and the STEM and Gender Advancement (SAGA) Project. He was previously Senior STI Policy and Capacity Building Specialist at the UNESCO Regional Office for Science in Latin America and the Caribbean. Programme Specialist for Natural Sciences at UNESCO Windhoek, and led the Science and Technology Statistics team at the UNESCO Institute for Statistics.

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 Medaille d’Argent, and has received several honorary degrees and other distinctions.

Gihan Kamel
Gihan Kamel is the Infrared Beamline Scientist at SESAME (Synchrotron-light for Experimental Science and Applications in the Middle East), on leave from the Physics Department, Faculty of Science at Helwan University in Egypt, where she is also a lecturer of physics. She obtained her PhD degree in 2011 from the University of Rome, La Sapienza, Italy. She collaborates in various national and international research projects utilizing advanced and complementary approaches in life and materials sciences. She represented Egypt in SESAME Users’ Committee during the period 2012-2015. Her activities include organizing workshops and scientific events to increase the awareness of different topics linking science to society and industry, particularly of what concerns Synchrotron light applications.
Kari Kola
Kari Kola is a lighting designer and a light artist. Large outdoor installations are his greatest passion and his main expertise, including a 360-degrees installation lighting up the exterior of the UNESCO Fontenoy building during the International Year of Light Opening Ceremony in 2015. He has spent over 15 years of his life to test new ways to use technical possibilities to realize imagination and implement it all in massive scale productions.

Firmin Edouard Matoko
Holder of a diploma in Political Sciences and International Relations from the University Cesare Alfieri (Florence, Italy) and a diploma in Hautes Etudes internationales et Diplomates de Paris. Mr. Matoko currently is the Assistant Director-General of the Africa Department of UNESCO. Prior, he was Director of the UNESCO Liaison Office with the African Union (AU) and the United Nations Economic Commission for Africa (UNECA), as well as UNESCO Representative to Ethiopia. He served as Director in Quito and Bamako UNESCO Cluster Offices and as Chief of the Education for Peace. Human Rights and Democracy Section, in the Division for the Promotion of Quality education of the Education Sector as well as Senior Programme Specialist of the Culture of peace National Programmes Unit in UNESCO’s Paris headquarters.

Nuno Maya
Nuno Maya is the founder partner and creative director at OCUBO studio specialized in light art, new media, interactive and cultural projects. He received numerous awards for his work in visual arts and is founder and director of LUMINA Light Festival Cascas, Portugal, considered by The Guardian as a TOP 10 European Light Festival. He curated, produced and presented more than 80 international new media and visual artworks of artists from Europe and abroad. He has art directed and produced author video mapping projects for several cultural festivals and UNESCO World Heritage Sites worldwide.

Tolu Oni
Tolu Oni is an Associate Professor in Public Health at the University of Cape Town, South Africa. She is a public health physician/urban epidemiologist and leads the Research Initiative for Cities Health and Equity (RICHE), a transdisciplinary urban health research collaborative providing evidence to support implementation of healthy public policies. She has published over 40 manuscripts in international journals, and has given presentations at international academic and non-academic meetings including the United Nations High Level Political Forum for Sustainable Development, New York, and the World Economic Forum (WEF) Annual Meeting, Davos 2018. She is also a 2015 NEF Fellow, Fellow of the WEF Global Future Council on Health/Healthcare, Fellow of the Stellenbosch Institute for Advanced Study, and is co-Chair of the Global Young Academy.

Victor Palacio
Victor Palacio is a lighting designer from Mexico City, founder of ideas en luz an architectural lighting design firm. His experience in lighting spans 25 years in projects for National museums, high end residences, corporate offices, shopping centers, urban areas, institutions and historic monuments. Both in his practice and his contributions as advocate for the profession, he studies the positive experiences created by quality lighting, particularly those that impact human well-being. As member of the IALD, Victor fosters the collaboration of lighting design experts in multi-disciplinary teams to leverage the power of light in the benefit of people.

Robert Ramponi
Robert Ramponi is the director of the Institute for Photonics and Nanotechnologies of the Italian National Research Council and a 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 Technology Platform 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.

Maria Guadalupe Ramírez Reyes (with Angel Emir Zacarias Méndez)
Maria Guadalupe Ramírez Reyes is a teacher from the Profra. Obdulia Zamora Martinez primary school in Monterrey, Nuevo León, Mexico. This school is a member of the UNESCO Associated Schools Network and has been very active in promoting educational initiatives exploring the dialogue of knowledge between science and art. Angel Emir Zacarias Méndez is a student who was a participant in this project.

Maria Teresa Ruiz
Maria Teresa Ruiz is a full professor at Universidad de Chile, Director of the Center for Astrophysics and Associated Technologies (CATa), and President of the Chilean Academy of Science. She has a PhD in Astrophysical Sciences from Princeton University (USA) and was a postdoc at Trieste Observatory, Italy. She received the Chilean National Award for Science in 1997 and is a Honorary Member of the American Astronomical Society. In 2017 she received the L’Oreal-UNESCO For Women in Science Award. She is author of more than 200 scientific publications and six astronomy books for children and general public.

Kip Thorne
Kip Thorne is currently the Feynman Professor of Theoretical Physics, Emeritus at the California Institute of Technology (Caltech). From 1967 to 2009, he led a Caltech research group working in relativistic astrophysics and gravitational physics, with emphasis on relativistic stars, black holes, and especially gravitational waves. He co-authored the textbooks Gravitation (1972) and Modern Classical Physics (2017), and was sole author of Black Holes and Time Warps: Einstein’s Outrageous Legacy. Thorne was cofounder (with Rainer Weiss and Ronald Drever) of the LIGO (Laser Interferometer Gravitational Wave Observatory) Project. LIGO made the breakthrough discovery of gravitational waves arriving at Earth from the distant universe in 2015. For his contributions to LIGO and to gravitational wave research, Thorne has shared the 2017 Nobel Prize in Physics, and other major awards.
Khaled Toukan
Khaled Toukan is regarded as among the most important academic and scientific figures in Jordan. Toukan obtained his BE in Electrical Engineering from the American University of Beirut, MSc in Nuclear Engineering from the University of Michigan and his PhD in Nuclear Engineering from the Massachusetts Institute of Technology in USA. He was appointed as the President of Al-Balqa Applied University, Minister of Education, Minister of Higher Education and Minister of Energy. Dr. Toukan served as the Chair of the Board of Trustees of the University of Jordan. Currently Dr. Toukan is the Chairman of Jordan Atomic Energy Commission and Director of the Synchrotron-light for Experimental Science and Applications in the Middle East (SESAME) Center. He has also served as a member of eIAEA’s SACNE Advisory Group since 2016. Dr. Toukan holds several distinguished international and national medals of honour and is the winner of several awards and prizes. He has also been selected as one of Nature’s 10 people who mattered for 2017.

Tuan Vo-Dinh
Tuan Vo-Dinh is Director of the Fitzpatrick Institute for Photonics. R. Eugene and Susie E. Goodson Distinguished Professor of Biomedical Engineering and Professor of Chemistry at Duke University. He was born in Vietnam where he completed high school education and studied in Europe where he received a PhD in physical chemistry from ETH (Swiss Federal Institute of Technology) in Zurich, Switzerland. Before joining Duke, he was Director of the Center for Advanced Biomedical Photonics, and a Corporate Fellow, one of the highest honors for distinguished scientists at the Oak Ridge National Laboratory. His research involves the development of advanced photonics technologies for protecting the environment and improvement of human health.

Harry Verhaar
Harry Verhaar is Head of Global Public & Government Affairs for Signify. He is an active member of a number of partnership and stakeholder networks, including The Climate Group, Regions20 and the World Green Building Council and is a member of the Advisory Board of the Global Cities Institute and of the Environnement Science Business Policy Committee. He is responsible for Signify’s relationship management with the UN and the World Bank and is a founding member of UNEP’s Enlighten program and the SE4All’s Global Energy Efficiency Accelerator Platform. He is chairman of the European Alliance to Save Energy and is president of the Global Off-Grid Lighting Association.

Charlotte Warakaulle
Charlotte Warakaulle is the Director for International Relations at CERN. Before joining CERN in 2016, she served in a variety of posts at the United Nations, from associate speechwriter to chief of the Political Affairs and Partnerships Section at the United Nations Office at Geneva and chief of the United Nations Library in Geneva. Prior to her work with the United Nations, she held a Carlsberg Visiting Research Fellowship at Lucy Cavendish College at the University of Cambridge. She gained her MPhil in international relations at the University of Cambridge (Pembroke College) and also holds an MA in history (cand. mag.) from the University of Copenhagen.

MUSEUM OF LIGHT EXHIBITION
The Museum of Light (Spanish Museo de la Luz) is a science museum dedicated to the phenomena of light, located in the Historical Center of Mexico City and administered by the National Autonomous University of Mexico (UNAM). In celebration of the International Day of Light, the Museum of Light has generously furnished a selection of their holdings for exhibition in the Salle Miro of UNESCO, to illustrate the beauty of light and the many ways that it impacts humanity.

VIRTUAL REALITY EXHIBITION
Virtual, Augmented and Mixed Reality (VR, AR and MR) are technologies that are revolutionizing the way we interact, socialize, communicate, learn, teach, get entertained, and become more productive in our professional and private lives. They offer new opportunities for education, innovation and appreciation of art and culture. SPIE will offer to all International Day of Light attendees the chance to try out state of the art VR and AR headsets and to personally experience the potential of this revolutionary light-based technology.

DISAPPEARING IN THE DARK
This short documentary by Inside Science follows the Paris-based artist team known as Nonotak as they plan and build an immersive, sensory art installation with lasers and fiber optics that will open May 16 at the Washington D.C. gallery Artechouse. An associated outreach project co-sponsored by three organizations on the IDL steering committee – the American Institute of Physics (AIP), the American Physical Society (APS) and The Optical Society (OSA) – will uncover for viewers the underlying science of the installation pieces.
ART EXHIBITS AND INSTALLATIONS

IMMERSIVE LIGHT SHOW - A BRIEF HISTORY OF LIGHT

Nuno Maya | OCUBO
For this immersive light art installation, OCUBO will install state of the art technology to project the artistic content of Maya – an engaging and visually rich narrative. The artistic concept emerges from the idea to explore the interior of UNESCO’s Room I auditorium, and to redesign its architecture using light in order to illustrate the richness of the ideas that pass through there every day. The installation will create a contemplative moment where, surrounded by light, forms and colours, the audience will be immersed in a spectacular audio-visual experience.

LIGHT PAINTING EXHIBITION

Light Painting World Alliance and Ligue Francophone de Light Painting
In this exhibition, you are invited to witness the manifestation of light through the science, technologies and art of our time. Artists from all over the globe are showing their creations on digital displays. Their creative minds are showing that light can be sculpted, bent, used like paint, giving us a peek into the imagination and its stunning possibilities. Imagination is the beginning of everything.

DAY AND NIGHT IN PARIS

Kari Kola
Light Artist Kari Kola has created a work of light art called Day and Night in Paris in honor of the first International Day of Light. The themes of the artwork are light and darkness, day and night, the sun and the moon. The artwork will cover the Fontenoy building of UNESCO headquarters and the Symbolic Globe in front of it.

PYRAMIDION

Milène Guermont
PYRAMIDION is an interactive light sculpture by the artist Milène Guermont. This modern “pyramid” is the continuity of her monumental artwork PHARES born at the Place de la Concorde in Paris. You can interact with PYRAMIDION via its cardiac sensor or at distance through www.youlightme.com.
SUPPORTERS

The International Day of Light 2018 would not be possible without our many supporters and partners. We are extremely grateful for their support and commitment to the ideals of our mission during 2018.

PERFORMERS

PHOTONICS SCIENCE SHOW
Brussels Photonics Team (B-PHOT) of Vrije Universiteit Brussel (VUB)

Light-based (or photonic) technologies have underpinned remarkable societal progress in areas such as healthcare, education, energy and sustainable development. One of the most revolutionary photonic technologies is the optical fibre, a near-invisible strand of glass that is the backbone of the world’s communication networks. However, although most people have heard of optical fibres, very few actually know how they work and what they can be used for. In this 30 minute Photonics Science Show, young researchers and students from Vrije Universiteit Brussels B-PHOT will unravel and explain the magic of optical fibres and their many uses and applications. Vibrant and entertaining on-stage presentations will be accompanied by an accessible and educational narrative that will explain both the history of this exciting and fascinating field and its importance for the future.

SOPRANO

Cypriot born British soprano Katerina Mina will be performing two pieces by Manchester UK songwriter Linda Lamon. Look to the Universe is a melody based on the classical guitar piece Romance with added lyrics that were inspired by the late Professor Stephen Hawking’s ‘Look To The Stars’ quote. It encourages humanity to look to the cosmos for a sustainable future, with hope being the catalyst. The Rainbow of Light Anthem asks whether the answer to the mysteries of the universe could be in the spectrum of the rainbow. It was an official song during the International Year of Light 2015.