

# Monday, April 1, 2019

08:00 – 09:00 ☕ Coffee and Registration

## 09:00 – 10:55 Opening Session – Plenary Hall

09:00 – 09:30 **Chairperson: Prof. Abraham Katzir,**  
*Chairman of Oasis 2019*

09:30 – 10:15 **Plenary Lecture:**  
Passion Extreme Light  
**Prof. Gérard Mourou,** *Nobel Prize Winner, École Polytechnique, Palaiseau, France*

10:15 – 10:55 **Plenary Lecture:**  
Seeing the Unseen in Patients: Advancing Disease Prevention and Treatment through Microimaging  
**Prof. Guillermo Tearney,**  
*Mass General Hospital, Harvard University, MIT, Cambridge, MA, USA*

10:55 – 11:25 ☕ Coffee Break and Posters Review of Topics: *Micro and Nano Optics, IFLA – International Fiber Lasers and Applications*

## 11:30 – 13:00 | Parallel Session 1

### Hall A

**Optical Engineering**  
**Dr. Hanni Inbar**

- ◆ Photonics-Based Particle Acceleration  
**Peter Hommelhoff, Robert L. Byer, R. Joel England,** *Physics Department, Friedrich Alexander University ErlangenNuremberg, Germany*
- ◆ SWIR to Visible Up-Conversion Devices Development  
**Gabby Sarusi,** *Photonics and Electrooptics Engineering Unit and Ilisa Katz Center for Nano Scale Sciences, Ben-Gurion University Beer-Sheva, Israel*
- Non-Paraxial Fourier and Fresnel Optics in Design of Diffractive Optical Elements and Meta-Surfaces  
**Michael A. Golub,** *Tel Aviv University, School of Electrical Engineering- Physical Electronics, Israel*
- Joint Design of Optics and Post-Processing Algorithms Based on Deep Learning for Generating Advanced Imaging Features  
**Shay Elmalem, Harel Haim, Raja Giryes, Alex M. Bronstein and Emanuel Marom,** *Faculty of Engineering, Tel Aviv University, Israel*
- A K-Domain Method for Fast Propagation of Electromagnetic Fields through Graded-Index Media  
**Huiying Zhong, Site Zhang, Rui Shi and Frank Wyrowski,** *Light Trans International UG, Germany*

### Hall B

**Lasers and Applications**  
**Dr. Ariel Bruner**

- ◆ Challenges in Further Power Scaling of Single-Mode Fiber Lasers  
**Liang Dong,** *Clemson University, USA*
- ◆ Femtosecond Pulse Generation by Using Single-Layer Graphene and Voltage-Controlled Graphene Supercapacitor Structures  
**Alphan Sennaroglu, Isinsu Baylam, Ferda Canbaz, Can Cihan, Nurbek Kakenov, Coskun Kocabas, Umit Demirbas, and Sarper Ozharar,** *Koç University, Turkey*
- Axiparabola: A Long Focal Depth, High Resolution Mirror for Broadband High Intensity Lasers  
**Slava Smartsev, Clement Caizergues, Kosta Oubriere, Julien Gautier, Jean-Philippe Goddet, Amar Tafzi, Kim Ta Phuoc, Victor Malka, Cedric Thauray,** *Department of Physics of Complex Systems, Weizmann Institute of Science, Israel*
- Laboratoire d'Optique Appliquée, Ecole Polytechnique, ENSTA, CNRS, Palaiseau, France
- Micron Precision Assembly for Sensors and Laser Systems on a Reconfigurable Industrial Platform  
**Tobias Mueller, Sebastian Sauer,** *Fraunhofer Institute for Production Technology, Germany*
- High Energy Tunable Narrow Bandwidth Tm:YAP Laser  
**Salman Noach, Uzziel Sheintop, Eytan Perez, Rotem Nahear, Pavel Komm, Gilad Marcus,** *Jerusalem College of Technology, Israel*

### Hall C

**Medicine and Biology**  
**Prof. Dror Fixler**

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- ◆ Wide-field Time-correlated Single Photon Counting (TCSPC) for Fluorescence Lifetime Imaging (FLIM) Microscopy  
**Klaus Suhling,** *King's College London, UK*
- ◆ All Optical Monitoring of Cancer Treatment Efficiency with Overtone Absorption Spectroscopy on Microfibers with Random Surface Roughness  
**Alina Karabchevsky,** *Ben-Gurion University, Israel*
- Improved Photoacoustic Image Reconstruction of Clinical Data  
**Idan Steinberg, David M. Huland, Sarah Hooper, Sanjiv Sam Gambhir, Tal Klap (Independent),** *Stanford School of Medicine, USA*
- Advanced Fiber Optic Solutions for Biomed Photonics in 0.3–16µm Range  
**Viacheslav Artyushenko,** *Art Photonics GmbH, Germany*
- Infrared Fiber-Optic Sensing Method for Early Detection of Melanoma and other types of Skin Cancer  
**Svetlana Basov, Max Platkov, Ilan Goldberg, Eli Sprecher, Andrey Goriachev, Yosef Raichlin, Yair Dankner, Marcelo Weinstein, Abraham Katzir,** *Nuclear Research Center Negev (NCRN), Israel*
- Automated Transscleral Laser Trabeculoplasty  
**Zachary Sacks,** *Belkin Laser Ltd., Israel*

### Hall D

**Electro Optics in Industry**  
**Dr. Rami Cohen**

- ◆ Optimize Electro-Optics Mechanical Design for Additive Manufacturing  
**Elad Yosef,** *Mechanical Engineer, Elbit Systems-ISTAR, Israel*
- ◆ Embedded 3D Interconnects in Glass Substrates by a Combined Laser Trenching and Printing Process  
**Yuval Berg,** *Department of Physical Electronics, Faculty of Engineering, Tel Aviv University, Israel*
- ◆ State Of The Art Precision Metrology with Ultra-Low-Noise Optical Frequency Combs  
**Benjamin Sprenger, Dag Schmidt, Michele Giunta, Wolfgang Haensel, Marc Fischer, Ronald Holzwarth,** *Menlo Systems, Germany*
- Development of Thin Glass-based Technologies for Photonic System Integration  
**Henning Schröder,** *Fraunhofer IZM, Germany*
- Review on Free Form Optics: Advantages and Challenges Of An Emerging Technology  
**Raginski Igor,** *Optical Designer, Electro - Optics Department, Rafael, Israel*

### Hall E

**IFLA – Specialty Fiber**  
**Dr. Yoav Sintov**

- ◆ Materials Development for Advanced Optical Fibers  
**John Ballato,** *Clemson University, USA*
- ◆ Image Transport through Glass-Air Disordered Optical Fiber  
**Axel Schülzgen, Jian Zhao, Yangyang Sun, Zheyuan Zhu, Jose Enrique Antonio-Lopez, Rodrigo Amezcua Correa, Shuo Pang,** *CREOL, The College of Optics and Photonics, University of Central Florida, USA*
- ◆ Large Mode Area Fiber Designs for Megawatt Peak Power Generation in REPUSIL-Based Tapered Amplifiers  
**Matthias Jäger, Martin Leich, André Kalide, Martin Lorenz, Tina Eschrich, Anka Schwuchow, Jens Kobelke, Jörg Bierlich, Claudia Aichele, Katrin Wondraczek, Dörte Schönfeld, Andreas Langner, Clemens Schmitt, Jaqueline Plass, Gerhard Schötz, Heraeus Quarzglas, Leibniz Institute of Photonic Technology, GmbH & Co. KG, Germany**
- ◆ Mode Area Scaling Through a Multicore Supermode Fibre  
**Seongwoo Yoo,** *Nanyang Technological University, Singapore*

13:00 - 14:00 | Lunch Break

13:30 - 14:00 | Posters Review of Topics: *Electro Optics in Industry and Medicine and Biology*

14:00 - 15:30 | Parallel Session 2

Hall A

Micro and Nano Optics  
Prof. Koby Scheuer

- ◆ Kerr-Microresonator Solitons for Ultraprecise Measurements  
**Scott B. Papp**, *NIST and University of Colorado, USA*
- Parametrical Optomechanical Oscillations in Microbubble Resonators: Suppression, Enhancement and Route to Chaos  
**Silvia Soria**, **Xavier Rosello-Mecho**, **Daniele Farnesi**, **Gabriele Frigenti**, **Martina Delgado-Pinar**, **Miguel V. Andrés**, **Giancarlo Righini**, **Gualtiero Nunzi Conti**, *IFAC-CNR Institute of Applied Physics "N. Carrara", Italy*
- Optomechanically-Driven Microstructures for Targeted Drug Delivery Applications  
**Pavel Ginzburg**, **Ivan I. Shishkin**, **Hen Markovich**, **Hani Barhom**, **Andrey Machnev**, **Roman E. Noskov**, **Yael Roichman**, *Tel Aviv University, Israel*
- Optical Skyrmions: A New Texture of Light  
**Shai Tsesses**, **Kobi Cohen**, **Evgeny Ostrovsky**, **Bergin Gjonaj**, **Netanel H. Lindner**, **Guy Bartal**, **Andrew and Erna Viterbi**, *Department of Electrical Engineering, Technion - Israel Institute of Technology, Israel; Faculty of Medical Sciences, Albanian University, Tirana, Albania; Physics Department, Technion - Israel Institute of Technology, Israel*
- Spin-Locking In 2D and 3D Plasmonic Structures  
**Yuri Gorodetski**, *Ariel University, Israel*

Hall B

Atomic and Quantum Optics  
Dr. Barak Dayan

- ◆ Quantum-Dot Quantum Nanophotonics  
**Nir Rotenberg**, *University of Copenhagen, Denmark*
- Effect of Stokes Shift on Polariton Dynamics  
**Jussi Toppari**, **Gerrit Groenhof**, **Tero Heikkilä**, *Nanoscience Center and Departments of Physics and Chemistry, University of Jyväskylä, Finland*
- Quantum Free-Electron Wavepacket Interactions with Light and Matter  
**Avraham Gover**, **Yiming Pan**, **Bin Zhang**, *Department of Electrical Engineering Physical Electronics, Tel Aviv University, Israel; Department of Physics of Complex Systems, Weizmann Institute of Science, ISRAEL; National Laboratory of Solid State Microstructures and School of Physics, Nanjing University, CHINA*
- Strong Coupling of THz Fields to Collective Molecular Vibrations  
**Sharly Fleischer**, **Ran Damari**, **Omri Weinberg**, **Natalia Demina**, **Katherine Akulov**, **Daniel Krotkov**, **Tal Schwartz**, *Tel Aviv University Physical Chemistry Department and Tel Aviv Center for Light-Matter Interaction, Israel*
- Photonic Quantum Walks with Cyclic Geometry as Versatile Quantum Simulators  
**E. Cohen** (*Bar Ilan University*), **W.-W. Pan**, **X.-Y. Xu**, **Q.-Q. Wang**, **Z. Chen**, **M. Jan**, **Y.-J. Han**, **C.-F. Li**, **G.-C. Guo** (*University of Science and Technology of China*); *Faculty of Engineering and the Institute of Nanotechnology and Advanced Materials, Bar Ilan University, Israel*

Hall C

Medicine and Biology  
Prof. Dror Fixler

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- ◆ On-Chip Silicon Photonic Biosensors  
**Sharon M. Weiss**, *Vanderbilt University, USA*
- ◆ Stain-Free Quantitative Phase Imaging of Sperm Cells for In Vitro Fertilization  
**Natan T. Shaked**, *Faculty of Engineering, Tel Aviv University, Israel*
- Three Photon Adaptive Optics for in-vivo Mouse Brain Imaging  
**David Sinefeld**, **Fei Xia**, **Mengran Wang**, **Chunan Wu**, **Tianyu Wang**, **Hari P. Paudel**, **Dimitre G. Ouzounov**, **Thomas G. Bifano** and **Chris Xu**, *Applied and Engineering Physics, Cornell University, USA*
- Imaging Tympanic Membrane Surface Vibrations - In Vivo  
**Matan Hamra**, **Shadi Shinnawi**, **Ariel Weigler**, **Mauricio Cohen Vaizer**, **Dvir Yelin**, *Biomedical Engineering, Technion - Israel Institute of Technology, Israel*
- Eye Tracking Control in Visual Prostheses  
**Avi Caspi**, *Jerusalem College of Technology, Israel*

Hall D

Start-up Session  
Ms. Salit Lev

- Prof. Gabby Sarusi**, *SenSWIR*
- Dr. Yaakov Amitai**, *Oorym*
- Mr. Ran Bar-Yosef**, *Spectralics*
- Dr. Zachary Sacks**, *Belkin Lasers*
- Prof. Ibrahim Abdulhalim**, *Photonicsys*
- Dr. Assaf Anderson**, *MaterialsZone*
- Mr. Ofer Harpak**, *Oxitone*
- Dr. Ilya Fine**, *Elfi-Tech*
- Dr. Dan Haronian**, *Enervibe*
- Prof. Yossef Ben-Ezra**, *Cellowireless*
- Dr. Cristina Canavesi**, *LighTopTech*
- Mr. Jon Donner**, *Nano-Fabrica*
- Mr. Eduardo Svetliza**, *Retsight*
- Mr. Itai Hayot**, *Scopiolabs*

Hall E

IFLA - Mid-IR Fibers and Sources  
Prof. Amiel Ishaaya

- ◆ Silica-Based Hollow-Core Optical Fibres: A New Paradigm for the Mid-Infrared  
**Jonathan Knight**, *Department of Physics, University of Bath, UK*
- ◆ Recent Advances in Mid-Infrared Fiber Lasers  
**Real Valle**, **M. Bernier**, **V. Fortin**, **F. Maes**, **S. Duval**, **F. Jobin**, **Y.O. Aydin**, **P. Paradis**, *Center for Optics Photonics and Lasers, Laval University, Canada*
- ◆ Bringing Infrared Fiber Components to the Market  
**Eric Geoffrion**, *Mohammed Saad Thorlabs (Formerly IRPhotonics), Canada*
- ◆ Fiber-Bulk Hybrid Mid-Infrared Lasers Based on Transition Metal Doped Ceramic Chalcogenides  
**S.B. Mirov**, **I.S. Moskalev**, **M.S. Mirov**, **S. Vasilyev**, **V.V. Fedorov**, **D.V. Martyshkin**, **O. Gafarov**, **V. Smolski**, *Department of Physics, University of Alabama at Birmingham, USA; IPG Photonics Corporation, Southeast Technology Center, 100 Lucerne Ln, USA*

Monday, April 1, 2019

14:00 - 15:30 | Parallel Session 2

Key: ◆=Invited/Keynote Speaker

15:30 – 16:00 | ☕ Coffee Break and Posters Review of Topics: *Non-Linear Optics and Lasers and Applications*

Monday, April 1, 2019


16:00 – 17:30 | Parallel Session 3

16:00 – 17:30   Parallel Session 3				
Hall A	Hall B	Hall C	Hall D	Hall E
<p><b>Micro and Nano Optics</b> <b>Prof. Koby Scheuer</b></p> <p>Multifunctional Spectrally Interleaved Geometric Phase Metasurface <b>Elhanan Maguid, Michael Yannai, Arkady Faerman, Qitong Li, Jung-Hwan Song, Vladimir Kleiner, Mark L. Brongersma, Erez Hasman,</b> <i>Faculty of Mechanical Engineering and Russell Berrie Nanotechnology Institute, Technion – Israel Institute of Technology, Israel</i></p> <p>Guiding Surface Plasmon Polaritons on Curved Surfaces <b>Ana Libster-Hershko, Roy Shiloh, Ady Arie,</b> <i>Faculty of Engineering, Tel Aviv University, Israel</i></p> <p>Reconfigurable Semiconductor Metasurface Resonators <b>Tomer Lewi,</b> <i>Bar-Ilan University, Israel</i></p> <p>Non-Equilibrium Theory of “Hot” Electron Generation in Plasmonic Nanostructures under Illumination – Thermal vs. Non-Thermal Effects <b>Yonatan Sivan, Yonatan Dubi,</b> <i>Ben-Gurion University, Israel</i></p> <p>Optimization of Coupling Gratings for Lightguide-Based Displays <b>Huiying Zhong, Site Zhang, Roberto Knoth, Stefan Steiner, Site Zhang, Yichen Liu, Christian Hellmann, Frank Wyrowski,</b> <i>LightTrans International UG; Applied Computational Optics Group, Friedrich-Schiller-Universität Jena, Germany; Wyrowski Photonics GmbH Applied Computational Optics Group, Friedrich-Schiller-Universität Jena, Germany</i></p> <p>Random Topological Defects-Induced Spin-Enabled Photonic Transport by Metasurfaces <b>Bo Wang, Elhanan Maguid, Michael Yannai, Vladimir Kleiner, Erez Hasman,</b> <i>Technion – Israel Institute of Technology, Israel</i></p>	<p><b>Lasers and Applications</b> <b>Dr. Ariel Bruner</b></p> <p>♦ Progress in VECSEL Technology and Emerging Applications <b>Mircea Guina, Jussi-Pekka Penttinen,</b> <i>Tampere University, Finland; Vexlum Ltd., Tampere, Finland</i></p> <p>♦ An Overview of the Israeli Consortium on Advanced Laser Technologies for Industrial Applications (ALTIA) <b>Kobi Lasri,</b> <i>V-Gen Ltd., MKS Spectra-Physics, Israel</i></p> <p>Optically Pumped Flip-Chip Wafer-Fused Vecsels Emitting at 1.55-<math>\mu\text{m}</math> Wavelength <b>Eli Kapon, Alexandru Mereuta, Kostiantyn Nechay, Andrei Caliman, Grigore Suruceanu, Pascal Gallo, Mircea Guina,</b> <i>Lake Diamond SA, Switzerland; Tampere University of Technology, Optoelectronics Research Centre, Tampere, Finland; Ecole Polytechnique Federale de Lausanne-EPFL, Laboratory of Physics of Nanostructures, Lausanne, Switzerland</i></p> <p>Towards Room Temperature Operation of Terahertz Quantum Cascade Lasers: Carrier Leakage Engineering as a Novel Design Concept <b>Asaf Albo,</b> <i>Bar Ilan University, Israel</i></p> <p>Micron-Scale Additive Manufacturing Using Laser Transfer of Metals <b>Niv Gorodesky, Sharona Cohen, Marc Altman, Zvi Kotler, Zeev Zalevsky,</b> <i>Faculty of Engineering and the Nanotechnology center, Bar-Ilan University; Additive Manufacturing Lab, Orbotech Ltd</i></p>	<p><b>Spectroscopic and Optical Sensing</b> <b>Dr. Ayala Ronen</b></p> <p>♦ Atmospheric Optics: Beauty and Science <b>Joseph A Shaw,</b> <i>Montana State University, USA</i></p> <p>Accurate Synchronization of Spectrometers for Laser Induced Breakdown Spectroscopy Using New CMOS Sensors <b>Niv Gorodesky, Sharona Cohen, Marc Altman, Zvi Kotler, Zeev Zalevsky,</b> <i>Faculty of Engineering and the Nanotechnology center, Bar-Ilan University; Additive Manufacturing Lab, Orbotech Ltd</i></p> <p>Design of an All-Optical Ultrasound Transducer Based on a Microcavity Resonator <b>Silvia Soria, Gabriele Frigenti, Fulvio Ratto, Lucia Cavigli, Gualtiero Nunzi Conti, Alberto Fernandez-Bienes, Sonia Centi, Andrea Barucci, Roberto Pini, Tupak Garcia-Fernandez,</b> <i>IFAC-CNR Institute of Applied Physics “N. Carrara”, Italy</i></p> <p>NDIR Gas Measurement in Harsh Environments by Advanced IR Components and Packaging Technologies <b>Steffen Biermann, André Magi, Patrick Sachse,</b> <i>Micro-Hybrid Electronic GmbH, Germany</i></p> <p>Measurements and Modeling of Laser Propagation in Fog and Clouds <b>O. Yaron, A. Ronen,</b> <i>Rafael Advanced Defense Systems Ltd; IIBR, Israel institute for Biological Research</i></p> <p>Application of Hyper-Spectral LIF-LIDAR Based on ICCD for Detection and Identification of Bio-Aerosol Clouds &amp; Studying its Formation Dynamic <b>Ofir Shoshanim, Adva Baratz,</b> <i>Israel Institute for Biological Research, Israel</i></p>	<p><b>Non-Linear Optics</b> <b>Dr. Haim Suchowski</b></p> <p>♦ Quantum Design of Coherent X-rays with Spin and Orbital Angular Momentum <b>Tenio Popmintchev,</b> <i>University of California San Diego, USA</i></p> <p>Loss of Time Reversibility in Absorption-Free Focusing Media <b>Amir Sagiv, Adi Ditzkowski, Gadi Fibich,</b> <i>Faculty of Engineering, Tel Aviv University, Israel</i></p> <p>High Energy KGW/Tm:YLF Raman Laser <b>Uzziel Sheintop (JCT), Pavel Komm (HUJI), Gilad Marcus (HUJI), Salman Noach (JCT);</b> <i>Jerusalem College of Technology, Israel</i></p> <p>Thermo-Optical Nonlinearity of Single Metallic Nanoparticle <b>Jeng Wai Un, Shi-Wei Chu, Yonatan Sivan,</b> <i>Ben Gurion University, Electro-Optics Engineering, Israel</i></p> <p>Indefinitely Switchable Nonlinear Optical Nanoantennas for Ultrafast Stream Cryptography <b>Roman E. Noskov, Pujuan Ma, Lei Gao, Pavel Ginzburg,</b> <i>Tel Aviv University, Israel; Soochow University, Suzhou, China</i></p>	<p><b>IFLA – Fiber Lasers and Applications I</b> <b>Dr. Boaz Lissak</b></p> <p>♦ Prospects in Power Scaling of Coherently Coupled Fiber Lasers and Amplifiers <b>Andreas Tünnermann, Jens Limpert,</b> <i>Fraunhofer Institute for Applied Optics and Precision Engineering, Center of Excellence in Photonics, Jena, Germany</i></p> <p>♦ Amplifiers and Lasers with Active Tapered Double Clad Fibers <b>Valery Filippov,</b> <i>Ampliconyx, Finland</i></p> <p>♦ Beam Cleaning Effects in Multimode LD-Pumped GRIN-Fiber Raman Laser <b>S. A. Babin, E. A. Evmenova, A. G. Kuznetsov, S. I. Kablukov, E. V. Podilov,</b> <i>Novosibirsk State University; Institute of Automation and Electrometry SB RAS, Novosibirsk, Russia</i></p> <p>♦ High Pulse Energy Single Frequency 1.55micron Fiber Amplifiers <b>Shibin Jiang,</b> <i>AdValue, US</i></p> <p>Robust Setup for Generation of High-Power CW Green Laser <b>Yishai Albeck, Steven Jackel, Avraham Boubli, Ziv Gross and Gabi Teller,</b> <i>CIVAN Advanced Technologies, Israel</i></p>

Key: ♦=Invited/Keynote Speaker

## Tuesday, April 2, 2019

08:00 – 09:00

 Coffee and Registration

09:00 – 11:30

### Opening Session – Plenary Hall

09:00 – 09:10

**Chairperson: Prof. Abraham Katzir,**  
*Chairman of Oasis 2019*

09:10 – 09:15

**Eng. Ehud Noff,**  
*Chairman of AEAI – Association of Engineers, Architects and Graduates in Technological Sciences in Israel*

09:15 – 09:55

**Plenary Lecture:**  
Recovering Lost Information in the Digital World  
**Prof. Yonina Eldar,**  
Weizmann Institute of Science, Israel

09:55 – 10:35

**Plenary Lecture:**  
Gravitational-wave Interferometers: A Revolution in the Way We Observe the Universe  
**Prof. David Reitze,**  
*The LIGO Laboratory, Caltech, Pasadena, CA, USA*

10:35 – 10:50

 Coffee Break

10:50 – 11:30

**Plenary Lecture:**  
Landmarks in Quantum Optics: From Photons to Atoms  
**Prof. Alain Aspect,**  
*Institut d'Optique, Paris, France*

11:30 – 11:50

 Coffee Break and Posters Review of Topics: *Atomic and Quantum Optics, Photonics in Defense, and Electro Optics Devices*

## Tuesday, April 2, 2019

Tuesday, April 2, 2019

11:50 – 13:20 | Parallel Session 4

## 11:50 – 13:20 | Parallel Session 4

Hall A	Hall B	Hall C	Hall D	Hall E
<p><b>Solar Energy</b> <b>Prof. David Cahen</b></p> <ul style="list-style-type: none"> <li>◆ Experimental Realization and Theoretical Understanding of High Open-Circuit Voltages in LeadHalide Perovskites <b>Thomas Kirchartz</b>, Faculty of Engineering and CENIDE, University of Duisburg-Essen, Duisburg, Germany; Forschungszentrum Jülich, Germany</li> <li>◆ Stability Studies of Perovskite PV Materials and Devices Using Concentrated Sunlight <b>Iris Visoly-Fisher</b>, Dept. of Solar Energy and Environmental Physics, J. Blaustein Institutes for Desert Research, Ben-Gurion University of the Negev, Midreshet Ben-Gurion, Israel</li> <li>◆ Low Dimensional Perovskite: Stability, Solar Cells and Nanostructures <b>Lioz Etgar</b>, The Institute of Chemistry, The Hebrew University of Jerusalem, Israel</li> <li>◆ Photovoltaics for Internet of Things vs. Solar Power – the Optics Factor <b>Barry Breen</b>, CEO, 3GSolar Photovoltaics Ltd, Israel</li> <li>◆ On Optimization of Heliostat Fields for Solar Central Receiver Plants <b>Pinchas Doron, Leon Karni, Marina Izmailov, Jacob Karni</b>, Azrieli College of Engineering, Jerusalem, Israel; SolPeD International Ltd., Rehovot, Israel</li> </ul>	<p><b>Electro Optics Devices</b> <b>Prof. Dan Marom</b></p> <ul style="list-style-type: none"> <li>◆ Highly Integrated Silicon Photonic Subsystems For Real World Applications <b>Christopher Doerr</b>, Acacia Communications, USA</li> <li>◆ The Multiple-Functionality of Double Injection <b>Roei Aviram Cohen, Dr. Ofer Amrani and Prof. Shlomo Ruschin</b>, Tel Aviv University, Israel</li> <li>◆ Eight-Channel Dense-Wavelength-Division Multiplexer in Silicon Photonics <b>D. Munk, M. Katzman, N. Inbar, Y. Kaganovskii, A. Misra, M. Hen, M. Priel, A. Bergman, M. Feldberg, M. Tkachev, M. Vofsi, M. Rosenbluh, T. Schneider, and A. Zadok</b>, Faculty of Engineering, Bar-Ilan University, Israel; Bar-Ilan Institute for Nano-Technology and Advanced Materials (BINA), Bar-Ilan University, Israel; Tower-Jazz Semiconductors, Migdal-Ha'Emek, Israel; Department of Physics, Bar-Ilan University, Israel; Institute for High-Frequency Technology, Technical University of Braunschweig, Germany</li> <li>◆ Maxwell Fisheye for Integrated Optics <b>Y. Blinder, O. Bitton, R. Bruch, and U. Leonhardt</b>, Weizmann Institute of Science, Israel</li> <li>◆ Complex Fiber Micro Devices <b>Shir Shahal, Moti Fridman</b>, Faculty of Engineering and the Institute of Nanotechnology and Advanced Materials, Bar Ilan University, Israel</li> <li>◆ Exploring 2.5 and 3D Integration to Meet the Bandwidth Density Challenge <b>Oded Raz, Chenhui Li, Teng Li, Patty Stabile</b>, Department of Electrical Engineering, TU/Eindhoven, Netherlands</li> </ul>	<p><b>Photonics in Defense</b> <b>Dr. Joelle Schlesinger, Dr. Ami Yaacobi</b></p> <ul style="list-style-type: none"> <li>◆ Performance Assessment of Electro-optical Imagers: TRM4 Model and Imaging Simulation <b>Stefan Kessler</b>, Department of Optronics, Fraunhofer Institute of Optronics, System Technologies, and Image Exploitation IOSB, Ettlingen, Germany</li> <li>◆ Quantification of Human Color Perception Applied in TRM Model for Range Prediction of Imaging Color Systems <b>Ephi Pinsky</b>, RAFAEL Advanced Defense Systems Ltd, Israel</li> <li>◆ New Devices and Materials for Infrared Detectors <b>P.C. Klipstein</b>, Semiconductor Devices Research Department, Israel</li> <li>◆ Applications of High Power Lasers in the Battlefield <b>Yehoshua Kalisky</b>, Electrical and Electronics Engineering Department, SCE, Israel</li> <li>◆ Breaking Through the Atmospheric Barrier <b>Daniel Golubchik</b>, Rafael, Israel</li> </ul>	<p><b>Optical Engineering</b> <b>Dr. Hanni Inbar</b></p> <ul style="list-style-type: none"> <li>◆ Transforming Optical Networks Design – Intelligent Networks in the Nonlinear Regime <b>Polina Bayvel</b>, Department of Electronic &amp; Electrical Engineering, University College London, UK</li> <li>◆ Nonlinear Optical Holograms for Shaping of Light Beams <b>Ady Arie</b>, School of Electrical Engineering, Tel Aviv University, Israel</li> <li>◆ Sub-Nanometer Overlay Metrology <b>Yuri Paskover</b>, KLA, Israel</li> <li>◆ Beam Shaping Based on Aspheres and Freeforms <b>Stefan Klinzing</b>, Ulrike Fuchs, Thomas Hegenbart; Asphericon GmbH, Germany</li> <li>◆ Layout and Analysis of Fused Silica Precision Glass Molding Processes <b>Tim Grunwald, Olaf Dambon, Thomas Bergs</b>, Fraunhofer IPT, Fine Machining and Optics Department, Germany; Tool Machine Laboratory (WZL) of RWTH Aachen University, Germany</li> </ul>	<p><b>IFLA – Fiber Lasers and Applications II</b> <b>Dr. Zachary Sacks</b></p> <ul style="list-style-type: none"> <li>◆ Unconventional High-Power Fiber Lasers for Improved Wavelength Coverage <b>Johan Nilsson</b>, University Southampton UK</li> <li>◆ Recent Developments in High Power Industrial Fiber Lasers <b>Scott Christensen</b>, IPG Photonics, USA</li> <li>◆ Advanced Fiber Laser Design with Pulse-On-Demand for Next Generation Airborne Lidar Applications <b>Doron Barnes</b>, VGen, Israel</li> <li>◆ Multi KW, High Power Laser with Single Mode (SM) Dynamic Beam using Coherent Beam Combining (CBC) <b>Benayahu Urbach, Yaniv Vinde and Eyal Shekel</b>, Civan Ltd., Israel</li> <li>◆ Fiber Optic Distributed Acoustic Sensing (DAS) Data Processing via Artificial Neural Networks <b>Lihl Shiloh, Avishay Eyal Raja Giryes</b>, PhD student, Faculty of Engineering, Tel Aviv University, Israel</li> </ul>
13:20 – 14:20   🍴 Lunch Break (Lobby Floor)				
13:50 – 14:20   📄 Posters Review of Topics: <i>Optical Engineering, and Ultrafast Phenomena</i>				

Key: ◆=Invited/Keynote Speaker

14:20 - 15:50   Parallel Session 5				
Hall A	Hall B	Hall C	Hall D	Hall E
<p><b>Ultrafast Phenomena</b> Prof. Oren Cohen</p> <ul style="list-style-type: none"> <li>◆ Spatiotemporal Dynamics of Optical Pulse Propagation in Multimode Fibers <b>Frank Wise</b>, Department of Applied Physics, Cornell University, USA</li> <li>Self-Compressed Polarization Controlled Red Shifted Soliton from Supercontinuum for 1 μm CPA Systems <b>Zaharit Refaeli, Yariv Shamir, and Gilad Marcus</b>, Soreq, Israel</li> <li>Interferometric Attosecond Lock-In Measurement of Extreme Ultraviolet Circular Dichroism <b>Doron Azoury, Omer Kneller, Michael Krüger, Barry D. Bruner, Oren Cohen, Yann Mairesse, Nirit Dudovich</b>, Weizmann Institute of Science, Israel</li> <li>Two-photon Excitation of an Exciton-Polariton Condensate <b>Nadav Landau, Dmitry Panna, Sebastian Brodbeck, Christian Schneider, Sven Höfling, Alex Hayat</b>, Department of Electrical Engineering, Technion, Israel; Technische Physik, Universität Würzburg, Germany</li> <li>◆ Revealing the Motion of Hybrid Light-Matter Excitations by Ultrafast Microscopy <b>Tal Schwartz, Georgi Ro</b>, Physical Chemistry Department and Tel Aviv Center for Light-Matter Interaction, Tel Aviv University, Israel</li> </ul>	<p><b>Non-Linear Optics</b> Dr. Haim Suchowski</p> <ul style="list-style-type: none"> <li>Opto-Mechanical Time-Domain Reflectometry <b>G. Bashan, H. H. Diamandi, Y. London, E. Preter, A. Zadok</b>, Faculty of Engineering and Institute for Nano-Technology and Advanced Materials, Bar-Ilan University, Israel</li> <li>Observation of Strong Nonlinear Interactions in Parametric Down-Conversion of X-Rays into Ultraviolet Radiation <b>Or Sefi</b>, Bar-Ilan University, Israel</li> <li>THz Generation and Manipulation by a Nonlinear Metasurface Fresnel Zone Plate <b>Eviatar Minerbi, Shay Keren-Zur, Tal Ellenbogen</b>, Faculty of Engineering, Tel Aviv University, Israel</li> <li>Enhanced Frequency Doubling of High-Power CW Fiber Lasers in The Presence of Doubler Phase-Mismatch Through Injection of a Conjugate Seed Beam <b>Steven Jackel, Yishai Albeck</b>, Civan Advanced Technologies, Israel</li> <li>Stabilizing Soliton-Based Propagation in Nonlinear Optical Waveguide Loops by Frequency-Dependent Linear Gain-Loss and the Raman Self-Frequency Shift <b>Avner Peleg, Debananda Chakraborty</b>, Ort Braude College of Engineering, Israel, New Jersey City University, USA</li> <li>Advantageous Hurdles in Rotational Echo Spectroscopy <b>Dina Rosenberg, Sharly Fleischer, Ran Damari</b>, School of Chemistry, Tel Aviv University, Israel</li> </ul>	<p><b>Photonics in Defense</b> Dr. Joelle Schlesinger, Dr. Ami Yaacobi</p> <ul style="list-style-type: none"> <li>Mission Ready Optics: Conquering Frontiers in Aerospace &amp; Defense Contamination Control with First Contact Polymers <b>James Hamilton</b>, University of Wisconsin-Platteville, Department of Chemistry &amp; Engineering Physics, USA</li> <li>Controlled Distortion for Optical-Equivalent Zoom Lens with No Moving Parts <b>Paula Roit</b>, Rafael, USA</li> <li>Lenses on Diet <b>Oded Arnon</b>, Arnon Optical Engineering, Israel</li> <li>Bullet Speed System - Calibration Method <b>Uri Maurice</b>, QCC Hazorea, Israel</li> <li>◆ Photonic Integrated Interferometric Telescopes - Scalable and High-Resolution Imaging with 2D/3D Integrated Photonic Chips <b>S. J. Ben Yoo</b>, UC Davis, USA</li> </ul>	<p><b>Atomic and Quantum Optics</b> Dr. Barak Dayan</p> <ul style="list-style-type: none"> <li>◆ Quantum Photonics for Computer Security and other Applications <b>Philip Walther</b>, Faculty of Physics, University of Vienna, Austria</li> <li>◆ New Frontiers for Light Storage at Room Temperature <b>Ofer Firstenberg</b>, Weizmann Institute of Science, Israel</li> <li>Demonstration of a Two-Qubit Photon-Atom Gate and Engineering Quantum States of Light <b>Ziv Aqua, Orel Bechler, Adrien Borne, Serge Rosenblum, Gabriel Guendelman, Ori Ezra Mor, Moran Netser, Tal Ohana, Niv Drucker, Ran Finkelstein, Yulia Lovsky, Rachel Bruch, Doron Gurovich, Ehud Shafir, Barak Dayan</b>, Weizmann Institute of Science, Israel</li> <li>Quadrature Phase Detection in Atom Interferometry <b>Chen Avinadav, Dmitry Yankelev, Nir Davidson, Ofer Firstenberg</b>, Weizmann Institute of Science, Physics of Complex System, Israel; Rafael Ltd., Israel</li> <li>Squeezing-Enhancement of Stimulated and Spontaneous Raman Spectroscopy <b>Yoad Michael, Leon Bello, Michael Rosenbluh, Avi Pe'er</b>, Bar-Ilan University, Israel</li> </ul>	<p><b>IFLA - Ultrafast Fiber Sources and Related Applications</b> Dr. Zeev Zalevsky</p> <ul style="list-style-type: none"> <li>◆ Coherent Pulse Stacking Amplification - Extending Fiber Chirped Pulse Amplification by Two Orders of Magnitude <b>Almantas Galvanauskas</b>, University of Michigan, USA</li> <li>◆ The Myths, the Reality, and the Unexplored Potential of SESAM Technology for Mode-Locking <b>Mircea Guina</b>, Optoelectronics Research Centre, Tampere University, Finland</li> <li>◆ Tailoring the Spectral Response in Fibers by Localized Fs Laser Modifications <b>S. Nolte, T. A. Göbel, M. Heck, R. G. Krämer, C. Matzdorf, D. Richter</b>, Friedrich Schiller University Jena, Institute of Applied Physics</li> <li>◆ Asynchronous Optical Sampling Technique for Pump-Probe Measurements <b>Benjamin Sprenger</b>, Friedrich Schiller University Jena, Institute of Applied Physics</li> <li>◆ Megawatt Single-Mode Lasers <b>Frank Wise</b>, Cornell University, USA</li> </ul>
<p>15:50 - 16:20   ☕ Coffee Break and Posters Review of Topics: Solar Energy and Spectroscopic and Optical Sensing</p>				

Key: ◆=Invited/Keynote Speaker

16:20 – 17:50   Parallel Session 6				
Hall A	Hall B	Hall C	Hall D	Hall E
<p><b>Solar Energy</b> <b>Dr. Iris Visoly-Fisher</b></p> <ul style="list-style-type: none"> <li>◆ Coupling “Regular” Quantum Dots with Lead Halide Perovskites <b>Dan Oron</b>, Dept. of Complex Systems Weizmann Institute of Science, Israel</li> <li>◆ Magnetism in Nominally Non-Magnetic Semiconductor Nanocrystals <b>Efrat Lifshitz</b>, Schulich Faculty of Chemistry, Russell Berrie Nanotechnology Institute, Solid State Institute, Technion, Israel</li> </ul> <p>Luminescent Solar Power-Quantum Separation between Free-Energy and Heat For Cost-Effective Base-Load Solar Energy Generation <b>Carmel Rotschild, Einat Carmon, Bar Simor, Bella Mali, Beatrice Uziely, Tamar Sella</b>, Department of Surgery, Department of Pathology, Sharet Institute of Oncology, Department of Radiology, The Hebrew University Hadassah Medical School; Mechanical Engineering Department, Technion – Israel Institute of Technology, Israel</p> <p>Observing the Green Flash in the Laboratory <b>Stephen G. Lipson, Tomer ben Aroush, Saber Boulahjar</b>, Physics Dept, Technion – Israel Institute of Technology, and Physics Dept, Ort Braude College, Israel</p> <p>Photon Management Utilizing Deep-Subwavelength Sidewall Features in Nanopillar Arrays for Broadband Absorption Enhancement of the Solar Radiation <b>Ashish Prajapati, Yevgeny Faingold, Shay Fadida, Jordi Llobet, Mariana Antunes, Helder Fonseca, Carlos Calaza, João Gaspar, Gil Shalev</b>, Ben Gurion University Electrical and Computer Engineering Department, Israel</p>	<p><b>Spectroscopic and Optical Sensing</b> <b>Dr. Ayala Ronen</b></p> <p>Measuring the BRDF Optical Properties of Surfaces <b>Dan Sheffer, Adam D. Devir, Alexey Kravchouk, Yair Bar Ilan, Gal Yehuda, Benny Milgrom</b>, IARD SENSING SOLUTIONS LTD, Israel</p> <p>Toward UAV Based Compact Thermal Infrared Hyperspectral Imaging Solution for Real-time Gas Detection Identification and Quantification <b>Stephane Boubanga Tombet, Frederick Marcotte, Eric Guyot, Martin Chamberland</b>, Telops Inc., France</p> <p>Multispectral and Thermal Detection Methods for Finding Missing Persons <b>Yishay Bruckental, Ori Cohen, Meir Chen, Yoav Stoler, Benny Milgrom, Gal Yehuda, Dan Sheffer</b>, IARD Sensing Solutions Ltd., Israel</p> <p>Snapshot Spectral Imaging Using Two Cameras, Optical Diffuser and Compressed Sensing Algorithms <b>Jonathan Hauser</b>, Faculty of Engineering, Tel Aviv University, Israel</p> <p>Silver Halide Fiber Sensors with Surface Chemistry for Specific Protein Immobilization Using Infrared Evanescent Wave Spectroscopy <b>H. Michael Heise, Sven Delebeck, Benjamin Schmitz, Andreas Nabers, Klaus Gerwert, Anne Habermehl, Ulrich Lemmer</b>, South-Westphalia University of Applied Sciences, Germany; Ruhr-University Bochum, Germany; Karlsruher Institut für Technologie, Germany</p> <p>Multi-Modal Fiber-Probe Spectroscopy for Tissue Diagnostics and Biological Fluid Sensing <b>F. S. Pavone, R. Cicchi, C. Credi, E. Baria, C. Dallari, O. Bibikova, V. Artyushenko, S. Centi, F. Ratto, R. Pini</b>, LENS, Italy</p>	<p><b>Electro Optics in Industry</b> <b>Dr. Rami Cohen</b></p> <p>Optical Wafer Inspection Challenges – Optimizing Optical Configuration for Detection <b>Tal Kuzniz</b>, Applied Materials, Process Development, Israel</p> <ul style="list-style-type: none"> <li>◆ Permanent USP Laser Marking of Stainless Steel Devices without Post-Processing <b>Daniel Seitz</b>, Coherent Munich GmbH&amp;Co, Germany</li> </ul> <p>Early Detection of Fires from Space <b>Shimshon (Steven) Lashansky, Michael Gilichinsky and Yuval Erez</b>, Elop, Elbit system, Israel</p> <p>Yb: YAG and Nd:YAG Crystals for High Energy DPSSL <b>Karel Nejezchleb, Jana Preclíková, Štěpán Uxa, Martin Divoký, Mihai-George Muresan</b>, CRYTUR, spol. s r.o., Czech republic</p> <p>HILASE IoP ASCR</p> <ul style="list-style-type: none"> <li>◆ The Recent Advances in Quantitative Imaging and Spectroscopy Instrumentation for EUV-SWIR Regime <b>Ravi Guntupalli</b>, Princeton Instruments, USA</li> </ul>	<p><b>Electro Optics Devices</b> <b>Prof. Dan Marom</b></p> <ul style="list-style-type: none"> <li>◆ Integrated Nanophotonics Technology and Applications <b>Y. Fainman</b>, Department of Electrical and Computer Engineering, University of California, San Diego, USA</li> </ul> <p>Superconducting Light-Emitting Diode <b>Shlomi Bouscher, Dmitry Panna, Krishna Balasubramanian, Alex Hayat</b>, Department of Electrical Engineering, Technion – Israel Institute of Technology, Israel</p> <p>E-SWIR High Operating Temperature P-N Photodetectors <b>I. Shafir, D. C. Elias, N. Sicron, M. Katz, N. Snapi, O. Klin, A. Glozman, E. Weiss, and G. Sarusi</b>, Solid State Physics Department, Applied Physics Division, Soreq NRC, Israel; SCD-SemiConductor Devices, Haifa, Israel; Electrooptics and Photonics Engineering Unit, Ben-Gurion University of the Negev, Beer-Seva, Israel</p> <p>Optical Gas Imaging Using Liquid Crystal Absorption Properties <b>Karni Wolowelsky, Amir Gil, Moshe Elkabets, Iliya Romm, Cukurel Beni, Carmel Rotschild</b>, Technion – Israel Institute of Technology, Israel</p> <ul style="list-style-type: none"> <li>◆ Chip-Scale Metrology: Coupling and Interfacing Atoms, Kerr Frequency-Combs and Cavity <b>Liron Stern</b>, National Institute for Standards and Technology, CO, USA</li> </ul>	<p><b>IFLA – Fiber Components</b> <b>Prof. Amiel Ishaaya</b></p> <ul style="list-style-type: none"> <li>◆ Functionalized Micro-Nano-Fibres and Hybrid Photonic Crystal Fibres: The Role of New Materials <b>George Kakarantzas</b>, Theoretical and Physical Chemistry Institute, Athens, Greece</li> <li>◆ In-Fiber Speckle-Based Interferometry for Fabric Integrated, Non-Contact Bio-Sensor of Vital Signs <b>Zeev Zalevsky</b>, Faculty of Engineering, Bar Ilan University Israel</li> <li>◆ Water-Wave Lasers <b>Tal Carmon</b>, Technion – Israel Institute of Technology, Israel</li> </ul> <p>Improved Sensitivity and Spatial Resolution in Fiber Bragg Gratings Dynamic Strain Sensing System via Iterative Soft Thresholding Algorithm <b>Roy Shen-Tzur, Lihi Shiloh, Avishay Eyal and Raja Giryas</b>, Physical Electronics Department, Tel Aviv University, Israel</p> <p>High Resolution Heterodyne Measurement of Phase Shifted Fiber Bragg Gratings <b>Garry Berkovic, Ehud Shafir</b>, Applied Physics Department, Soreq NRC Yavne, Israel</p>

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