

08:00 – 09:00  
 09:00 – 10:55 **Opening session – Plenary Hall**  
 09:00 – 09:25 **Chairperson:** Professor **Abraham Katzir**, Chairman of Oasis 2022  
 09:25 – 09:30 **Mr. Guy Shasha** Chairman of the Association of Engineers, Architects and Graduates in Technological Sciences in Israel  
 09:30 – 10:15 **Plenary lecture:**  
 The future of Organic Optoelectronics beyond OLED  
**Prof. Stephen Forrest**, College of Engineering, University of Michigan, Michigan, USA  
 10:15 – 10:55 **Plenary lecture:**  
 Attosecond Science  
**Prof. Nirit Dudovich**, Department of Physics, The Weizmann Institute, Rehovot, Israel  
 10:55 – 11:20 Coffee break and Posters review of topics: *Lasers and Applications & Electro-Optics in Defense & Nonlinear Optics*

11:20 – 12:50 | Parallel Session 1

Hall A	Hall B	Hall C	Hall D	Hall E
<b>Optical Engineering</b> <b>Dr. Hanni Inbar</b> <b>11:20 Invited speaker</b>   Paradigm-shifts in Neurosurgery with Lensless 3D Fiber Endoscopy using Deep Learning <b>Prof. Jürgen Czarske</b> , Center Biomedical Computational Laser Systems (BIOLAS), Faculty Electrical and Computer Engineering, Co-opted Professor for Physics, School of Science, TU Dresden, Dresden, Germany <b>11:47 Invited speaker</b>   Deep Learning for Extreme Optical Compressive Imaging   <b>Prof. Adrian Stern</b> , Electrooptical Engineering Department, School of Electrical and Computer Engineering, Ben-Gurion University of the Negev, Beer-Sheva, Israel <b>12:12</b> How to turn a Puddle of Liquid into a Diffractive Optical Element <b>Mr. Jonathan Ericson</b> , Faculty of Mechanical Engineering, Technion – Israel Institute of Technology, Haifa, Israel <b>12:25</b> Squared TopHat Profiles for Laser Material Processing <b>Mr. Silvio Vater</b> , asphericon GmbH, Jena, Germany <b>12:38</b> Current Freeform Metrology Methods <b>Dr. Jessica DeGroot Nelson</b> , Edmund Optics, USA	<b>Atomic and Quantum Optics</b> <b>Prof. Dan Oron</b> <b>11:20 Invited speaker</b>   Hybrid Quantum Systems with Ultra-coherent Mechanical Resonators <b>Prof. Albert Schliesser</b> , Niels Bohr Institute, Copenhagen University <b>11:48 Invited speaker</b>   Quantum Simulation with Ultracold Fermionic Atoms <b>Prof. Yoav Sagi</b> , Associate Professor, Physics Department Technion – Israel Institute of Technology, Haifa, Israel <b>12:15</b> Shaping Entangled Photons Through Emulated Turbulent Atmosphere <b>Mr. Roshen Shekel</b> , The Hebrew University of Jerusalem, Jerusalem, Israel <b>12:33</b> Free-Electron Entanglement and non-Gaussian Photonic States Through 'which-path' Information <b>Mr. Ron Ruimy</b> , Technion Israel Institute of Technology, Haifa, Israel	<b>Lasers and Applications</b> <b>Dr. Ariel Bruner</b> <b>11:20 Invited speaker</b>   High Power Single-Frequency Laser Systems for Gravitational Wave Detectors <b>Prof. Peter Wessels</b> , Laser Zentrum Hannover e.V., Germany <b>11:50</b> Active and Passive Gain Switched Ho:YAG Laser with few Nanosecond Pulse Duration <b>Mr. Yechiel Bach</b> , Jerusalem College of Technology, Jerusalem, Israel <b>12:05</b> Synchronized and Spectrally Overlapping Yb / Nd Chirped Pulse Amplifier <b>Dr. Yariv Shamir</b> , Soreq Nuclear Research Center, Yavne, Israel <b>12:20</b> Femtosecond Inscription of a Spectral Array of Fiber Bragg Gatings at the same Spot, using a Single Uniform Phase-Mask <b>Dr. Aviran Halstuch</b> , Ben-Gurion University of the Negev, Beer-Sheva, Israel <b>12:35</b> A Forward Brillouin Fiber Laser <b>Mr. Gil Bashan</b> , Bar Ilan University, Ramat-Gan, Israel	<b>Electro-Optics in Industry</b> <b>Dr. Rami Cohen</b> Sponsored by:  IDEA <b>11:20 Invited speaker</b>   Space-Proof Based Packaging of Compact Single and Entangled Photon Sources for Secure Communication <b>Dr. Erik Beckert</b> , Fraunhofer-Institute for Applied Optics and Precision Engineering (IOF), Jena, Germany <b>11:40 Invited speaker</b>   Main Features of High-performance CW Laser Optics for High-power NIR Range Applications <b>Dr. Laurynas Lukoševičius</b> , PhD, Chief Scientist, Altechna, Vilnius, Lithuania <b>12:00 Invited speaker</b>   Common Path Interferometry: Towards Non-Destructive Testing of Functional Damage in CW Regime <b>Mr. Justinas Galinis</b> , UAB Lidaris, Vilnius, Lithuania <b>12:20</b> Green Wavelength Lasers Improve Copper Materials Processing <b>Dr. Dror Shayovitz</b> , Civan Lasers, Israel <b>12:35</b> On-tool Polarimetry for Detection Optimization <b>Dr. Ilan Harel</b> , Applied Materials, Israel	<b>Electro-Optics in Defense</b> <b>Dr. Ami Yaacobi</b> <b>11:20 Invited speaker</b>   Adaptive Wavefront Control with Coherent Fiber Array Systems <b>Prof. Mikhail A. Vorontsov</b> , Department of Electro-Optics and Photonics, University of Dayton, Ohio, and Optonica, Spring Valley, Ohio <b>11:45 Invited speaker</b>   Atmospheric Turbulence & Propagation Study with Deep Machine Learning <b>Prof. Mikhail A. Vorontsov</b> , Department of Electro-Optics and Photonics, University of Dayton, Ohio, and Optonica, Spring Valley, Ohio <b>12:15</b> Phase Retrieval and More Approaches for Wavefront Sensorless Adaptive Optics <b>Dr. Bar Peled</b> , Rafael Advanced Defense Systems, Israel <b>12:33</b> Diode Pumped Alkali Laser: Current Status and Prospects <b>Dr. Ilan Hakimi</b> , Rafael Advanced Defense Systems, Israel
12:50 – 13:50   Lunch Break 				
13:50 – 14:15   Poster Review of Topics: Electro-Optic Devices & Optical Engineering				

14:15 – 15:45 | Parallel Session 2

Hall A	Hall B	Hall C	Hall D	Hall E
<b>Electro-Optics Devices</b> <b>Dr. Ilya Goykhman</b> <b>14:15 Invited speaker</b>   Application of 2D Materials in Photonic Sensing and Electronics <b>Prof. Thomas Mueller</b> , Vienna University of Technology, Institute of Photonics, Vienna, Austria <b>14:35 Invited speaker</b>   Modelling Optoelectronic Applications based on Graphene <b>Prof. Eleftherios Lidorikis</b> , Computational Materials Science Laboratory, Department of Materials Science and Engineering, University of Ioannina; Institute of Materials Science and Computing, University Research Center of Ioannina, Ioannina, Greece <b>14:55 Invited speaker</b>   Active Metasurfaces <b>Prof. Uriel Levi</b> , Department of Applied Physics, Center for Nanoscience and Nanotechnology, The Hebrew University of Jerusalem, Jerusalem, Israel <b>15:15</b> Orthogonal Sub-Sampled Analog-to-Digital and Digital-to-Analog Conversion <b>Prof. Thomas Schneider</b> , Technical University of Braunschweig, Germany <b>15:25</b> Transparent, Optically Lossless and Thermally Efficient 2D MoS2 Heaters Integrated with Silicon Microring Resonators <b>Mr. Dor Oz</b> , Technion – Israel Institute of Technology, Haifa, Israel <b>15:35</b> Tunable Electro-Optical Blockade and Switching of Propagating Exciton-Polaritons <b>Mr. Dror Liran</b> , The Hebrew University of Jerusalem, Jerusalem, Israel	<b>Spectroscopy and Optical Sensing</b> <b>Dr. Ayala Ronen</b> <b>14:15 Invited speaker</b>   Coherent Free-Space Optical Communications <b>Dr. Szymon Gladysz</b> , Fraunhofer Institute of Optonics, System Technologies and Image Exploitation, Germany <b>14:40</b> Characterization of Sub Inversion Layer Haze Pockets in the Summer Season of the Israeli Coastline with IR Imager <b>Dr. Eyal Agassi</b> , Israel Institute for Biological Research, Ness Ziona, Israel <b>14:53</b> Application of 3D Volumetric Scattering-Tomography to in-lab Cloud-Cell <b>Dr. Masada Tsabari</b> , Technion – Israel Institute of Technology, Haifa, Israel <b>15:06</b> Optical Strain and Magnetic field Sensors based on Whispering Gallery Modes Microresonators <b>Dr. Eyal Yacoby</b> , Soreq Nuclear Research Center, Yavne, Israel <b>15:19</b> Ellipsometric Surface Plasmon Resonance Sensor using Polarization Camera for Real-Time Sensing Applications <b>Mr. Nipun Vashishta</b> , Ben-Gurion University of the Negev, Beer-Sheva, Israel <b>15:32</b> Forward Brillouin Point Sensor in a Multi-Core Optical Fiber <b>Ms. Keren Shemer</b> , Bar Ilan University, Ramat-Gan, Israel	<b>Start-Up</b> <b>Mr. Ran Bar-Sella</b> Sponsored by:  bank hapaalim  E I T A R 1. 270o Field Of View pancake lens based compact Virtual Reality visual engine – <b>hyperVlION</b> 2. How to Treat Amblyopia by Watching Netflix – <b>NovoSight</b> 3. From a Pilot's Helmet to Ray-ban Glasses – Making Augmented Reality a Reality – <b>OORYM</b> 4. Cloud-Based, Non-Sequential Optical Simulation – <b>3C0B0X</b> 5. What Would Work Best for Inter-Satellite link in space? Laser or RF? Practical Lessons –  BeetleSat 6. Solving hard problems in the speed of light – <b>LightSolver</b> 7. Applications of Temporal Optics –  BIRAD 8. How cooling can be achieved under sunlight –  Cold 9. Video Based Predictive Maintenance –  Scoutcam 10. Disruptive Multispectral Technologies –  adrawing 11. A New Paradigm In Vision Correction –  nopo drops 12. Nemo Nano Materials – A New Set of Material Toolbox for the Industry –  NEMO	<b>Nonlinear Optics</b> <b>Prof. Haim Suchowski</b> <b>14:15 Invited speaker</b>   Efficient Parametric Amplification via Hybridized Nonlinear Optics <b>Prof. Jeffrey Moses</b> , Cornell University, USA, School of Applied & Engineering Physics <b>14:35</b> Soliton Pair Dynamical Transition in Mode-Locked Lasers <b>Mr. Offek Tziperman</b> , Hebrew University of Jerusalem, Jerusalem, Israel <b>14:49</b> Co-located Two-Photon Absorption and AFM Imaging of CsPbBr3 Thin Films <b>Prof. Yaakov Tischler</b> , Bar Ilan University, Ramat-Gan, Israel <b>15:03</b> Interaction-based Nonlinear Optics <b>Dr. Avi Niv</b> , Ben-Gurion University of the Negev, Beer-Sheva, Israel <b>15:17</b> Direct time-of-flight Distributed Analysis of Nonlinear Forward Scattering <b>Mr. Alon Bernstein</b> , Bar Ilan University, Ramat-Gan, Israel <b>15:31</b> Nanoscale Inverse Design of Strongly Coupled, Plexcitonic Metasurfaces for Linear and Broadband Nonlinear Interaction <b>Ms. Yael Blechman</b> , Technion – Israel Institute of Technology, Haifa, Israel	<b>Optics in Medicine and Biology</b> <b>Prof. Dror Fixler</b> <b>14:15 Invited speaker</b>   Nanoparticles and Cells – Making use of Different Microscopy Techniques <b>Prof. Wolfgang Parak</b> , Universität Hamburg, Hamburg Germany <b>14:45 Invited speaker</b>   Gold Quantum Dots-Transition Metal Dichalcogenides Composite Material for Photonic-sensing <b>Prof. Mustafa Yavuz</b> , Nano and Micro Systems Lab-Waterloo Institute for Nanotechnology-University of Waterloo, Ontario Canada <b>15:05 Invited speaker</b>   Multimodal Genetically Encoded Life-Time Fluorescent Sensors for Theranostic Applications <b>Prof. Alexander Savitsky</b> , Professor of biochemistry, Head of the physical biochemistry lab A.N.Bach Institute of Biochemistry Of the Federal State Institution "Federal Research Centre Fundamentals of Biotechnology" Of the Russian Academy of Science, Moscow, Russia <b>15:25</b> Spatiotemporal Sensing and Imaging using Fluorescent Single-Walled Carbon Nanotubes for Biomedical Applications <b>Dr. Gili Bisker</b> , Tel Aviv University, Tel Aviv, Israel <b>15:35</b> Automatic Detection and Evaluation of Nasal Airway Obstruction in CT Scans of Newborns <b>Dr. Talia Yeshua</b> , The Jerusalem College of Technology
15:45 – 16:15   Coffee break and Posters review of topics: Optics in Medicine and Biology & Electro-Optics in Industry 				

16:15 – 17:45 | Parallel Session 3

Hall A	Hall B	Hall C	Hall D	Hall E
<b>Quantum Computers</b> <b>Prof. Nadav Katz</b> <b>16:15 Invited speaker</b>   Photonic Fault-Tolerant Quantum Computing, and how Single Atoms can Drastically Simplify it <b>Prof. Barak Dayan</b> , Dan Lebas & Ruth Sonnwend Professorial Chair of Physics, Weizmann Quantum Optics Group Weizmann Institute of Science, Rehovot, Israel <b>16:45</b> Increasing Communication Rates Using Photonic Hyperentangled States <b>Mrs. Liat Nemirovsky Levy</b> , Technion – Israel Institute of Technology, Haifa, Israel <b>17:00</b> Erasure Qubits: Overcoming the T1 Limit in Superconducting Circuits <b>Prof. Alex Retzker</b> , The Hebrew University of Jerusalem <b>17:15</b> Creation of Optical Cat and GKP States Using Shaped Free Electrons <b>Mr. Raphael Dahan</b> , Technion – Israel Institute of Technology, Haifa, Israel <b>17:30</b> Fast Entanglement of Weakly Interacting Harmonic Oscillators with Superconducting Qubits for Bosonic Encoded Quantum Computation <b>Mr. Asaf Diringier</b> , Technion – Israel Institute of Technology, Haifa, Israel	<b>Micro and Nano Optics</b> <b>Prof. Alina Karabchevsky</b> <b>16:15 Invited speaker</b>   Optoelectronic Cardiac Biointerfaces <b>Prof. Igor Efimov</b> , Professor of Biomedical Engineering, Professor of Medicine, Northwestern University <b>16:30 Invited speaker</b>   High-index Chalcogenides for Static and Active Mie-resonant Metaoptics <b>Dr. Tomer Lewi</b> , Faculty of Engineering and Institute for Nanotechnology and Advanced Materials (BINA), Bar Ilan University, Ramat-Gan, Israel <b>16:45</b> High-Index Deep-Subwavelength Topological Insulator Metastructures for Mid-Infrared Photonics <b>Dr. Sukanta Nandi</b> , Bar Ilan University, Ramat-Gan, Israel <b>17:10</b> Explosives Detection using SERS Substrate Based on 3D Plasmonic Hot Spots network <b>Prof. Ibrahim Abdulhalim</b> , Ben-Gurion University of the Negev, Beer-Sheva, Israel <b>17:20</b> Spin-Valley Rashba Monolayer Laser <b>Dr. Kexiu Rong</b> , Technion – Israel Institute of Technology, Haifa, Israel <b>17:30</b> Mycotoxins Raman Detection with Vertical Carbon Nanotubes <b>Prof. Uros Cvelbar</b> , Jozef Stefan Institute, Ljubljana, Slovenia	<b>Ultrafast Phenomena</b> <b>Dr. Marcus Gilad</b> <b>16:15 Invited speaker</b>   Nanoscale Control of Extreme Ultraviolet Light <b>Prof. Giulio Vampa</b> , National Research Council of Canada <b>16:40</b> Tunable Photo-Induced Free-Electron Spatial Modulation using Ultrafast Plasmonic Fields <b>Mr. Shai Tsesses</b> , Technion – Israel Institute of Technology, Haifa, Israel <b>16:52</b> Observation of Interband Berry Phase in Laser-Driven Crystals <b>Mr. Lior Faeyrman</b> , Weizmann Institute of Science, Rehovot, Israel <b>17:04</b> Sub-cycle phase resolved attosecond interferometry <b>Mr. Chen Mor</b> , Weizmann Institute of Science, Rehovot, Israel <b>17:16</b> Ultrafast High-Harmonic Microscopy <b>Dr. Sergey Zayko</b> , Max-Planck Institute, Germany <b>17:28</b> Kerr Lens Time Space Coupling Mechanism for Contrast Enhancement of Ultrashort Pulses <b>Mrs. Zaharit Refaeli</b> , Soreq Nuclear Research Center, Yavne, Israel	<b>Artificial Intelligence in Optics</b> <b>Prof. Yoav Shechtman</b> <b>16:15 Invited speaker</b>   Learning to see in the Data Age <b>Prof. Alex Bronstein</b> , Dan Broida Academic Chair; Schmidt Chair in Artificial Intelligence, The Henry & Marilyn Taub Faculty of Computer Science; Technion – Israel Institute of Technology, Haifa, Israel <b>16:45 Invited speaker</b>   Deep Learning Metamaterials <b>Prof. Willie Padilla</b> , Department of Electrical and Computer Engineering, Duke University, North Carolina, USA <b>17:15</b> Image and Video From Coded Motion Blur Using Dynamic Phase Coding <b>Mr. Erez Yosef</b> , Tel Aviv University, Tel Aviv, Israel <b>17:30</b> Optical Compressive Imaging for Defending Deep Neural Networks from Adversarial Attacks in the Physical Domain <b>Prof. Adrian Stern</b> , Ben-Gurion University of the Negev, Beer-Sheva, Israel	<b>Lasers and Applications</b> <b>Dr. Ariel Bruner</b> <b>16:15 Invited speaker</b>   Laser Defense Systems – Science Fiction Materializing <b>Dr. Yehonatan Segev</b> , Rafael Advanced Defense Systems, Israel <b>16:45</b> High Power Picosecond MOPA System with Yb-doped Tapered Double-Clad Spun Fiber <b>Dr. Valery Filippov</b> , Ampliconx Oy, Tampere, Finland <b>17:00</b> Dynamic Beam Lasers offer new Parameters for Material Processing Optimization <b>Dr. Benayahu Orbach &amp; Dr. Yaniv Vidne</b> , Civan Lasers, Israel <b>17:15</b> Insight into the Epitaxy Process of a VCSEL from the Calibration of a Single Layer to the LIV Curve <b>Mrs. Rimon Tamari</b> , Israel Center for Advanced Photonics (ICAP), Yavne, Israel <b>17:30</b> A Novel Laser Resonator <b>Mr. Avigdor Zajdman</b> , Private Consultant <b>17:45</b> First Light at the Israeli THz Superradiant Free Electron Laser <b>Dr. Ariel Nause</b> , Ariel University, Ariel, Israel

08:00 – 09:00 Coffee and registration  
 09:00 – 10:00 Opening session – Plenary Hall  
 09:00 – 09:10 Chairperson:  
 Professor Abraham Katzir,  
 Chairman of Oasis 2022  
 09:10– 09:50 **Plenary lecture:**  
 The James Webb Space Telescope:  
 First Science Results  
**Dr. Mark Clampin**, Director  
 Astrophysics Division, Science  
 Mission Directorate, NASA  
 09:50 – 10:30 **Plenary lecture:**  
 Quantum computation:  
 The second quantum revolution  
 in physics  
**Prof. Dorit Aharonov**, School  
 of Computer Science and  
 Engineering, The Hebrew  
 University of Jerusalem, Israel  
 and CSO of the Company Qedma D  
 10:30 – 10:50 Coffee break and Posters review  
 of topics: *Spectroscopy and  
 Optical Sensing & Quantum  
 Computers*

10:50 – 12:20 | Parallel Session 4

Hall A	Hall B	Hall C	Hall D	Hall E
<b>Atomic and Quantum Optics</b> <b>Prof. Dan Oron</b> <b>10:50 Invited speaker</b>   Quantum Nonlinear Optics: Strong Interaction Between Individual Photons <b>Prof. Ofer Firstenberg</b> , Weizmann Institute of Science, Rehovot, Israel <b>11:18 Invited speaker</b>   Transforming a Strain-Stabilized Ferroelectric into an Intrinsic Polar Metal with Light <b>Dr. Alon Ron</b> , Tel Aviv University, Tel Aviv, Israel <b>11:46</b> Universal Photonic-Atomic Interfaces for Ultra-Cold Atoms <b>Dr. Grisha Spektor</b> , National Institute Of Standards and Technology and Colorado University, USA <b>12:03</b> Benchmarking of Photon Counting and Number Resolving Techniques in Cameras <b>Dr. Sebastian Beer</b> , Hamamatsu Photonics GmbH, Germany	<b>Nonlinear Optics</b> <b>Prof. Haim Suchowski</b> <b>10:50 Invited speaker</b>   Versatile Laser Sources with Integrated Nonlinear Photonics <b>Prof. Scott Papp</b> , National Institute of Standards and Technology, Gaithersburg, Maryland, USA <b>11:10</b> High-power, Squeezing-Enhanced Interferometry in Optical Fibers <b>Dr. Yosef London</b> , Bar Ilan University, Ramat-Gan, Israel <b>11:24</b> The Nonlinear Optical Response and Non-Equilibrium Electron Dynamics in ITO <b>Prof. Yonatan Sivan</b> , Ben-Gurion University of the Negev, Beer-Sheva, Israel <b>11:38</b> Compton Scattering Driven by Quantum Light <b>Mr. Majed Khalaf</b> , Technion – Israel Institute of Technology, Haifa, Israel <b>11:52 Invited speaker</b>   Multiresonant and Active High-Q Nonlinear Metasurfaces <b>Dr. Mikko Huttunen</b> , Tampere University, Finland <b>12:06</b> Enhanced THz Generation and Dynamic Emission from Metasurfaces <b>Mr. Eviatar Minerbi</b> , Tel Aviv University, Tel Aviv, Israel	<b>Electro-Optics Devices</b> <b>Dr. Ilya Goykhman</b> <b>10:50 Invited speaker</b>   Surface Acoustic Wave – Photonic Devices in Silicon Integrated Circuits <b>Prof. Avi Zadok</b> , Faculty of Engineering and Institute for Nano-Technology and Advanced Materials, Bar Ilan University, Ramat-Gan, Israel <b>11:10 Invited speaker</b>   Photonics on Thin-Film Lithium Niobate <b>Dr. Boris Desiatov</b> , Faculty of Electrical Engineering at Bar-Ilan University, Ramat-Gan, Israel <b>11:30 Invited speaker</b>   Semiconductor-Superconductor Quantum Optoelectronic Devices <b>Prof. Alex Hayat</b> , Department of Electrical Engineering Technion, Israel Institute of Technology, Haifa, Israel <b>11:50 Invited speaker</b>   Time Scale Dependent Dynamics in Quantum Dot Lasers: from Modulation to Coherent Interactions <b>Prof. Gadi Eisenstein</b> , Electrical and Computer Engineering department, Technion – Israel Institute of Technology, Haifa, Israel <b>12:10</b> Heralded Relativistic Free Electrons <b>Dr. Ofer Kfir</b> , Tel Aviv University, Tel Aviv, Israel	<b>Optical Engineering</b> <b>Dr. Hanni Inbar</b> <b>10:50 Invited speaker</b>   Nonlinear Near-Field Microscope for Real-Time Contactless Detection of Surface and Guided Waves <b>Prof. Guy Bartal</b> , The Viterbi Electrical and computer engineering, Technion – Israel Institute of Technology, Haifa, Israel <b>11:17</b> First Lenses Fabricated in Space: Fluidic Shaping Onboard the International Space Station <b>Prof. Moran Bercovici</b> , Faculty of Mechanical Engineering, Technion – Israel Institute of Technology, Haifa, Israel <b>11:38</b> Sub-Wavelength Optical Functionalities Directly Imprinted on Chalcogenide Glasses <b>Mrs. Sivan Tzadka</b> , Department of Materials Engineering, Ilse Katz Institute for Nanoscale Science and Technology, Ben-Gurion University of the Negev, Beer-Sheva, Israel <b>11:52</b> High Speed Large Aperture Tunable Lenses and their Applications <b>Dr. David Leuenberger</b> , Optotune, Dietikon, Switzerland <b>12:06</b> A Theoretical Model for Automotive Lidar Performance in the Rain <b>Dr. Boaz Nemet</b> , Innoviz Technologies, Israel	<b>Solar Energy</b> <b>Prof. Adi Salomon</b> <b>10:50 Invited speaker</b>   In-situ Tools for Studying Dynamics and Electronic Structure at Functional Interfaces in Energy Conversion Devices <b>Prof. Elizabeth Von Hauff</b> , Fraunhofer Institute for Organic Electronics, Electron Beam and Plasma Technology (FEP), Faculty of Electrical and Computer Engineering, Technical University of Dresden, Dresden, Germany <b>11:25 Invited speaker</b>   Looking at Photovoltaic Devices with New Eyes <b>Mr. Jean-Francois Guillemoles</b> , Research Director, CNRS, Director, UMR Institut Photovoltaïque d’Ile de France, IPVF; Ecole Polytechnique Institut Polytechnique de Paris, PSL Chimie ParisTech <b>11:55</b> Operando Characterization of Charge Extraction and Recombination Profiles in Solar Cells with Nanoscale Resolution <b>Mr. Tamir Yeshurun</b> , Tel Aviv University, Tel Aviv, Israel <b>12:10</b> Amino Acids Additives for Efficient and Stable Perovskite Solar Cells <b>Dr. Said Kassou</b> , Ben-Gurion University of the Negev, Beer-Sheva, Israel

12:20 – 13:20 | Lunch Break  
 13:20 – 13:50 | Poster Review of Topics: Micro and Nano-Optics & Artificial Intelligence in Optics

13:50 – 15:20 | Parallel Session 5

Hall A	Hall B	Hall C	Hall D	Hall E
<b>Ultrafast Phenomena</b> <b>Dr. Marcus Gilad</b> <b>13:50 Invited speaker</b>   High Harmonic Generation Driven by Quantum Light <b>Prof. Oren Cohen</b> , Technion – Israel Institute of Technology, Haifa, Israel <b>14:10</b> Controlling Coherent Exciton Dynamics in TMDs <b>Mr. Omri Meron</b> , Tel Aviv University, Tel Aviv, Israel <b>14:22</b> Molecular Orientation-Induced Second Harmonic Generation: Deciphering Different Contributions Apart <b>Ms. Amit Beer</b> , Tel Aviv University, Tel Aviv, Israel <b>14:34</b> Dynamics of Modal Self-Cleaning <b>Ms. Yuval Tamir</b> , Bar Ilan University, Ramat-Gan, Israel <b>14:46</b> Ultrafast Low-Energy Electron Microscopy <b>Dr. Michael Krueger</b> , Technion Israel Institute of Technology, Haifa, Israel <b>14:58</b> Spectral Splitting in Phase-Mismatched Harmonics <b>Mr. Raz Halifa Levi</b> , Tel Aviv University, Tel Aviv, Israel <b>15:10</b> Ultrafast “Hot” Nonlinear Photoluminescence from Metals <b>Mrs. Imon Kalyan</b> , Ben-Gurion University of the Negev, Beer-Sheva, Israel	<b>Spectroscopy and Optical Sensing</b> <b>Dr. Ayala Ronen</b> <b>13:50 Invited speaker</b>   Underwater Wireless Optical Communication: State-of-the-Art and Next Challenges <b>Dr. Amir Handelman</b> , Faculty of Electrical Engineering, Holon Institute of Technology, Holon, Israel <b>14:10</b> DNA Recognition with Nanoplasmonic Raman Spectroscopy <b>Dr. Vasyil Shvalya</b> , Josef Stefan Institute, Ljubljana, Slovenia <b>14:24</b> Super-Resolution Raman Spectroscopy – Applications to Diamond Identification <b>Mr. Yishai Amiel</b> , Bar Ilan University, Ramat-Gan, Israel <b>14:38</b> A Phase Stable Hybrid Dual Comb Spectrometer <b>Mrs. Sutapa Ghosh</b> , Technion – Israel Institute of Technology, Haifa, Israel <b>14:52</b> Long Wavelength QCL with Pulsed Operation for Spectroscopy <b>Mr. Mathieu Carras</b> , MirSense <b>15:06</b> Enhanced Molecular Orientation via NIR-delay-THz scheme: Experimental Results at Room Temperature <b>Mr. Ran Damari</b> , Tel Aviv University, Tel Aviv, Israel	<b>Optics in Defense</b> <b>Dr. Ami Yaacobi</b> <b>13:50</b> Non-Line-of-Sight Passive Localization around Corners with Light and with Sound <b>Mr. Jeremy Boger-Lombard</b> , Hebrew University of Jerusalem, Jerusalem, Israel <b>14:08</b> A Novel Large Optics Mounting Design <b>Mr. Oded Lahav</b> , Rafael Advanced Defense Systems, Israel <b>14:26</b> Dead-Time effect on SPAD Efficiency <b>Dr. Yishai Albeck</b> , Soreq Nuclear Research Center, Yavne, Israel <b>14:44</b> Narcissus Reduction in Advanced Thermal Imaging Zoom Lenses <b>Dr. Nissim Asida</b> , MKS Instruments, Israel <b>15:02</b> Deployable Asymmetric Space Telescope <b>Dr. Erez N. Ribak</b> , Department of Physics, Technion, Haifa, Israel	<b>Electro-Optics in Industry</b> <b>Dr. Rami Cohen</b> Sponsored by:  <b>13:50 Invited speaker</b>   Automated Assembly and Testing of Electro-Optical Systems <b>Mr. Tobias Müller</b> , Technical Director, Aixemtec GmbH, Herzogenrath, Germany <b>14:08</b> KLA Optical Metrology Division and the key challenges in Overlay Metrology of advanced Semiconductor Integrated Circuits <b>Mr. Ohad Bachar</b> , KLA, Israel <b>14:26 Invited speaker</b>   Combining Electrons and Energetic Photons Information in a Scanning Electron Microscopy for Advanced Semiconductors Applications <b>Dr. Martin Chauvin</b> , Applied Materials <b>14:44 Invited speaker</b>   SWIFT-El Event-based Imager and Laser Multi-spot Sensor in SWIR <b>Dr. Claudio Jakobson</b> , SCD – Semiconductor Devices, Israel <b>15:02</b> Spectral Transmission of Materials used for Laser Safety <b>Dr. Shimshon Lashansky</b> , ELOP/Elbit, Israel	<b>Micro and Nano Optics</b> <b>Prof. Alina Karabchevsky</b> <b>13:50</b> Broad-Band Impedance Matching of Dispersive Waveguides Using Exceptional Points and White Light Cavities <b>Prof. Jacob Scheuer</b> , Tel Aviv University, Tel Aviv, Israel <b>14:05 Invited speaker</b>   Micro and Nano-Optics: Ongoing Research and Future Directions   <b>Prof. Alina Karabchevsky</b> , Ben-Gurion University of the Negev, Beer-Sheva, Israel <b>14:20 Invited speaker</b>   Introducing New Phases of Matter to Microphotonics   <b>Prof. Tal Carmon</b> , Photonic Enhancement Laboratory, School of Electrical Engineering, Faculty of Engineering, Tel Aviv University, Tel Aviv, Israel <b>14:30</b> Structuring Light out of Optical Fibers Using Integrated Micro-Optics   <b>Dr. Shlomi Lightman</b> , Soreq Nuclear Research Center, Yavne, Israel <b>14:40</b> Displacement Trajectory of Gold Nanoparticles Under Photonic Hook   <b>Ms. Maya Shor Peled</b> , Ben-Gurion University of the Negev, Beer-Sheva, Israel <b>14:50</b> Development of Nanostructured Metallodielectric Substrates for Surface Enhanced Spectroscopies and Sensing <b>Dr. Nikolaos Papanikolaou</b> , NCSR “Demokritos”, Aghia Paraskevi, Athens, Greece <b>15:00</b> Arbitrary On-Chip Polarization Manipulation with Twisted Waveguides   <b>Mr. Fedar Marozka</b> , Ben-Gurion University of the Negev, Beer-Sheva, Israel <b>15:10 Invited speaker</b>   Novel polaritonic phenomena in 2D materials   <b>Dr. Itai Epstein</b> , School of Electrical Engineering, Faculty of Engineering, Tel Aviv University, Israel

15:20 – 15:50 | Coffee break and Posters review of topics: Ultrafast Phenomena & Atomic and Quantum Optics

15:50 – 17:20 | Parallel Session 6

Hall A	Hall B	Hall C	Hall D
<b>Quantum Computers</b> <b>Prof. Nadav Katz</b> <b>15:50</b> Machine Learning Detection of Quantum Many-Body Localization Phase Transition <b>Mr. Ron Ziv</b> , Technion – Israel Institute of Technology, Haifa, Israel <b>16:05</b> High-dimensional Time-Bin Quantum Key Distribution <b>Mr. Kfir Sulimany</b> , The Hebrew University of Jerusalem, Jerusalem, Israel <b>16:20</b> Segmented Composite Design of Robust Quantum Gates <b>Mr. Yonatan Pizetsky</b> , Tel Aviv University, Tel Aviv, Israel <b>16:35</b> Global and Local Quantum Sensing Across >100THz of Optical Bandwidth <b>Prof. Avi Pe'er</b> , Bar Ilan University, Ramat-Gan, Israel <b>16:50</b> Suppression of Logical Error in Linear Optic Quantum Computer using Composite Pulses <b>Mr. Ron Cohen</b> , Tel Aviv University, Tel Aviv, Israel	<b>Optics in Medicine and Biology</b> <b>Prof. Dror Fixler</b> <b>15:50 Invited speaker</b>   Motion Tolerant Remote Vital Signs Monitoring using Optical and Depth Cameras <b>Prof. Ofer Levi</b> , University of Toronto, Ontario, Canada, Institute of Biomedical Engineering; The Edward S. Rogers Sr. Department of Electrical and Computer Engineering <b>16:15 Invited speaker</b>   Twist of Light in Tissue Diagnosis <b>Prof. Igor Meglinski</b> , Aston University, College of Engineering & Physical Sciences, Aston University, Birmingham, UK <b>16:40</b> Optoacoustic Micro-Tomography using a Silicon-Photonics Acoustic Detector <b>Prof. Amir Rosenthal</b> , Technion – Israel Institute of Technology, Haifa, Israel <b>17:00</b> Recent Advances in Rapid and Highly Sensitive Detection of Proteins and Specific DNA Sequences using a Magnetic Modulation Biosensing System <b>Prof. Amos Danieli</b> , Bar Ilan University, Ramat-Gan, Israel	<b>Artificial Intelligence in Optics</b> <b>Prof. Yoav Shechtman</b> <b>15:50 Invited speaker</b>   Learned Optics – Improving Computational Imaging Systems through Deep Learning and Optimization <b>Prof. Wolfgang Heidrich</b> , Computational Imaging Researcher <b>16:20</b> DBlink: Dynamic Localization Microscopy in Super Spatiotemporal Resolution via Deep Learning <b>Mr. Alon Saguy</b> , Technion – Israel Institute of Technology, Haifa, Israel <b>16:32</b> Sperm-Cell DNA Fragmentation Prediction Using Label-Free Quantitative Phase Imaging and Deep Learning <b>Mr. Lioz Noy</b> , Tel Aviv University, Tel Aviv, Israel <b>16:44</b> A Machine Learning Approach to Generate Quantum Light <b>Mr. Eyal Rozenberg</b> , Technion – Israel Institute of Technology, Haifa, Israel <b>16:56</b> Single Molecule QR Codes Provide Extreme Multiplexing for Gene Expression Analysis <b>Mr. Jonathan Jeffet</b> , Tel Aviv University, Tel Aviv, Israel <b>17:08</b> Recent Advancements in Model-Based Super-Resolution Microscopy <b>Dr. Shay Elmalem</b> , Weizmann Institute of Science, Rehovot, Israel	<b>Solar Energy</b> <b>Prof. David Cahen</b> <b>15:50 Invited speaker</b>   Characterization of Interfaces by Simple Far-Field Optics <b>Prof. Adi Salomon</b> , Chemistry department, BINA nano center for advance materials, Bar Ilan university, Ramat-Gan, Israel <b>16:20 Invited speaker</b>   Thermodynamic Aspects of PV Power Generation Process <b>Dr. Avi Niv</b> , Solar Energy and Environmental Physics, The Jacob Blaustein Institutes for Desert Research, Ben-Gurion University of The Negev, Beer-Sheva, Israel <b>16:50</b> Modular Concentrated Solar Power for Dispatchable Reliable and Affordable Solar Electricity <b>Prof. Carmel Rotschild &amp; Dror Mimron</b> , Technion – Israel Institute of Technology, Haifa, Israel

10:50 – 12:20 | Parallel Session 4

13:50 – 15:20 | Parallel Session 5

15:50 – 17:20 | Parallel Session 6