







PRIZES AND AWARDS CEREMONY



CLEO®/EUROPE-EQEC 2019 MUNICH ICM - INTERNATIONAL CONGRESS CENTRE MUNICH, GERMANY <u>TUESDAY 25 JUNE 2019 = 10:30 > 12</u>:30 = ROOM 1, ICM CENTER

EPS QUANTUM ELECTRONICS PRIZES

EPS Quantum Electronics Prize in the category "Fundamental Aspects"



Anne L'Huillier, Lund University, Sweden

The 2019 prize for fundamental aspects of Quantum Electronics and Optics is awarded to Anne L'Huillier in recognition of her pioneering experimental and theoretical contributions to attosecond pulse trains using high harmonics, which form the basis of today's successful field of attosecond science.

Anne L'Huillier is a Swedish/French researcher in attosecond science. She was born in Paris in 1958, studied at the Ecole Normale Supérieure in mathematics and physics and defended her doctorat d'état ès Sciences Physiques de l'Université Paris VI, in 1986. She was then permanently employed as researcher at the Commissariat à l'Energie Atomique, in Saclay, France until 1995. She was postdoctoral researcher at Chalmers Institute of Technology, Gothenburg (1986), University of Southern California (1988), and visiting scientist at the Lawrence Livermore National Laboratory (1993). In 1995, she moved to Lund University, Sweden and became full professor in 1997. She was elected to the Royal Swedish Academy of Sciences in 2004.

Her research, which includes both theory and experiment, deals with the interaction between atoms and intense laser light, and in particular the generation of high-order harmonics of the laser light, which, in the time domain, consist of trains of attosecond pulses. Currently, her research group works on attosecond source development and optimization as well as on applications, for example, concerning the measurement of photoionization dynamics in atomic systems.

The European Physical Society is delighted to announce the 2019 winners of its senior prizes in Quantum Electronics and Optics. These prizes are awarded only once every two years, and recognize the very highest level of achievements in fundamental and applied research. The awards will be presented in a special plenary ceremony on Tuesday 25 June during CLEO[®]/Europe-EQEC 2019, held during the World of Photonics Congress in Munich, Germany.

EPS Quantum Electronics Prize in the category "Applied Aspects"



Govind P. Agrawal, University of Rochester, USA

The 2019 prize for applied aspects of Quantum Electronics and Optics is awarded to Govind P. Agrawal for pioneering and groundbreaking research that underpins a wide range of current photonic technologies in the fields of semiconductor lasers, nonlinear fiber optics and optical communication systems.

Govind P. Agrawal is an expert on nonlinear optics, silicon photonics, and optical communications. He received the M.S. and Ph.D. degrees from the Indian Institute of Technology, New Delhi in 1971 and 1974 respectively. After holding positions at the Ecole Polytechnique, France, the City University of New York, and AT&T Bell Laboratories, Agrawal joined in 1989 the faculty of the Institute of Optics at University of Rochester, where he is currently James C. Wyant Professor of Optics. He is an author or coauthor of more than 450 research papers, and eight books. His books on Nonlinear Fiber Optics (Academic Press, 6th ed., 2019) and Fiber-Optic Communication Systems (Wiley, 4th ed., 2010) are used worldwide for research and teaching. Since January 2014, Agrawal serves as the Editor-in-Chief of the OSA journal Advances in Optics and Photonics.

Agrawal is a Fellow of IEEE and OSA (The Optical Society) and a Life Fellow of the Optical Society of India. He is also a member of the European Physical Society. In 2012, IEEE Photonics Society honoured him with its Quantum Electronics Award. He received in 2013 Riker University Award for Excellence in Graduate Teaching. Agrawal was given the Esther Hoffman Beller Medal in 2015. He is also the recipient of the 2019 Max Born Award of the OSA.

FRESNEL PRIZES

2019 Fresnel Prize in the category "Fundamental Aspects"



Carlos Hernández-García, University of Salamanca, Spain

The 2019 Fresnel prize for fundamental aspects is awarded to Carlos Hernández-García for pioneering contributions to the theory of high harmonic generation, uncovering new regimes of attosecond and zeptosecond waveforms and designer beams with orbital and spin angular momentum.

Carlos Hernández-García is Senior Researcher (Ramón y Cajal fellow) in the Research Group in Photonics and Laser Applications (ALF-USAL) at University of Salamanca (Spain). He received his PhD in Physics in 2013 at the University of Salamanca (Spain). He was a Marie Curie postdoc fellow, and worked for two years as Research Associate at JILA, University of Colorado at Boulder (USA).

His main research line is the development of theoretical models to understand and propose the generation of structured ultrafast laser pulses with designed angular momentum (both spin and orbital) properties, conveying strong field physics, attosecond science and high harmonic generation. He has published >40 peer-review articles, including several publications in Science, Nature Photonics or Phys. Rev. Lett. journals. In addition to the senior prizes, two additional EPS/QEOD prizes are awarded on a biennial basis for outstanding contributions to quantum and optics made by young scientists before the age of 35. There is one prize for fundamental aspects and one prize for applied aspects.



2019 Fresnel Prize in the category "Applied Aspects"



Matteo Lucchini, Politecnico di Milano, Italy

The 2019 Fresnel prize for applied aspects is awarded to Matteo Lucchini for outstanding contributions in the field of attosecond science. In particular for seminal contribution in the investigation of attosecond electron dynamics in solid state materials.



Matteo Lucchini graduated from the Politecnico di Milano in 2009 and obtained a PhD in Physics at the same institute in 2012 with a thesis on the development of new techniques for the generation of single attosecond pulses and their application to molecular dynamics. He then joined the Physics Department at ETH Zurich where he was awarded an ETH Zurich postdoctoral fellowship and started to investigate attosecond dynamics in solids with photo-emission and photo-absorption spectroscopy. At present he is Assistant Professor at the Physics Department of Politecnico di Milano where he is in charge of the scientific activities in the Attosecond Science Laboratories. His research interests include the study of sub-femtosecond electron dynamics in atoms, molecules and solids.

QEOD THESIS PRIZES

2019 QEOD Thesis Prize in the category "Fundamental Aspects"



Ileana-Cristina Benea-Chelmus, Harvard University, Cambridge, USA

The 2019 Thesis prize for fundamental aspects is awarded to Ileana-Cristina Benea-Chelmus for Terahertz quantum optics with ultra-short pulses.



Ileana-Cristina Benea-Chelmus received her Doctor of Sciences in Physics from the Swiss Federal Institute of Technology in Zurich (ETHZ), Switzerland in 2018. She worked in the area of terahertz science and technology and performed the first direct measurements on quantum states of light in this frequency range. On a parallel line, she developed ultrasensitive detectors that exploit miniaturization. She is currently a postdoctoral associate and a research fellow of the Swiss National Science Foundation at Harvard University. Here, she develops on-chip optical devices for the manipulation of light and its use in fundamental sciences and industry. She is involved in mentoring work and outreach activities at the faculty and university level. Since 2007 EPS/QEOD Thesis prizes are also awarded on a biennial basis for the best-nominated PhD thesis in the area of quantum electronics and optics submitted in the two years prior to the CLEO[®]/Europe-EQEC 2019 meeting. These prizes will be awarded for fundamental and for applied aspects.

2019 QEOD Thesis Prize in the category "Fundamental Aspects"



Fabian Langer, Lund University, Sweden

The 2019 Thesis prize for fundamental aspects is awarded to Fabian Langer **for Lightwave-driven quasiparticle acceleration**.



Fabian Langer was born on the 17th of March 1990 in Bamberg, Germany. He studied physics in the joint elite study program "Physics Advanced" of the Universities of Erlangen-Nuremberg and Regensburg (Germany). While completing his Bachelor's thesis in low-temperature physics and superconductivity at the chair of Paul Müller in Erlangen, he went on to Regensburg to work on his Master's and PhD in the group of Rupert Huber. Here, he learned about ultrafast quantum physics of condensed matter systems and started to work on lightwave electronics. Fabian Langer received his PhD in March 2018. Since June 2018, he is a post-doctoral fellow at Lund University, Sweden, jointly in the groups of Anne L'Huillier and Anders Mikkelsen.

QEOD THESIS PRIZES

EPS QEOD Thesis Prize in the category "Applied Aspects"



Armin Feist, University of Göttingen, Germany

The 2019 Thesis prize for applied aspects is awarded to Armin Feist for next-generation ultrafast transmission electron microscopy – Development and applications.

Armin Feist is a postdoctoral research associate in the group of Claus Ropers at the University of Göttingen, Germany. Here, he received his Ph.D. in June 2018, working on the development and application of ultrafast transmission electron microscopy (UTEM) using coherent electron pulses. He studied physics in Leipzig, Leeds and Göttingen, and his B.Sc. and M.Sc. theses focused on angle-resolved fluorescence in photonic crystals and laser-triggered field ion microscopy, respectively. In his current research activities, he explores new fundamental and instrumental capabilities in UTEM, including the study of ultrafast nanoscale dynamics and the coherent optical tailoring of free-electron beams.

EPS QEOD Thesis Prize in the category "Applied Aspects"



Mathieu Massicotte, University of Sherbrooke, Canada

The 2019 Thesis prize for applied aspects is awarded to Mathieu Massicote for ultrafast optoelectronics in 2D materials and their heterostructures.



Mathieu Massicotte is a postdoctoral research fellow at the Institut Quantique of the University of Sherbrooke in Canada. His research interests lie at the intersection of experimental condensed matter physics and photonics, with a focus on optoelectronic nanodevices based on novel 2D materials. He completed his PhD in Photonics in 2017 at ICFO – The Institute of Photonic Sciences in Barcelona, Spain. He previously obtained his bachelor's degree in Engineering Physics from Polytechnique Montreal and his master's degree in Physics from McGill University.

PREVIOUS RECIPIENTS

EPS Quantum Electronics Prizes

2017	Fundamental aspects Applied aspects	
2015	Fundamental aspects Applied aspects	,
2013	Fundamental aspects Applied aspects	,
2011	Fundamental aspects Applied aspects	
2009	Fundamental aspects Applied aspects	
2007	Fundamental aspects Applied aspects	5
2005	Fundamental aspects Applied aspects	Ignacio Cirac Gerd Leuchs

2003	Fundamental aspects Applied aspects	
2002	Fundamental aspects Applied aspects	5
2001	Fundamental aspects Applied aspects	Theodor W. Hänsch Algis Petras Piskarskas
2000	Fundamental aspects Applied aspects	
1998	Fundamental aspects Applied aspects	
1996	Fundamental aspects Applied aspects	Claude Cohen-Tannoudji Sune Svanberg

EPS Thesis Prizes

2017	Fundamental aspects Fundamental aspects	Bas Jorrit Hensen Marissa Giustina
2015	Fundamental aspects Fundamental aspects	Tim Langen Søren Raza
2013	Fundamental aspects Fundamental aspects	Pascal Del'Haye Thomas Monz
2011	Fundamental aspects Fundamental aspects Fundamental aspects	Simon Gröblacher Maiken H. Mikkelsen Albert Schliesser
2009	Fundamental aspects Fundamental aspects	Fernando G.S.L. Brando Alexei Ourjoumtsev
2007	Fundamental aspects Fundamental aspects	Axel Griesmaier Jacob Sherson

EPS Fresnel Prizes

2017 2015	Fundamental aspects Applied aspects Fundamental aspects Applied aspects	Lu Chao-Yang Cédric Thaury Tim Hugo Taminiau Daniele Brida
2013	Fundamental aspects Applied aspects	Yu-Ao Chen Gerasimos Konstantatos
2011	Fundamental aspects Applied aspects	Philip Walther Christelle Monat
2009	Fundamental aspects Applied aspects	Tobias Kippenberg Romain Quidant
2007	Fundamental aspects Applied aspects	Markus Aspelmeyer Jérôme Faure
2005	Fundamental aspects Applied aspects	Jian-Wei Pan Fetah Benabid
2003	Fundamental aspects Applied aspects	Kjeld Eikema Stephano Longhi
2002	Fundamental aspects Applied aspects	Carlo Sitori Rüdiger Paschotta
2001	Fundamental aspects Applied aspects	Konrad Banaszek Ronald Holzwarth
2000	Fundamental aspects Applied aspects	Fabien Bretenaker Arnaud Brignon

Applied aspects Achim Woessner Gustavo Villares Tobias Herr Pete Shadbolt Florian Kaiser Clara Saraceno Alberto Politi Pavel Ginzburg Alex Hayat Deran Maas John C. Travers Giuseppe Della Valle Raul Vicente Zafra

OTHER AWARDS AND PRIZES

EPS-QEOD and EPS Young Minds 2019 Travel Grant Student Awards

The selection committee composed by EPS-QEOD board members and EPS Young Minds members are happy to announce the names of the ten laureates and the title of their contribution to the conference:

Emil Vosmar Denning,

A nuclear quantum memory enabled by strain (Wednesday, EA/EB-2.1, 16:00-16:15, room 14b ICM)

Vinícius C. Ferreira,

Thermal analysis of new ionic liquids by EZ-scan technique (Sunday, CE-P.33, 13:00-14:00, Hall B0)

Xin Jin,

Modifying the optical phonon response of nanocrystals inside Terahertz plasmonic nanocavities (Thursday, EG-6.3, 16:30-16:45, room 14a ICM)

Aleksandrs Leitis,

All-dielectric High-Q metasurfaces for infrared absorption spectroscopy applications (Sunday, CH-4.2, 18:30-18:45, room 1 Hall A1)

Ziqi Li,

Generation of multi-gigahertz laser pulses in optical lattice-like cladding waveguides with PdSe₂ as a new saturable absorber (Sunday, CJ-P.45, 13:00-14:00, Hall B0)

The Quantum Electronics and Optics Division and Young Minds Committee of the European Physical Society remit travel student grants to PhD students wishing to attend CLEO®/Europe-EQEC 2019.



Paulius Mackonis,

Shaping of picosecond pump pulses by SHG depletion for wide-bandwidth TW-class NOPCPA (Wednesday, CA-11.4, 16:45-17:00, room 13a ICM)

Ahmed Othman,

Combining MEMS FTIR spectrometer and widened-spectrum mode-locked fiber laser for gas-sensing (Monday, CH-P.12, 13:15-14:15, Hall B0)

Dmitrii Pushkarev,

Superfilament spatial dynamics and energy deposition under various focusing conditions (Tuesday, EE-4.5, 15:00-15:15, room 4b ICM)

Jérémy Raskop,

Single collective excitation of atoms evanescently coupled to a nanoscale waveguide (Monday, EA-2.3, 16:45-17:00, room 4a ICM)

Varun Sharma,

Siptical vortex generation from an anti-resonant-ring picosecond optical parametric oscillator (Wednesday, CD-8.5, 17:15-17:30, room 13b ICM)

OSA AWARDS AND HONOURS

Herbert Walther Award



The award commemorates Max Planck Institute of Quantum Physics Professor Herbert Walther's ground-breaking innovations in quantum optics and atomic physics as well as other wideranging contributions to the scientific community. The Herbert Walther Award, administered jointly by OSA and DPG, recognizes distinguished contributions in quantum optics and atomic physics as well as leadership in the international scientific community.



Peter Knight

Kavli Royal Society International Centre, United Kingdom

The Optical Society (OSA) and the Deutsche Physikalische Gesellschaft (DPG) have named Sir Professor Peter Knight the 2019 recipient of the Herbert Walther Award. Knight is recognized **for remarkable and varied contributions to quantum optics and quantum information science, ranging from foundations to applications**. Knight will present an invited talk in the CLEO[®]/Europe-EQEC program, "The journey from manipulating single quantum systems to quantum information processing" on Tuesday 25 June from 14:00 to 14:30, room 1 ICM.

Knight, Senior Fellow in Residence, Kavli Royal Society International Centre, U.K., is a physicist renowned for pioneering research into quantum optics. His 40 years of work on the non-classical properties of light and the theoretical underpinnings of quantum computing have established him as an influential figure within the wider U.K. physics community.

Knight is also professor and senior research investigator in the physics department at Imperial College, and chair of the Quantum Metrology Institute, National Physical Laboratory, both in the U.K. He retired in September 2010 as Deputy Rector, Research, at Imperial College where he was responsible for research strategy.

After receiving his doctorate at Sussex University, Knight was a Research Associate in the Department of Physics and Astronomy at the University of Rochester and the Physics Department and SLAC at Stanford University. He joined Imperial College in 1979 first as a Lecturer, becoming a Professor in 1988.

Knight, a dedicated volunteer, has served in many roles, including OSA president in 2004, Institute of Physics President (2011-2013), chair of the EPS Quantum Electronics and Optics Division, and editor of both the Journal of Modern Optics and Contemporary Physics. He is a Thomson-ISI Highly Cited Author.

Knight has won numerous awards including the OSA Frederic Ives Medal/Jarus W. Quinn Prize, the Thomas Young Medal and the Glazebrook Medal of the Institute of Physics, and the Royal Medal of the Royal Society. He was named a U.K. Knights Bachelor on the 2005 Queen's Birthday Honours List, for his work in optical physics. The Optical Society (OSA) will recognize newly elected Fellow Members, present the 2019 Herbert Walther Award and the 2019 Emmett N. Leith Medal during the Awards Ceremony.

OSA Fellow Members

2019 marks the 60th anniversary of the first class of OSA Fellows. At its April 1959 meeting, the OSA Board of Directors elevated 115 members to the rank of Fellow — a first for the Society. To-date over 2,400 members have joined the ranks of OSA Fellow. These members have served with distinction in the advancement of optics and photonics through distinguished contributions to education, research, engineering, business and society.

The number of Fellows is limited by the Society's bylaws to be no more than 10% of the total OSA Membership and the number elected each year is limited to approximately 0.5% of the current membership total. 16 Fellows requested their recognition at CLEO/Europe – EQEC 2019.

Saša Bajt, DESY, Germany Daniele Faccio, University of Glasgow, United Kingdom Lukas Gallmann, ETH Zurich, Switzerland Mircea Guina, Tampere University, Finland **Rupert Huber**, University of Regensburg, Germany Animesh Jha, University of Leeds, United Kingdom **Zhongping Lee**, University of Massachusetts Boston, United States **Uli Lemmer**, Karlsruhe Institute of Technology, Germany Ion N. Mihailescu, National Institute for Laser, Plasma, and Radiation Physics, Romania **Roberto Osellame**, CNR– Istituto di Fotonica e Nanotecnologie, Italy Ekmel Ozbay, Bilkent Universitesi, Turkey Francesco Saverio Pavone, University of Florence, Italy Concita Sibilia, Università degli Studi di Roma La Sapienza, Italy Christine Silberhorn, Universität Paderborn, Germany Adrian Stern, Ben Gurion University of the Negev, Israel Yan Zhang, Capital Normal University, China

OSA AWARDS AND HONOURS

2019 Emmett N. Leith Medal

The Medal, established in 2006 in honour of Emmett N. Leith, a world-renowned scientist in holography and optical information processing, recognizes seminal contributions to the field of optical information processing, including sensing and analog signal processing as well as computing (classical and quantum) and optical storage.



Wolfgang Osten Universität Stuttgart, Germany

The Optical Society (OSA) will present the 2019 Emmett N. Leith Medal to Wolfgang Osten for extending the limits of optical metrology by integrating digital image processing with modern optical measurement techniques.

Prof. Wolfgang Osten received the MSc/Diploma in Physics from the Friedrich-Schiller-University Jena in 1979. From 1979 to 1984 he was a member of the Institute of Mechanics in Berlin working in the field of experimental stress analysis and optical metrology. In 1983 he received the PhD degree from the Martin-Luther-University Halle-Wittenberg for his thesis in the field of holographic interferometry. From 1984 to 1991 he was employed at the Central Institute of Cybernetics and Information Processes ZKI in Berlin making investigations in digital image processing and computer vision. Between 1988 and 1991 he was heading the Institute for Digital Image Processing at the ZKI. In 1991 he joined the Bremen Institute of Applied Beam Technology (BIAS) to establish and to direct the Department Optical 3D-Metrology till 2002.

Since September 2002 he has been a full professor at the University of Stuttgart and director of the Institute for Applied Optics. From 2006 till 2010 he was the vice rector for research and technology transfer of the Stuttgart University where he is currently an elected member of the university council. His research work is focused on new concepts for industrial inspection and metrology by combining modern principles of optical metrology, sensor technology and image processing. Special attention is directed to the development of resolution-enhanced technologies for the investigation of micro and nano structures.

Wolfgang Osten is fellow of OSA, SPIE, EOS, SEM, and senior member of IEEE. He is an Honorary Professor of the Shenzhen University, China, an Honorary Doctor of the University of Technology of Ilmenau, Germany, the 2011 recipient of the SPIE's Dennis Gabor Award, the 2018 recipient of the Rudolf Kingslake Medal of the SPIE, and the 2019 recipient of the SPIE Chandra Vikram Award.

2019 Advocate of Optics

The Advocate of Optics is an annual recognition by the Public Policy Council of The Optical Society. Each year, the council evaluates and selects an outstanding public official from any country who demonstrates leadership and support for the advancement of optics and photonics. The recipient is evaluated on criteria such as his/her enthusiasm for science and science policy, level of familiarity with optics and photonics, level of interaction with OSA and our members in the past year, and record of consistent support of science, optics and photonics.



Aram V. Papoyan

Institute for Physical Research of the National Academy of Sciences of Armenia, Ashtarak, Armenia

The Optical Society (OSA) will recognize Aram V. Papoyan, Director of the Institute for Physical Research of the National Academy of Sciences of Armenia as the 2019 Advocate of Optics for his leadership in the integration of the Institute for Physical Research into the European Research Area.

Aram V. Papoyan received his Ph.D. from Yerevan State University in radiophysics. His research is dedicated to laser physics, atomic physics, and quantum and non-linear optics.

Prof. Papoyan's efforts have resulted in the integration of the Institute for Physical Research into the European Research Area (ERA). ERA is a system of scientific research programs which connects scientific resources across the European Union by focusing on multinational cooperation in medical, environmental, industrial, and socioeconomic research. Armenian integration into ERA through the Institute of Physical Research is the product of several years of collaborative development of a framework of cooperation between Armenia and European research and innovation organizations, which was especially difficult due to the geographical distance between Armenia and Europe. The integration provides collaboration mechanisms in quantum information science, atomic and matter wave physics, and scintillating Materials, all areas directly funded by programs created by the European Union/European Commission. As a result, Armenian researchers and young professionals have access to ERA funding to support and foster research in these areas.

OSA PAST RECIPIENTS

Walther Award

2018	Gerd Leuchs	2013	H. Jeff Kimble
2017	Randall Hulet	2012	Alain Aspect
2016	Peter A. Zoller	2011	Marlan O. Scully
2015	Peter E. Toschek	2010	Serge Haroche
2014	Massimo Inguscio	2009	David J. Wineland

Leith Medal

2018	Asher Albert Friesem	2012	Demetri Psaltis
2017	Jumpei Tsujiuchi	2011	Jean-Pierre Huignard
2016	Francis T. S. Yu	2010	Juris Upatnieks
2015	Yeshaiahu Fainman	2009	Joseph W. Goodman
2014	Adam Kozma	2008	Adolf W. Lohmann
2013	James R. Fienup		

Advocate of Optics Recognition

2018	Carol Monaghan (UK)	2011	Senator Stephen Conroy (Australia)
2017	Dr. France Córdova (US)	2010	Rep. Gabrielle Giffords (US)
2016	Dr. John Holdren (US)	2009	Rep. Rush Holt (US)
2015	Rep. Tom Reed (US)	2008	Viviane Reding and Thierry Van der Pyl
2014	Isao Sugino (Japan)		(Brussels, Belgium)
2013	Secretary of Energy Steven Chu (US)	2007	Sen. Jeff Bingaman (US)
2012	Neelie Kroes and Antonio Tajani (Nether-	2006	Sen. Christopher Bond (US)
	lands and Italy)		

C17 AWARDS

IUPAP Young Scientist Prizes in Laser Physics and Photonics

IUPAP Young Scientist Prizes (YSP) will be remitted during the CLEO[®]/Europe-EQEC 2019 Award Ceremony to take place on Tuesday morning 25 June 2019.

Commission 17 (C17) on "Laser Physics and Photonics" of the International Union of Pure and Applied Physics (IUPAP) chaired by Tsuneyuki Ozaki, INRS-EMT, Montreal, Canada, is happy to announce the remittance of its 2019 prizes. C17 commission awards these prizes every two years to excellent young researchers in laser physics and photonics in recognition of their outstanding contribution.

C17 is pleased to announce the award of IUPAP Young Scientist Prizes in Laser Physics and Photonics to the below recipients in recognition of their outstanding contribution to the areas of physics within the remit of the Commission.

Sergey Kruk, Alireza Marandi and Jinyang Liang

Further information available at http://iupap.org/commissions/c17-laser-physics-and-photonics/c17-news/





