

Nonlinear Optics and its Applications

Monday - Wednesday 23 - 25 April 2018

Conference Sessions At A Glance

[SHOW](#) | [HIDE](#)

Hot Topics I
Opening Remarks
1: 2nd Order Nonlinear Effects
2: Silicon Photonics
3: Photonic Circuits
Posters-Monday
4: Developments in Nonlinear Fibre Optics
5: High Harmonic Generation
6: New Materials and Processes
Hot Topics II
7: Nonlinear effects in optical waveguides
8: Quantum and nonlinear optics
Mode-locked Fibre Lasers: Joint Session between Conferences 10683 and 10684

Important Dates

[SHOW](#) | [HIDE](#)

Abstract Due:
25 October 2017

Author Notification:
26 January 2018

Manuscript Due Date:
26 March 2018

Conference Committee

[SHOW](#) | [HIDE](#)

Conference Chairs

[Benjamin J. Eggleton](#), The Univ. of Sydney (Australia)
Neil G. R. Broderick, The Univ. of Auckland (New Zealand)
Anna C. Peacock, Univ. of Southampton (United Kingdom)

Program Committee

[Fabio Biancalana](#), Heriot-Watt Univ. (United Kingdom)
Camille Brès, Ecole Polytechnique Fédérale de Lausanne (Switzerland)
Alex S. Clark, Imperial College London (United Kingdom)
Christophe Dorrer, Univ. of Rochester (United States)
[Majid Ebrahim-Zadeh](#), ICFO - Institut de Ciències Fotòniques (Spain)
[Mark Foster](#), Johns Hopkins Univ. (United States)

Program Committee continued...

[Goëry Genty](#), Tampere Univ. of Technology (Finland)
[Irina V. Kabakova](#), Imperial College London (United Kingdom)
Mercedeh Khajavikhan, CREOL, The College of Optics and Photonics, Univ. of Central Florida (United States)
[Christelle Monat](#), Ecole Centrale de Lyon (France)
[Dragomir N. Neshev](#), The Australian National Univ. (Australia)
Francesca Parmigiani, Univ. of Southampton (United Kingdom)
[Michelle Y. Sander](#), Boston Univ. (United States)
Dawn T. H. Tan, Singapore Univ. of Technology & Design (Singapore)

MONDAY 23 APRIL

[Show All Abstracts](#)

Hot Topics I

Monday 23 April 2018
9:00 AM - 11:00 AM
Location: Schweitzer Auditorium

Photonics Europe 2018: Hot Topics Session I

From Einstein doubts to quantum bits: a second quantum revolution
Alain Aspect, Lab. Charles Fabry, Institut d'Optique, France

Pico-Photonics: watching and sensing single molecules by confining light to the atom scale
Jeremy J. Baumberg, NanoPhotonics Ctr., Univ. of Cambridge, United Kingdom

For additional details please visit <http://spie.org/x12297.xml>.

Coffee Break 11:00 AM - 11:25 AM

Opening Remarks

Monday 23 April 2018
11:25 AM - 11:30 AM
Location: Salon 5


Session 1: 2nd Order Nonlinear Effects

Monday 23 April 2018
11:30 AM - 12:40 PM
Location: Salon 5

Session Chair: [Andrea Blanco Redondo](#), The Univ. of Sydney (Australia)


Engineering nano-oxides to enhance nonlinear optical signal for integrated devices (*Invited Paper*)

Paper 10684-1
Time: 11:30 AM - 12:00 PM
Author(s): Rachel Grange, ETH Zurich (Switzerland)

[Add To My Schedule](#) 


Nonlinear optical properties of germanium at mid-infrared wavelengths (*Conference Presentation*)

Paper 10684-2
Time: 12:00 PM - 12:20 PM
Author(s): Byoung-Uk Sohn, Singapore Univ. of Technology & Design (Singapore); Corentin Monmeyran, Lionel Kimerling, Anuradha Agarwal, Massachusetts Institute of Technology (United States); Dawn T.H. Tan, Singapore Univ. of Technology & Design (Singapore)

[Add To My Schedule](#) 

Asymmetrical second harmonic generation from metal-oxides and metal-metal boundaries

Paper 10684-3
Time: 12:20 PM - 12:40 PM
Author(s): Michael Scalora, U.S. Army Aviation & Missile Research, Development & Engineering Ctr. (United States); Maria A. Vincenti, Univ. degli Studi di Brescia (Italy); Domenico de Ceglia, Neset Akozbek, The AEGIS Technologies Group, Inc. (United States); Mark J. Bloemer, U.S. Army Aviation & Missile Research, Development, & Engineering Ctr. (United States); Jose Trull, Crina Cojocaru, Univ. Politècnica de Catalunya (Spain)

[Add To My Schedule](#) 

Lunch Break 12:40 PM - 1:50 PM


Session 2: Silicon Photonics

Monday 23 April 2018
1:50 PM - 3:20 PM
Location: Salon 5

Session Chair: [Rachel Grange](#), ETH Zurich (Switzerland)


Slow-light and graphene-enhanced nonlinearity of silicon waveguides (*Invited Paper*)

Paper 10684-4
Time: 1:50 PM - 2:20 PM
Author(s): Nobuyuki Matsuda, Nippon Telegraph and Telephone Corp. (Japan); Eiichi Kuramochi, Hiroki Takesue, Masaya Notomi, Rai Kou, NTT Basic Research Labs. (Japan); Tai Tsuchizawa, NTT Device Technology Labs. (Japan); Koji Yamada, Nippon Telegraph and Telephone Corp. (Japan); Atsushi Ishizawa, NTT Basic Research Labs. (Japan)

[Add To My Schedule](#) 


High gain optical parametric amplification in ultra-silicon-rich nitride (USRN) waveguides

Paper 10684-5
Time: 2:20 PM - 2:40 PM
Author(s): Kelvin J. A. Ooi, Singapore Univ. of Technology & Design (Singapore); Doris K. T. Ng, A*STAR - Data Storage Institute (Singapore); Ju Won Choi, Ezgi Sahin, Peng Xing, Ting Wang, Singapore Univ. of Technology & Design (Singapore); Arthur Chee, Lionel Kimerling, Anuradha Agarwal, Massachusetts Institute of Technology (United States); Dawn T.H. Tan, Singapore Univ. of Technology & Design (Singapore)

[Add To My Schedule](#) 


Intermodal four wave mixing in silicon waveguides for on-chip wavelength conversion and generation (*Conference Presentation*)

Paper 10684-6
Time: 2:40 PM - 3:00 PM
Author(s): Stefano Signorini, Univ. degli Studi di Trento (Italy); Mattia Mancinelli, Univ. degli Studi di Trento (Italy), SM Optics S.r.l. (Italy); Massimo Borghi, Univ. degli Studi di Trento (Italy); Martino Bernard, Fondazione Bruno Kessler (Italy), Univ. degli Studi di Trento (Italy); Mher Ghulinyan, Georg Pucker, Fondazione Bruno Kessler (Italy); Lorenzo Pavesi, Univ. degli Studi di Trento (Italy)

[Add To My Schedule](#) 

Controlling stimulated and spontaneous four wave mixing in coupled microring resonators (*Conference Presentation*)

Paper 10684-7
Time: 3:00 PM - 3:20 PM
Author(s): Massimo Borghi, Univ. of Bristol (Italy); Alessandro Trenti, Univ. degli Studi di Trento (Italy); Jean Marc Fédéli, MINATEC (France); Lorenzo Pavesi, Univ. degli Studi di Trento (Italy)

[Add To My Schedule](#) 

Coffee Break 3:20 PM - 3:50 PM

Session 3: Photonic Circuits

Monday 23 April 2018

3:50 PM - 6:00 PM

Location: Salon 5


Session Chair: Nobuyuki Matsuda, Nippon Telegraph and Telephone Corp. (Japan)

Novel nanophotonic circuits *(Invited Paper)*

Paper 10684-8

Time: 3:50 PM - 4:20 PM

Author(s): Andrea Blanco Redondo, The Univ. of Sydney (Australia)


[Add To My Schedule](#) 

Octave-spanning supercontinuum generation in titanium dioxide waveguides

Paper 10684-9

Time: 4:20 PM - 4:40 PM

Author(s): Kamal Hammani, Lab. Interdisciplinaire Carnot de Bourgogne (France), Univ. de Bourgogne Franche-Comté (France); Laurent Markey, Bertrand Kibler, Lab. Interdisciplinaire Carnot de Bourgogne (France); Manon Lamy, Lab. Interdisciplinaire Carnot de Bourgogne (France), Univ. de Bourgogne Franche-Comté (France); Juan Arocas, Jean-Claude Weeber, Christophe Finot, Lab. Interdisciplinaire Carnot de Bourgogne (France)


[Add To My Schedule](#) 

Gallium phosphide microresonator frequency combs (Conference Presentation)

Paper 10684-10

Time: 4:40 PM - 5:00 PM

Author(s): Simon Hönl, Katharina Schneider, IBM Research - Zürich (Switzerland); Miles Anderson, Ecole Polytechnique Fédérale de Lausanne (Switzerland); Dalziel Wilson, IBM Research - Zürich (Switzerland), Ecole Polytechnique Fédérale de Lausanne (Switzerland); Paul Seidler, IBM Research - Zürich (Switzerland); Tobias J. Kippenberg, Ecole Polytechnique Fédérale de Lausanne (Switzerland)


[Add To My Schedule](#) 

Experimental demonstration of soliton-plasmon coupling in planar waveguides (Conference Presentation)

Paper 10684-11

Time: 5:00 PM - 5:20 PM

Author(s): Tintu Kuriakose, FEMTO-ST (France), Ctr. National de la Recherche Scientifique (France); Tomas Halenkovic, Univ. Pardubice (Czech Republic); Mahmoud M. R. Elsayy, Institut Fresnel (France), Aix-Marseille Univ. (France), Ecole Centrale Marseille (France); Petr Nemeč, Univ. Pardubice (Czech Republic); Virginie Nazabal, Univ. de Rennes 1 (France); Gilles Renversez, Institut Fresnel (France), Aix-Marseille Univ. (France), Ecole Centrale Marseille (France); Mathieu Chauvet, FEMTO-ST (France), Ctr. National de la Recherche Scientifique (France)


[Add To My Schedule](#) 

High-repetition-rate femtosecond-laser micromachining of low-loss optical-lattice-like waveguides in lithium niobate

Paper 10684-12

Time: 5:20 PM - 5:40 PM

Author(s): Teerawat Piromjitpong, Aston Univ. (United Kingdom); Mykhaylo Dubov, Optoscribe Ltd. (United Kingdom); Sonia Boscolo, Aston Univ. (United Kingdom)

[Add To My Schedule](#) 

All-optical switches, unidirectional flow, and logic gates with discrete solitons in waveguide arrays (Canceled)

Paper 10684-13

Time: 5:40 PM - 6:00 PM

Author(s):

Session PSMon: Posters-Monday

Monday 23 April 2018

5:30 PM - 7:00 PM

Location: Hall Rhin

Conference attendees are invited to attend the Photonics Europe poster session on Monday 17.30 to 19.00. Posters will be on display after 10.00 Monday morning in the Hall Rhin. Come view the posters, enjoy light refreshments, ask questions, and network with colleagues in your field. Authors of poster papers will be present to answer questions concerning their papers. Attendees are required to wear their conference registration badges to the poster sessions. Poster authors, view poster presentation guidelines and set-up instructions at <http://spie.org/x34963.xml>.

Femtosecond filament-array in fused silica (Canceled)

Paper 10684-45

Time: 5:30 PM - 7:00 PM


Author(s):

Analysis of frequency modulation of femtosecond laser pulses with various incident pulse shape at SHG in medium with combined nonlinear response

Paper 10684-46

Time: 5:30 PM - 7:00 PM


Author(s): Vyacheslav A. Trofimov, Dmitry Kharitonov, Mikhail Fedotov, M.V. Lomonosov Moscow State Univ. (Russian Federation)

[Add To My Schedule](#) **Physical parameters of ultrawide band laser sources and their impacts on multiphoton imaging**

Paper 10684-47

Time: 5:30 PM - 7:00 PM

Author(s): Laetitia Magnol, Véronique Blanquet, Univ. de Limoges (France); Claire Lefort, XLIM Institut de Recherche (France)

[Add To My Schedule](#) **Influence of pulse edges on femtosecond filamentation and supercontinuum generation in air (Canceled)**

Paper 10684-48

Time: 5:30 PM - 7:00 PM

Author(s):

Supercontinuum generation and intermodal four-wave mixing in a step-index few-mode fibre

Paper 10684-49

Time: 5:30 PM - 7:00 PM


Author(s): Solveig Perret, Gil Fanjoux, FEMTO-ST (France); Laurent Bigot, Lab. de Physique des Lasers, Atomes et Molécules (France); Julien Fatome, Guy Millot, Lab. Interdisciplinaire Carnot de Bourgogne (France); John M. Dudley, Thibaut Sylvestre, FEMTO-ST (France)

[Add To My Schedule](#) **Nonlinear optical characterization of new ionic liquids by a noise reduced thermally managed EZ-Scan technique**

Paper 10684-50

Time: 5:30 PM - 7:00 PM


Author(s): Vinícius C. Ferreira, Graciane Marin, Univ. Federal do Rio Grande do Sul (Brazil); Jesum A. Fernandes, The Univ. of Nottingham (United Kingdom); Jairton Dupont, Ricardo R. B. Correia, Univ. Federal do Rio Grande do Sul (Brazil)

[Add To My Schedule](#) **Effect of pump depletion on the evolution of cavity solitons in whispering gallery mode resonator structures**

Paper 10684-51

Time: 5:30 PM - 7:00 PM


Author(s): Maitrayee Saha, Samudra Roy, Shailendra K. Varshney, Indian Institute of Technology Kharagpur (India)

[Add To My Schedule](#) **795-nm polarization squeezing at audio frequency band based on OPO at rubidium D1 line**

Paper 10684-53

Time: 5:30 PM - 7:00 PM

Author(s): Xin Wen, Yashuai Han, Jinyu Liu, Lele Bai, Jun He, Junmin Wang, Shanxi Univ. (China)

[Add To My Schedule](#) **Nonlinear refractive index measurement by SPM-induced phase reconstruction (Canceled)**

Paper 10684-54

Time: 5:30 PM - 7:00 PM


Author(s):

Spatial-temporal pulses in a waveguide under conditions of second harmonic generation

Paper 10684-55

Time: 5:30 PM - 7:00 PM


Author(s): Sergey V. Sazonov, Alexey A. Kalinovich, Maria V. Komissarova, Irina G. Zakharova, M.V. Lomonosov Moscow State Univ. (Russian Federation)

[Add To My Schedule](#) **Two-dimensional semiconductors: a novel platform for integrated parametric oscillators**

Paper 10684-56

Time: 5:30 PM - 7:00 PM


Author(s): Andrea Marini, Istituto dei Sistemi Complessi (Italy); Alessandro Ciattoni, CNR - SPIN (Italy); Carlo Rizza, CNR - SPIN (Italy), Univ. degli Studi dell'Aquila (Italy); Claudio Conti, Istituto dei Sistemi Complessi (Italy)

[Add To My Schedule](#) **Fiber-based measurement of temporal intensity and phase profiles through self-phase modulation**

Paper 10684-58

Time: 5:30 PM - 7:00 PM


Author(s): Frédéric Audo, Kilian Baudin, Christophe Finot, Lab. Interdisciplinaire Carnot de Bourgogne (France)

[Add To My Schedule](#) **Dissipative soliton dynamics in non-Kerr and Kerr type nonlinear media**

Paper 10684-59

Time: 5:30 PM - 7:00 PM

Author(s): Ambaresh Sahoo, Samudra Roy, Indian Institute of Technology Kharagpur (India)


[Add To My Schedule](#) 

Generation of terahertz pulses in a nonlinear dielectric waveguide

Paper 10684-60

Time: 5:30 PM - 7:00 PM


Author(s): Alexander N. Bugay, Joint Institute for Nuclear Research (Russian Federation); Sergey V. Sazonov, Russian Research Ctr. Kurchatov Institute (Russian Federation); Pavel Yu. Shestakov, M.V. Lomonosov Moscow State Univ. (Russian Federation)

[Add To My Schedule](#) **Absorptance testing of massive nonlinear optical crystal boules of polyhedron shape**

Paper 10684-61


Time: 5:30 PM - 7:00 PM

Author(s): Georgii Aloian, Nikita Kovalenko, Irina Shebarshina, Alexey Konyashkin, Oleg Ryabushkin, Moscow Institute of Physics and Technology (Russian Federation)

[Add To My Schedule](#) **A new technique based on angular momentum non-linear canalization of photonic and radio maser/laser wave signals for largely improved free space or fiber communication systems**

Paper 10684-62

Time: 5:30 PM - 7:00 PM

Author(s): Francesco Romano, STV _ HTEE (Italy); Rosario F. Cimmino, Consorzio Nazionale Interuniversitario per i Trasporti e la Logistica (Italy); Stefano Morini, La Sapienza[®] Rome Univ. (Italy)[Add To My Schedule](#) **Fabrication of microstructures on C/SiC surface by diffraction effect of femtosecond laser (Canceled)**

Paper 10684-63

Time: 5:30 PM - 7:00 PM


Author(s):

Compact diode-pumped Nd:YVO₄ slab ns-amplifier

Paper 10684-64

Time: 5:30 PM - 7:00 PM

Author(s): Yefei Mao, Lei Wang, Qian Xuesen Lab. of Space Technology (China); Hengli Zhang, Beijing Institute of Technology (China)

[Add To My Schedule](#) **Breakdown of optical lattice formation in dual-pumped supercavity soliton states**

Paper 10684-65

Time: 5:30 PM - 7:00 PM


Author(s): Arkadev Roy, Raktim Haldar, Shailendra K. Varshney, Indian Institute of Technology Kharagpur (India)

[Add To My Schedule](#) **Piezoelectric resonance spectroscopy for measuring surface temperature distribution of optical materials interacting with laser radiation**

Paper 10684-66

Time: 5:30 PM - 7:00 PM


Author(s): Nikita Kovalenko, George Aloyan, Irina Shebarshina, Alexey Konyashkin, Oleg Ryabushkin, Moscow Institute of Physics and Technology (Russian Federation)

[Add To My Schedule](#) **First demonstration of surface-enhanced stimulated Raman spectroscopy using continuous wave sources**

Paper 10684-67

Time: 5:30 PM - 7:00 PM


Author(s): Kevin C. Hewitt, Dalhousie Univ. (Canada)

[Add To My Schedule](#) **Tyndall scattering in colloidal solution of quantum dots under the action of laser pulses**

Paper 10684-69

Time: 5:30 PM - 7:00 PM


Author(s): Alexander M. Smirnov, Anastasiya Golinskaya, M.V. Lomonosov Moscow State Univ. (Russian Federation); Kseniia V. Ezhova, Saint-Petersburg University of Information Technologies, Mechanics, and Optics (Russian Federation); Vladimir S. Dneprovskii, M.V. Lomonosov Moscow State Univ. (Russian Federation)

[Add To My Schedule](#) **Effect of temperature on the absorption of rubidium vapor cell D₂ line studied by two-photon absorption spectroscopy**

Paper 10684-70

Time: 5:30 PM - 7:00 PM


Author(s): Nut Thanaboonrungrach, Prathan Buranasiri, King Mongkut's Institute of Technology Ladkrabang (Thailand); Pichet Limsuwan, King Mongkut's Univ. of Technology Thonburi (Thailand); Witoon Yindeesuk, King Mongkut's Institute of Technology Ladkrabang (Thailand)

[Add To My Schedule](#) **1 μm-pumped optical parametric generator and oscillator based on orientation-patterned gallium phosphide**

Paper 10684-71

Time: 5:30 PM - 7:00 PM

Author(s): Hanyu Ye, ICFO - Institut de Ciències Fotòniques (Spain); Suddapalli Chaitanya Kumar, Radiant Light SL (Spain); Junxiong Wei, ICFO - Institut de Ciències Fotòniques (Spain); Peter G. Schunemann, BAE Systems (United States); Majid Ebrahim-Zadeh, ICFO - Institut de Ciències Fotòniques (Spain), Institutió Catalana de Recerca i Estudis Avançats (Spain)

[Add To My Schedule](#) **Threshold effect in optical limiters based on conjugates J-type phthalocyanine dimers Zn and Mg with single-walled carbon nanotubes**

Paper 10684-72

Time: 5:30 PM - 7:00 PM


Author(s): Mikhail S. Savelyev, Alexander Gerasimenko, Artem Kuksin, Vitaly Podgaetsky, National Research Univ. of Electronic Technology (Russian Federation); Alexander Tolbin, Institute of Physiologically Active Compounds (Russian Federation); Pavel Vasilevsky, Sergey Tereschenko, National Research Univ. of Electronic Technology (Russian Federation)

[Add To My Schedule](#) **Compact continuous wave THz source based on monolithic two-color laser diode**

Paper 10684-73

Time: 5:30 PM - 7:00 PM


Author(s): Jared Ombiro Gwaro, Carsten Brenner, Ruhr-Univ. Bochum (Germany); Bernd Sumpf, Ferdinand-Braun-Institut (Germany); Leibniz-Institut für Höchstfrequenztechnik (Germany); Andreas Klehr, Jörg Fricke, Ferdinand-Braun-Institut (Germany); Martin R. Hofmann, Ruhr-Univ. Bochum (Germany)

[Add To My Schedule](#) **Tunable spatial compensation for polarization entangled photons**

Paper 10684-74

Time: 5:30 PM - 7:00 PM


Author(s): Salem F. Hegazy, Cairo Univ. (Egypt); Salah S. A. Obayya, Zewail city (Egypt)

[Add To My Schedule](#) **Nonlinear properties of CdSe/ZnS quantum dots colloidal solutions under one- and two-photon excitation by means of high-power ultrashort laser pulses**

Paper 10684-75

Time: 5:30 PM - 7:00 PM


Author(s): Alexander M. Smirnov, Yana Valchuk, Maria Kozlova, Vladimir Mantsevich, Vladimir Dneprovskii, M.V. Lomonosov Moscow State Univ. (Russian Federation)

[Add To My Schedule](#) **Nonlinear effects in colloidal nanoplatelets with two-dimensional electronic structure**

Paper 10684-76

Time: 5:30 PM - 7:00 PM


Author(s): Alexander M. Smirnov, Anastasiya Golinskaya, Maria Kozlova, Dmitrii Przhilyakovskii, Bedil Saidjonov, Roman Vasiliev, Vladimir Dneprovskii, M.V. Lomonosov Moscow State Univ. (Russian Federation)

[Add To My Schedule](#) **Dynamics of an all-fibre laser with saturable absorber**

Paper 10684-77

Time: 5:30 PM - 7:00 PM


Author(s): Robert Otupiri, Bruno Garbin, Soizic Terrien, Neil Broderick, Bernd Krauskopf, The Dodd-Walls Ctr. for Photonic and Quantum Technologies (New Zealand), The Univ. of Auckland (New Zealand)

[Add To My Schedule](#) **Peculiarities of spatial soliton formation in azobenzene liquid crystal**

Paper 10684-79

Time: 5:30 PM - 7:00 PM


Author(s): Tigran Dadalyan, Institute for Physical Research, NAS Armenia (Armenia); Varsenik Nersesyan, Institute for Physical Research, NAS Armenia (Armenia), Univ. Gent (Belgium); Anahit Gogyan, Yuri Malakyan, Institute for Physical Research, NAS Armenia (Armenia); Jeroen Beeckman, Kristiaan Neyts, Univ. Gent (Belgium); Rafael Drampyan, Institute for Physical Research, NAS Armenia (Armenia)

[Add To My Schedule](#) **Graphene all-optical sensor based on nonlinear multimode interference coupler**

Paper 10684-80

Time: 5:30 PM - 7:00 PM


Author(s): Mohammad Adnin Abdul Hassim, Wan Maryam Wan Ahmad Kamil, Mohd Zubir Mat Jafri, Univ. Sains Malaysia (Malaysia)

[Add To My Schedule](#) **Determination of Kerr and two-photon absorption coefficients of ABI thin films**

Paper 10684-81

Time: 5:30 PM - 7:00 PM


Author(s): Arturs Bundulis, Edgars Nitiss, Martins Rutkis, Univ. of Latvia (Latvia)

[Add To My Schedule](#) **Controlling terahertz spectrum in asymmetric air plasmas: the role of GDD and phase**

Paper 10684-83

Time: 5:30 PM - 7:00 PM

Author(s): Roland Flender, Univ. of Szeged (Hungary); Krisztina Sárosi, ELI-HU Nonprofit Kft. (Hungary); Ervin Petrács, Univ. of Szeged (Hungary); Adam Borzsonyi, Univ. of Szeged (Hungary), ELI-HU Nonprofit Kft. (Hungary); Viktor Chikán, ELI-HU Nonprofit Kft (Hungary), Kansas State Univ. (United States)

[Add To My Schedule](#) **Switching from sub- to superluminal light in a Y-type system using wavelength mismatching (Canceled)**

Paper 10684-84

Time: 5:30 PM - 7:00 PM


Author(s):

Two-axis acousto-optical deflector for high-power laser radiation

Paper 10684-85

Time: 5:30 PM - 7:00 PM

Author(s): Dmitrii Velikovskii, Scientific and Technological Ctr. for Unique Instrumentation (Russian Federation); Michail Mazur, VNIIFTRI (Russian Federation)

[Add To My Schedule](#) **Noise-like pulse generation in all-normal dispersion all-fiber passively mode-locked Yb-doped fiber laser (Canceled)**

Paper 10684-86

Time: 5:30 PM - 7:00 PM

Author(s):

Stimulated light scatterings in submicron single crystal diamond films implanted with light ions

Paper 10684-88

Time: 5:30 PM - 7:00 PM

Author(s): Maria Tareeva, Valeri Dravin, P.N. Lebedev Physical Institute (Russian Federation); Roman Khmelnskiy, P.N. Lebedev Physical Institute (Russian Federation), Kotelnikov Institute of Radio Engineering and Electronics of Russian Academy of Sciences (Russian Federation), A. M. Prokhorov General Physics Institute of the Russian Academy of Sciences (Russian Federation); Anna Kudryavtseva, Mikhail Shevchenko, Maksim Strokov, Nikolay Tcherniega, P.N. Lebedev Physical Institute (Russian Federation); Konstantin Tsarik, National Research Univ. of Electronic Technology (Russian Federation)

[Add To My Schedule](#) **Generation of dark soliton trains with high repetition rates through dissipative four wave mixing**

Paper 10684-92

Time: 5:30 PM - 7:00 PM

Author(s): Dmitry A. Korobko, Igor Zolotovskii, Ulyanovsk State Univ. (Russian Federation); Krassimir Panajotov, Vrije Univ. Brussel (Belgium); Andrei Fotiadi, Ulyanovsk State Univ. (Russian Federation), Univ. de Mons (Belgium)

[Add To My Schedule](#) **Image fidelity improvement using self-pumped phase conjugation digital holographic microscopy**

Paper 10684-93

Time: 5:30 PM - 7:00 PM

Author(s): Yang Kun Chew, Optoelectronics Research Ctr. (United Kingdom), MingDao Univ. (Taiwan); Huang Tian Chan, MingDao Univ. (Taiwan); Min Tzung Zhui, National Defense Univ. (Taiwan); Chia Hao Wu, Chi-Ching Chang, MingDao Univ. (Taiwan)

[Add To My Schedule](#) **Implementation of stimulated Raman losses and stimulated Raman gain microscopy using three femtosecond laser sources**

Paper 10684-94

Time: 5:30 PM - 7:00 PM

Author(s): Rajeev Ranjan, CNR Istituto per la Microelettronica e Microsistemi (Italy); Annalisa D'Arco, Institute for Microelectronics and Microsystems (Italy)

[Add To My Schedule](#) **Features of nonlinear absorption of $\text{Bi}_{2-x}\text{Sb}_x\text{Te}_{3-y}\text{Se}_y$ films**

Paper 10684-95

Time: 5:30 PM - 7:00 PM

Author(s): Alexander M. Smimov, Kotelnikov IRE RAS (Russian Federation); Ivan D. Laktaev, MV Lomonosov Moscow SU (Russian Federation); Petr I. Kuznetsov, Konstantin M. Golant, Kotelnikov IRE RAS (Russian Federation)

[Add To My Schedule](#) **TUESDAY 24 APRIL**[Show All Abstracts](#)**Session 4:
Developments in Nonlinear Fibre Optics**

Tuesday 24 April 2018

8:50 AM - 10:20 AM


Location: Salon 5

Session Chair: [Benjamin J. Eggleton](#), The Univ. of Sydney (Australia)**Intermodal four wave mixing effects in fibres and future prospective (Invited Paper)**

Paper 10684-14

Time: 8:50 AM - 9:20 AM


Author(s): Francesca Parmigiani, Univ. of Southampton (United Kingdom)

[Add To My Schedule](#) **Tunability improvement of a doubly resonant OPO for fast and high-resolution gas spectroscopy**

Paper 10684-15

Time: 9:20 AM - 9:40 AM

Author(s): Johann Georges des Aulnois, Benjamin Szymanski, Alexis Colin, Blue Industry and Science (France)

[Add To My Schedule](#) 

Experimental observation of dispersive photon focusing dam break flows (Conference Presentation)

Paper 10684-16

Time: 9:40 AM - 10:00 AM


Author(s): Frédéric Audo, Bertrand Kibler, Julien Fatome, Guy Millot, Christophe Finot, Lab. Interdisciplinaire Carnot de Bourgogne (France)

[Add To My Schedule](#) **Compact fibre-integrated femtosecond optical parametric oscillator (Conference Presentation)**

Paper 10684-17

Time: 10:00 AM - 10:20 AM

Author(s): Callum F. O'Donnell, Chaitanya Kumar Suddapalli, Radiant Light SL (Spain), ICFO - Institut de Ciències Fotòniques (Spain); Therese Paoletta, ICFO - Institut de Ciències Fotòniques (Spain); Majid Ebrahim-Zadeh, Radiant Light SL (Spain), ICFO - Institut de Ciències Fotòniques (Spain), Institutió Catalana de Recerca i Estudis Avançats (Spain)

[Add To My Schedule](#) 

Coffee Break 10:20 AM - 10:50 AM

**Session 5:
High Harmonic Generation**

Tuesday 24 April 2018

10:50 AM - 12:40 PM

Location: Salon 5


Session Chair: [Natalia M. Litchinitser](#), Univ. at Buffalo (United States)

Single molecule nonlinear optics (Invited Paper)

Paper 10684-19

Time: 10:50 AM - 11:20 AM


Author(s): Vahid Sandoghdar, Max-Planck-Institut für die Physik des Lichts (Germany)

[Add To My Schedule](#) **Phase-matched optical wave mixing in the XUV region by two-colour high-order harmonic generation**

Paper 10684-20

Time: 11:20 AM - 11:40 AM


Author(s): Khoa A. Tran, Khuong Ba Dinh, Peter Hannaford, Lap V. Dao, Swinburne Univ. of Technology (Australia)

[Add To My Schedule](#) **Generation of extreme ultraviolet vector beams driven by high harmonic generation**

Paper 10684-21

Time: 11:40 AM - 12:00 PM


Author(s): Alex Turpin, Ctr. of Advanced European Studies and Research (Germany); Julio San-Román, Antonio Picón, Univ. de Salamanca (Spain); Rokas Drevinskis, Aušra Cerkauskaitė, Peter G. Kazansky, Univ. of Southampton (United Kingdom); Charles G. Durfee, Colorado School of Mines (United States); Iñigo J. Sola, Carlos Hernández-García, Univ. de Salamanca (Spain)

[Add To My Schedule](#) **Ultrashort optical pulses and single-cycle terahertz fields in the service of molecular rotations: a comparative study (Conference Presentation)**

Paper 10684-22

Time: 12:00 PM - 12:20 PM


Author(s): Sharly Fleischer, Ran Damari, Tel Aviv Univ. (Israel); Shimshon Kallush, ORT Braude College (Israel), The Hebrew Univ. of Jerusalem (Israel); Dina Rosenberg, Tel Aviv Univ. (Israel)

[Add To My Schedule](#) **On the fly control of high harmonic generation using a structured pump beam (Conference Presentation)**

Paper 10684-23

Time: 12:20 PM - 12:40 PM

Author(s): Lilya Lobachinsky, Liran Hareli, Georgiy Shoulga, Yaniv Eliezer, Linor Michaeli, Alon Bahabad, Tel Aviv Univ. (Israel)

[Add To My Schedule](#) 

Lunch/Exhibition Break 12:40 PM - 1:50 PM

**Session 6:
New Materials and Processes**

Tuesday 24 April 2018

1:50 PM - 4:00 PM

Location: Salon 5


Session Chair: [Vahid Sandoghdar](#), Max-Planck-Institut für die Physik des Lichts (Germany)

Structured light and nonlinear metamaterials (Invited Paper)

Paper 10684-24

Time: 1:50 PM - 2:20 PM


Author(s): Natalia M. Litchinitser, Univ. at Buffalo (United States)

[Add To My Schedule](#) **Modeling and parameter retrieving in time domain spectroscopy of material and metamaterial**

Paper 10684-25

Time: 2:20 PM - 2:40 PM


Author(s): Romain Peretti, Institut d'Electronique de Microélectronique et de Nanotechnologie (France); Martin Micica, Institut d'Electronique de Microélectronique et de Nanotechnologie (France), VŠB-Technical Univ. of Ostrava (Czech Republic); Sergey I. Mityukovskiy, Kevin Froberger, Sophie Eliet, Mathias Vanwolleghem, Jean-François Lampin, Institut d'Electronique de Microélectronique et de Nanotechnologie (France)

[Add To My Schedule](#) **Analysis of the characteristics of the airy beam off-shooting soliton**

Paper 10684-26

Time: 2:40 PM - 3:00 PM


Author(s): Thomas Bouchet, Nicolas Marsal, Marc Sciamanna, Delphine Wolfersberger, CentraleSupélec (France)

[Add To My Schedule](#) **Correlated photon pair generation based on spontaneous four-wave-mixing in ultra-silicon-rich nitride waveguides (Conference Presentation)**

Paper 10684-57

Time: 3:00 PM - 3:20 PM


Author(s): Ju Won Choi, Byoung-Uk Sohn, George F. R. Chen, Singapore Univ. of Technology & Design (Singapore); Doris K. T. Ng, A*STAR - Data Storage Institute (Singapore); Dawn T.H. Tan, Singapore Univ. of Technology & Design (Singapore)

[Add To My Schedule](#) **Hot electron generation and dynamics within plasmonic nano-antenna (Conference Presentation)**

Paper 10684-28

Time: 3:20 PM - 3:40 PM


Author(s): Olivier Demichel, Benoît Cluzel, Alexandre Bouhelier, Regis Mejjard, Lab. Interdisciplinaire Carnot de Bourgogne (France)

[Add To My Schedule](#) **Realization of a watt-level narrow-linewidth 318-nm UV laser and single-photon Rydberg excitation of cesium atoms (Conference Presentation)**

Paper 10684-29

Time: 3:40 PM - 4:00 PM

Author(s): Junmin Wang, Jieying Wang, Jiandong Bai, Jun He, Shanxi Univ. (China)

[Add To My Schedule](#) 

Coffee Break 4:00 PM - 4:30 PM

Hot Topics II

Tuesday 24 April 2018

4:30 PM - 6:05 PM

Location: Schweitzer Auditorium

Photonics Europe 2018: Hot Topics Session II**Coherent combination of fiber amplified ultrafast laser pulses**

Jens Limpert, Institute of Applied Physics, Friedrich Schiller Univ. Jena, Germany

2D materials and their heterostructures: fundamentals, applications and prototypes

Frank Koppens, ICFO-The Institute of Photonic Sciences, Spain

For additional details, please visit <http://spie.org/x12297.xml>

WEDNESDAY 25 APRIL[Show All Abstracts](#)

**Session 7:
Nonlinear effects in optical waveguides**

Wednesday 25 April 2018

8:30 AM - 10:20 AM

Location: Salon 5


Session Chair: Anna C. Peacock, Univ. of Southampton (United Kingdom)

Ultrafast fiber parametric temporal imaging (Invited Paper)

Paper 10684-30

Time: 8:30 AM - 9:00 AM

Author(s): Kenneth K. Y. Wong, The Univ. of Hong Kong (Hong Kong, China)


[Add To My Schedule](#) 

Temporal optical super-resolution by super-oscillating beats (Conference Presentation)

Paper 10684-31

Time: 9:00 AM - 9:20 AM


Author(s): Alon Bahabad, Yaniv Eliezer, Liran Hareli, Liliya Lobachinsky, Sahar Froim, Tel Aviv Univ. (Israel)

[Add To My Schedule](#) **Optimal input signal distribution and capacity for nondispersive nonlinear optical fiber channel at large signal to noise ratio**

Paper 10684-32

Time: 9:20 AM - 9:40 AM


Author(s): Ivan Terekhov, Alexey Reznichenko, Budker Institute of Nuclear Physics SB RAS (Russian Federation); Sergey Turitsyn, Aston Institute of Photonics Technologies, Aston University (United Kingdom)

[Add To My Schedule](#) **Broadband four-wave mixing and optical parametric gain of broadband incoherent light using ultra-silicon-rich nitride waveguides (Conference Presentation)**

Paper 10684-33

Time: 9:40 AM - 10:00 AM

Author(s): Ju Won Choi, Byoung-Uk Sohn, George F. R. Chen, Singapore Univ. of Technology & Design (Singapore); Doris K. T. Ng, A*STAR - Data Storage Institute (Singapore); Dawn T.H. Tan, Singapore Univ. of Technology & Design (Singapore)

[Add To My Schedule](#) **Mitigation of self-phase modulation by sinusoidally time varying phase (Conference Presentation)**

Paper 10684-34

Time: 10:00 AM - 10:20 AM

Author(s): Frédéric Audo, Lab. Interdisciplinaire Carnot de Bourgogne (France); Sonia Boscolo, Aston Univ. (United Kingdom); Christophe Finot, Lab. Interdisciplinaire Carnot de Bourgogne (France)

[Add To My Schedule](#) 

Coffee Break 10:20 AM - 10:50 AM

**Session 8:
Quantum and nonlinear optics**

Wednesday 25 April 2018

10:50 AM - 12:40 PM

Location: Salon 5

Session Chair: [Thomas H. Kerr III](#), TeK Associates (United States)

Enhancing the performance of fibre-based nonlinear heralded single-photon sources through active switching (Invited Paper)

Paper 10684-35

Time: 10:50 AM - 11:20 AM


Author(s): Peter J. Mosley, Univ. of Bath (United Kingdom)

[Add To My Schedule](#) **Continuous-wave, multi-milliwatt, tunable difference-frequency generation across 4608-4694 nm in orientation-patterned GaP**

Paper 10684-36

Time: 11:20 AM - 11:40 AM


Author(s): Kavita Devi, Anuja Padhye, ICFO - Institut de Ciències Fotòniques (Spain); Peter G. Schunemann, BAE Systems (United States); Majid Ebrahim-Zadeh, ICFO - Institut de Ciències Fotòniques (Spain), Institutió Catalana de Recerca i Estudis Avançats (Spain)

[Add To My Schedule](#) **A new way of controlling NesCOPOs (Nested Cavity doubly resonant OPO) for faster and more efficient high resolution spectrum measurement**

Paper 10684-37

Time: 11:40 AM - 12:00 PM


Author(s): Johann Georges des Aulnois, Benjamin Szymanski, Axel Grimieau, Léo Sillard, Blue Industry and Science (France)

[Add To My Schedule](#) **Optical rectification for a new shot to shot feedback system for laser-driven plasma wakefield accelerators**

Paper 10684-38

Time: 12:00 PM - 12:20 PM

Author(s): Stefano Mattiello, Technische Hochschule Mittelhessen (Germany); Holger Schlarb, Deutsches Elektronen-Synchrotron (Germany); Andreas Penirschke, Technische Hochschule Mittelhessen (Germany)

[Add To My Schedule](#) **Temperature dependent noise in quantum frequency conversion (Conference Presentation)**

Paper 10684-39

Time: 12:20 PM - 12:40 PM

Author(s): Paulina S. Kuo, National Institute of Standards and Technology (United States); Carsten Langrock, Jason S. Pelc, Martin M. Fejer, Stanford Univ. (United States)

[Add To My Schedule](#) 

Lunch/Exhibition Break 12:40 PM - 1:40 PM

Session JS: Mode-locked Fibre Lasers: Joint Session between Conferences 10683 and 10684

Wednesday 25 April 2018

1:40 PM - 3:35 PM

Location: Salon 7

Session Chair: Neil G. R. Broderick, The Univ. of Auckland (New Zealand)


Please note the room change

Propagation of infrared ultrashort pulses in the air (Invited Paper)

Paper 10684-40

Time: 1:40 PM - 2:05 PM

Author(s): Thomas J. Karr, Defense Advanced Research Projects Agency (United States); Larry Stotts, Stotts, Inc (United States); Jason D. Schmidt, Jason A. Tellez, Justin D. Mansell, MZA Corp. (United States)


[Add To My Schedule](#) 

High power ultrafast mode-locked ring fibre laser with InN SESAM (Conference Presentation)

Paper 10683-59

Time: 2:05 PM - 2:20 PM

Author(s): Francesca Gallazzi, Instituto de Óptica "Daza de Valdés" (Spain); Marco Jimenez-Rodriguez, Univ. de Alcalá (Spain); Eva Monroy, Univ. Grenoble Alpes (France), CEA Grenoble (France); Pedro Corredera, Instituto de Óptica "Daza de Valdés" (Spain); Miguel González-Herráez, Fernando B. Naranjo, Univ. de Alcalá (Spain); Juan Diego Ania-Castañón, Instituto de Óptica "Daza de Valdés" (Spain)


[Add To My Schedule](#) 

Dissipative soliton resonance in the Er:Yb:doped double-clad fiber laser

Paper 10684-41

Time: 2:20 PM - 2:35 PM

Author(s): Mohamed Salhi, Georges Semaan, Fatma Ben Braham, Meriem Kemel, Alioune Niang, Univ. d'Angers (France); Yichang Meng, Hebei Univ. of Science and Technology (China); Andrey Komarov, Institute of Automation and Electrometry, Russian Academy of Sciences (Russian Federation); Konstantin Komarov, Institute of Automation and Electrometry, Russian Academy of Sciences (Russian Federation); François Sanchez, Univ. d'Angers (France)


[Add To My Schedule](#) 

Ytterbium-doped mode-locked fibre laser with three gain media for micromachining (Conference Presentation)

Paper 10683-60

Time: 2:35 PM - 2:50 PM

Author(s): Neil G. R. Broderick, Stanley Tang, Richard Provo, Miro Erkintalo, Claude Ageuray, The Univ. of Auckland (New Zealand)


[Add To My Schedule](#) 

Graphene-based saturable absorber for high average-power fiber lasers

Paper 10684-42

Time: 2:50 PM - 3:05 PM

Author(s): Paul Mouchel, Univ. d'Angers (France), Keopsys SA (France); Georges Semaan, Univ. d'Angers (France); Yichang Meng, Hebei Univ. of Science and Technology (China); Mohamed Salhi, Meriem Kemel, François Sanchez, Univ. d'Angers (France)


[Add To My Schedule](#) 

High energy, femtosecond fiber laser source at 1750 nm for 3-photon microscopy (Conference Presentation)

Paper 10683-61

Time: 3:05 PM - 3:20 PM

Author(s): Andreas Wienke, Dieter Wandt, Laser Zentrum Hannover e.V. (Germany); Jean-Bernard Lecourt, Didier Lekime, Yves Hernandez, Multitel A.S.B.L. (Belgium); Jörg Neumann, Dietmar Kracht, Laser Zentrum Hannover e.V. (Germany)

[Add To My Schedule](#) 

Intracavity pulse dynamics in all-normal dispersion all-fiber oscillator

Paper 10684-43

Time: 3:20 PM - 3:35 PM

Author(s): Jan Szczepanek, Univ. of Warsaw (Poland); Tomasz M. Kardaś, Institute of Physical Chemistry of the Polish Academy of Sciences (Poland); Czesław Radzewicz, Univ. of Warsaw (Poland); Yuriy Stepanenko, Institute of Physical Chemistry of the Polish Academy of Sciences (Poland), Univ. of Warsaw (Poland)

[Add To My Schedule](#) 