

| 08:00-09:00  |         |  |         |   |         |  | Welcome and Registration |  |         |  |         |   |  |
|--|---------|--|---------|---|---------|--|--------------------------|--|---------|--|---------|---|--|
| Hall B<br>We1.1 Optics-1<br>President: Hagai Diamandi, Hebrew University |         | Hall A<br>We1.2 Scattering and Propagation<br>President: TBD   |         | Hall C<br>We1.3 Circuits-1<br>President: Freddy Gabbay, Hebrew University   |         | Hall D<br>We1.4 Signals-1<br>President: Nir Shlezinger, Ben-Gurion University  |                          | Hall E<br>We 1.5 Cyber-1<br>President: Amit Dvir, Ariel University   |         | Hall F<br>We1.6 AI/ML-1<br>President: Igal Blik, Ben-Gurion University   |         |   |  |
| 09:00-09:15  | We1.1.1 | Invited: Exploring Laser-Induced Strong-Field Ionization Phenomena: Toward Dynamic 4D Imaging and Beyond<br>Eugene Frumker<br>Ben-Gurion University  | We1.2.1 | Invited: Pulsed Hot Spots and Their Applications for Curved Beam Design<br>Timor Melamed<br>Ben-Gurion University | We1.3.1 |  | We1.4.1                  | Target Tracking Using Range and Range-Rate Measurements with Axes Coupling Constraint<br>Liat Peled-Eitan and Ilan Rusnak          | We1.5.1 | Invited: Using AI for detection of Routing Deflection Attacks<br>Prof. Yuval Shavit<br>Tel Aviv University                                     | We1.6.1 | Data augmentation for spoofing-robust automatic speaker verification<br>Shani Budilovsky, Yehuda Ben-Shimol and Itshak Lapidot      |  |
| 09:15-09:30  |         |  |         |   | We1.3.2 | Invited: "More than Moore: The Package Is the Computer"<br>Prof. Leonid Yavits<br>Bar-Ilan University  | We1.4.2                  | Conformal Prediction-Aware DOA Tracking<br>Maya Veisman Barnes, Sharon Gannot and Bracha Laufer Goldshtein                         | We1.5.2 |  | We1.6.2 | Reservoir Computing with Memristive Neural Networks for Image Classification<br>Rishona Daniels, Ronny Ronen, and Shahar Kvatinisky |  |
| 09:30-09:45  | We1.1.3 | Invited: Extreme confinement with hyperbolic cavities – a new platform for quantum light-matter interactions<br>Hanan Sheinfux-Herzig<br>Bar-Ilan University   | We1.2.3 | Deep Learning Architectures for Radio Wave Propagation Modeling: A Concise Overview<br>Eran Greenberg             | We1.3.3 |  | We1.4.3                  | Unfolded Expectation-Maximization Neural Network for Speaker Localization<br>Rina Veler and Sharon Gannot                          | We1.5.3 | Analysis of Power Side-Channel Vulnerabilities in Memristor-Based Neuromorphic Systems<br>Adam Antoshin, Ilan Lipschutz, and Shahar Kvatinisk  | We1.6.3 | Tutorial: The return of engineering in Computer Vision<br>Prof. Yair Weiss<br>Hebrew University                                     |  |
| 09:45-10:00  |         |  | We1.2.4 | Voltage along a quasi TEM transmission line hit by a plane wave<br>Reuven Ianculescu and Vladimir Vulfin          | We1.3.4 | Sub-Nanosecond Polarization Dynamics and Switching Kinetics in HZO FeCAPs<br>Mor Mordechai Dahan, Uwe Schroeder and Eilam Yalon  | We1.4.4                  | Deep Unfolding with Approximated Computations<br>Dvir Avrahami, Amit Milstein, Caroline Chau, Tirza Routtenberg and Nir Shlezinger | We1.5.4 | Measuring the Impact of Algorithmic Noise on Side-Channel Analysis<br>Matan Elkoni, Yehuda Rudin, Yoav Weizman, Osnat Keren and Alexander Fish | We1.6.4 |   |  |
| 10:00-10:15  | We1.1.5 | Practical Implementation of m-Plane GaN Terahertz Quantum Cascade Lasers with Reduced Current Density for Room Temperature Applications<br>Shiran Levy, Nathalie Lander Gower, Silvia Piperno, Gad Bahir and Asaf Albo | We1.2.5 | Pulsed Light Structures using Phase-space Methods<br>Timor Melamed  | We1.3.5 | Unraveling Phase Change Memory Programming Energy Limits<br>Rivka-Galya Nir-Harwood, Keren Stern and Eilam Yalon   | We1.4.5                  | Adapting AI DoA Estimators via Downstream Tracking<br>Shaul Konstantino, Lei Li, Nir Shlezinger, and Davide Dardari                | We1.5.5 | Too Easy Fault Injection Attacks on Learning with Rounding (LWR)<br>Francesco Berti, Sasha Petri and Itamar Levi                               | We1.6.5 |   |  |
| 10:15-10:30  | We1.1.6 | Bias-Modulated Optoelectronic Chromatic Dispersion in Photodiodes: a New Type of Spectral-Information Pixel<br>Uttama K Saint, Ziv Glasser, Endalamaw Ewnu Kassa, Egor Liokumovitch and Shmuel Sternklar               | We1.2.6 | Microwave Relativistic Motors<br>Asher Yahalom  | We1.3.6 | The Critical Point Model as a Tool for Optimizing Organic Thin Film Transistors' Active Layer Morphology and Performance<br>Tal Elbaz, P.R. Chithira, and Rafi Shikler | We1.4.6                  | Conformal Prediction Aided Kalman Filters with Confidence Intervals<br>Olga Weisman, Nir Shlezinger and Bracha Laufer-Goldshtein   | We1.5.6 | Information Extraction with Physical Attacks and Safeguarding Information Reconciliation Protocols<br>Roel Groner and Itamar Levi              | We1.6.6 |   |  |
| 10:30-11:00  |         |  |         |   |         |  | Coffee Break             |  |         |  |         |   |  |
| Hall B   We2 Plenary Session A   |         |  |         |   |         |  |                          |  |         |  |         |   |  |
| 11:00-11:30  | We2.1.1 | Behind the AI Revolution: From Silicon to Intelligence<br>Mr. Ori Tadmor<br>VP Operations, KLA - President, KLA Israel   |         |   |         |  |                          |  |         |  |         |   |  |
| 11:30-12:15  | We2.1.2 | Nvidia Israel-1 AI Factory Journey<br>Mr. Dror Goldenberg<br>Senior Vice President of Network Software Architecture at NVIDIA  |         |   |         |  |                          |  |         |  |         |   |  |
| 12:15-13:00  | We2.1.3 | Space-Based Intelligence<br>Dr. Shimrit Maman<br>Chairperson, Israel Space Agency   Senior scientist, BGU  |         |   |         |  |                          |  |         |  |         |   |  |
| 13:00-14:00  |         |  |         |   |         |  | Lunch Break              |  |         |  |         |   |  |

| Hall B<br>We3.1 Optics-2<br>President: Pavel Sidorenko, Technion |   | Hall A<br>We3.2 Microwave Circuits<br>President: Timor Melamed, Ben-Gurion University   |  | Hall C<br>We3.3 Autonomous Vehicles<br>President: Igal Bilik, Ben-Gurion University  |  | Hall D<br>We3.4 Signals-2<br>President: Sharon Gannot, Bar-Ilan University   |  | Hall E<br>We3.5 Gender Panel<br>President: Prof. Hagit Messer-Yaron |  | Hall F<br>We3.5 AI/ML-2<br>President: Nir Shlezinger, Ben-Gurion University |  |
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| 14:00-14:15  | We3.1.1<br>Invited: Optomechanics Beyond the Cavity: Forces, Nonlinearity, and Distributed Dynamics<br>Lior Michaeli<br>Tel-Aviv University                                       | We3.2.1<br>A Deep sub-micron 2.4GHz Watt Level Digital Power Amplifier based on Quad-Stacking Topology<br>Naor R. Shay, David Ben-Haim, Elad Solomon, Yishai Eilat, Eran Socher and Ofir Degani | We3.3.1<br>Investigating generalized models of the Twistcar's dynamics<br>Rom Levy, Anna Zigelman and Yizhar Or                                | We3.4.1<br>Invited: Detection, source separation, and contextual inference of sperm whales' vocalizations<br>Prof. Roee Diamant<br>University of Haifa | We3.5.1<br>Women in Engineering Panel<br>Organized by Prof. Hagit Messer-Yaron<br>Panelists:<br>• Dr. Orna Berry, Google Cloud + ScienceAbroad<br>• Prof. Idit Keidar, Technion<br>• Dr. Ronit Bustin, Toga Networks<br>• Dr. Oded Margalit, Ben-Gurion University and NextSilicon<br><b>Note: Session will be in Hebrew</b> | We3.6.1<br>Learning to Refine LLMs: Neural Augmentation for MIMO-OFDM Receivers<br>Ory Eger and Nir Shlezinger   |  |   |  |   |  |
| 14:15-14:30  |   | We3.2.2<br>Ultra-Low Insertion Loss Stepped Impedance Resonator Topology for HTSC RF Front-End<br>Ilan Kurtser, Yoav Korat, Eldad Holdengraber, Shmuel E. Schacham and Elyahu Farber            | We3.3.2<br>Asynchronous swarm-intelligence navigation for GPS-denied IMU-only drone swarms<br>Guy Moshe Atias and Igal Bilik                   | We3.4.2<br>Acoustic Feedback Cancellation with DNN-based Step-Size Control<br>Liron Pollak, Simona Lisker, Henning Scepker and Elior Hadad             |  | We3.6.2<br>Universal Agnostic Learning over Smooth Parametric Models<br>Shlomi Vituri and Meir Feder   |  |   |  |   |  |
| 14:30-14:45  | We3.1.3<br>SOI-Compatible Photonic Structures Exhibiting a Degenerate Band Edge<br>Kessem Zamir-Abramovich and Jacob Scheuer  | We3.2.3<br>A Unified Quality Factor Formula for Component Modeling Across Self-Resonance<br>Itzhak Shapir and Tomer Paley   | We3.3.3<br>Invited: Perception Challenges for Autonomous Robots in Unstructured Green Spaces<br>Odi Dahan<br>Husqvarna Tel Aviv Innovation Lab | We3.4.3<br>K-Divergence-Based Training of Deep Normalizing Flow Networks<br>D. Bilik and K. Todros   |  | We3.6.3<br>Adaptive Deadline and Batch Layered Synchronized Federated Learning<br>Asaf Goren, Natalie Lang, Nir Shlezinger, Alejandro Cohen                                |  |   |  |   |  |
| 14:45-15:00  | We3.1.4<br>Broadband SiN Photonic 50:50 Power Splitters: Optimization and Performance Analysis of InverseDesigned MMI and Directional Couplers<br>Alekssei Kukin and Dan M. Marom | We3.2.4<br>Analysis of GaN based high power N-path filter with linearity enhancement circuit<br>Netanel Desta and Emanuel Cohen   |  | We3.4.4<br>Tangential velocity estimation using automotive radar<br>M. Shifrin, J. Tabrikian and I. Bilik  |  | We3.6.4<br>Enhancing sample efficiency in multi-agent rl with uncertainty quantification and selective exploration<br>Tom Danino and Nahum Shimkin                         |  |   |  |   |  |
| 15:00-15:15  | We3.1.5<br>Noise Suppression in Gain-Managed Nonlinear Amplifiers<br>Nitzan Haviv, Maksim Kozlov, Michael Krüger and Pavel Sidorenko  | We3.2.5<br>An 8 bit RF-DAC for 5G in 28nm CMOS with 17dbm and 30% peak drain efficiency<br>Tomer Ben Oz, Eran Socher, Emanuel Cohen   |  | We3.4.5<br>Time-based Amplitude Sampling<br>Hila Naaman and Yonina C. Eldar  |  | We3.6.5<br>Invited: Efficient Training, Fast Inference: Reducing Memory Requirements and Inference Time of Foundation Models<br>Prof. Ofir Lindbaum<br>Bar-Ilan University |  |   |  |   |  |
| 15:15-15:30  | We3.1.6<br>All-Optical Logic Gates and Programmable Signal Control in Polymer Photonic Meshes<br>Amir Handelman, Coral Raz and Alexandra Inberg                                   |   |  |  |  | We3.6.6<br>Bar-Ilan University   |  |   |  |   |  |
| 15:30-16:00  | Coffee Break  |   |  |  |  |  |  |   |  |   |  |

| Hall B<br>We4.1 Quantum Optics<br>President: Hanan Sheinfux, Bar Ilan University |   | Hall A<br>We4.2 Antennas and Metasurfaces<br>President: Yarden Mazor, Tel-Aviv University   |  | Hall C<br>We4.3 Circuits-2<br>President: Freddy Gabbay, Hebrew University  |  | Hall D<br>We4.4 BioEngineering-1<br>President: Amos Daneli, Bar-Ilan University   |  | Hall E<br>We4.5 Power Electronics-1<br>President: Ilan Aharon, Ariel University |  | Hall F<br>We4.6 AI/ML-3<br>President: Chaim Baskin, Ben-Gurion University |  |
|--|---|---|--|--|--|---|--|---|--|---|--|
| 16:00-16:15  | We4.1.1<br>Invited: Elastic electron-photon coupling: towards sub-Poisson free-electron states<br>Ofir Kfir<br>Tel-Aviv University  | We4.2.1<br>Biology-Inspired Butterfly-Shaped Microstrip Patch Antenna for Dual-Band Operation<br>V. Vulfim, I. Madar, N. Verhovski, D. Kanyas and R. Ianculescu   | We4.3.1<br>precision high signal rate setup for cryogenic SoC measurements<br>Noam Roknian, Yoav Weizmann and Alexander Fish   | We4.4.1<br>Invited Talk: Rapid and Highly Sensitive Detection of pathogens in Biological Fluids<br>Prof. Amos Danielli<br>Bar-Ilan University  | We4.5.1<br>Invited: Mutual Relations Between Power Electronics and Circuits and Systems Theory<br>Prof. Em. Sigmund Singer<br>Tel-Aviv University                                    | We4.6.1<br>Find the Leak, Fix the Split: Cluster-Based Method to Prevent Leakage in Video-Derived Datasets<br>Noam Glazner, Noam Tsfaty, Sharon Shalev and Avishai Weizman                  |  |   |  |   |  |
| 16:15-16:30  |   | We4.2.2<br>Learning-Based Null-Steering Beamforming for Wideband 5G Planar Phased Arrays<br>Matan Ben-Binyamin, Leonid Kuprian, Roi Yozevitch and Eldad Holdengreber  | We4.3.2<br>WP-MLX: An Energy-Efficient Clockless Wave-Propagated ML-Accelerator<br>Yehuda Kra and Adam Teman   |  | We4.5.2<br>Value Locality in Specialized Vision Transformers<br>Daniel Stoppel and Freddy Gabbay   |   |  |   |  |   |  |
| 16:30-16:45  | We4.1.3<br>Invited: Robust Ground-State Control of High-Frequency Bulk Acoustic Phonons<br>Hillel Hagai Diamandi<br>Hebrew University                                     | We4.2.3<br>Genetic Algorithm method for 5g null steering<br>Tomer Shor, Eldad Holdengreber and Roi Yozevitch  | We4.3.3<br>Ferroelectric FET-Based Time-Domain In-Memory Computing Macro with Tunable Delay Calibration in 28 nm CMOS<br>Jerjes Mattar, Mor M. Dahan, Stefan Dunkel, Halid Mulaosmanovic, Gunda Beernink, Sven Beyer, Eilam Yalon, and Nicolas Wainstein | We4.4.3<br>From Concept to Commercialization: Optical Modulation Biosensing<br>Shmuel Burg, Michael Margulis and Amos Danielli   | We4.5.3<br>A Robust Numerical Approach for Estimating the Six-Parameter Thevenin-Based Equivalent Circuit of AC Motors<br>Moshe Averbukh   | We4.6.3<br>Deep Learning for Real-Time Detection of Vulnerable Pedestrians<br>Avigail Haliva, Rina Azoulay, Esther David, Matus Sucha and Wafa Elias  |  |   |  |   |  |
| 16:45-17:00  |   | We4.2.4<br>Development of a Lightweight Large-Aperture Off-Axis Metasurface Antenna for Terahertz Communication System<br>Liran Akiva, Daniel Rozban and Amir Abramovich  | We4.3.4<br>Investigating Noise Immunity in Tsetlin Machine: Implementation and Analysis<br>Mor Shy, Yehuda Rudin, Eitan Weiss, Roi Lazar, Michal Yemini and Alexander Fish   | We4.4.4<br>EMD-Enhanced EEG for Prehospital LVO Stroke Detection<br>Alexander Yorov, Mark Parsons, Dennis Cordato, Jasmmeen Khan, Ahmad Shafiq Suffian Wee, Helen Badge, Elliot Sprecher, Kfir Y. Levy and Daniel H. Lange | We4.5.4<br>Power loss estimation in transformers under harmonic load currents<br>Neda Miteva and Kfir Jack Dagan   | We4.6.4<br>Cross-layer retention management in gain-cell edram for energy-efficient ai accelerators<br>Ofek Sharabi and Adam Teman  |  |   |  |   |  |
| 17:00-17:15  | We4.1.5<br>Flexible on-chip optical atomic clock architecture<br>Andrei Diakonov, Konstantin Khrizman and Liron Stern   | We4.2.5<br>Hybrid Chiral-Omega Response: Symmetry Breaking in Bianisotropic Knot-Particles<br>Nadav Goshen and Yarden Mazor   | We4.3.5<br>Transient kickback effect of multi-reference pair comparators on high speed ADCs and receivers<br>Ofir Glick, Nicolas Wainstein and Ariel Cohen   | We4.4.5<br>A Gait-Synchronized Wearable System for Lumbo-Pelvic Correction in Chronic Low Back Pain<br>Ami Eyal, Omri Lubovsky, Alex Frid, Ram Haddas and Aharon Raz   | We4.5.5<br>Simple identification of active AC-side component values in resonant inverters driving series RLC loads in high-current applications<br>Natan Schechter and Alon Kuperman | We4.6.5<br>Digital Predistortion Using Phase-Gated Recurrent Networks and Direct Backpropagation Learning<br>Tal Kahal, Yair Neria Cohen, Erez Loebli and Emanuel Cohen                     |  |   |  |   |  |
| 17:15-17:30  | We4.1.6<br>Spatio-temporal plasmonic weak-measurement<br>Sahil Sahoo, Andre Yaroshevsky, Dima Cheskis and Yuri Gorodetski   | We4.2.6<br>Design and Development of a Reconfigurable Metasurface Antenna Using Steer-By-Image Technology for Ka-Band Communication<br>Ido Gal, Tzach Hershko, Oleg Torgovitsky, Daniel Rozban, Gil Kedat and Amir Abramovich | We4.3.6<br>Bounding Multi-Source-Multi-Output Generalized TRNG Circuits Entropy<br>Rachel Podolak and Itamar Levi  | We4.4.6<br>Hybrid AI-physics modeling for quantitative renal drainage analysis from dynamic x-ray imaging<br>Uriel Shitrit, Mordechai Duddevani and Talia Yeshua   | We4.5.6<br>Invited: AI in Power Electronics: Status of Knowledge, Intelligence and Creativity (as of March 2026)<br>Prof. Em. Shmuel (Sam) Ben-Yaakov<br>Ben-Gurion University       | We4.6.6<br>YOLO Meets Mixture-of-Experts: Adaptive Expert Routing for Robust Object Detection<br>Ori Meiraz, Sharon Shalev and Avishai Weizman  |  |   |  |   |  |
| 17:30-17:45  | We4.1.7<br>Invited: Integrated Photonics and Atomic Vapors: Engineering Strong Light-Matter Interactions at the Single-Photon Level<br>Roy Zektzer<br>Bar-Ilan University | We4.2.7<br>Versatile Semianalytical Scheme for Multilayer PCB Transmissive Metalenses on Demand<br>Sherman W. Marcus, Ravi Yadav, Vinay K. Killamsetty and Ariel Epstein  | We4.3.7<br>Laser Modulation State Recovery via Side-Channel Analysis<br>Or Nahum and Itamar Levi   | We4.4.7<br>Finger joint angle and gesture estimation in dynamic hand postures using a soft printed electrode array<br>Hila Man, Nitzan Luxembourg, Hava Siegelmann and Yael Hanein   |  | We4.6.7<br>Invited: Geometric Deep Learning for Neural Artifacts: Symmetry-Aware Learning across Trained Model Weights, Internal Representations, and Gradients<br>Haggai Maron<br>Technion |  |   |  |   |  |
| 17:45-18:00  |   | We4.2.8<br>metamamba: hybrid semianalytical and generative inverse design of huygens' metasurfaces<br>Natanel Nissan, Sherman W. Marcus, Dan Raviv, Raja Ciryes and Ariel Epstein   |  | We4.4.8<br>Cross-Scale Networks for Electrical Stimulation Driven Brain Recovery<br>Dafna Rosenberg, Dafna Rivka Levenberg, Zehavit Shapira, Orit Shefi and Yaara Erez   |  |   |  |   |  |   |  |
| 18:00-19:30  | Poster Session + Light Snacks   |   |  |  |  |   |  |   |  |   |  |

| 08:00-09:00   |   | Welcome and Registration   |  |  |   |  |
|---|---|--|--|--|---|--|
| Hall B<br>Th1.1 Optics-4<br>President: Lior Michaeli, Tel-Aviv University |   | Hall A<br>Th1.2 Communications-1<br>President: Anatoly Khina, Tel-Aviv University  | Hall C<br>Th1.3 Signals-3<br>President: Itshak Lapidot, Afeka  | Hall D<br>Th1.4 Quantum Technologies-1<br>President: Eli Bordo, IMOD   | Hall E<br>Th1.5 Power Electronics-2<br>President: Alon Kuperman, Ben-Gurion University  |  |
| 09:00-09:15   | Th1.1.1<br>Tutorial: 3D printed complex microoptics: Fundamentals and first benchmark applications<br>Prof. Harald Giessen<br>University of Stuttgart   | Th1.2.1<br>CSI and AOD error effect on IRS performance<br>Eitan Ovrutski and Ofer Amrani   | Th1.3.1<br>Pareto Optimization for Multichannel Speech Enhancement<br>Elior Hadad, Simon Doclo and Sharon Gannot                                       | Th1.4.1<br>Experimental Quantum Cryptography with Inverse-Designed Entangled Qudits<br>Joshua Foley-Corner, Ofir Yesharim, Sarika Mishra, Shashi Prabhakar, Aviv Karnieli, Eyal Rozenberg, Ravindra P Singh and Ady Arie | Th1.5.1<br>Universal rectifier topology<br>Yarden Sharifi, Yishai Kellerman, Shlomo Gadelovits, Lucien El Baze and Ilan Aharon  |  |
| 09:15-09:30   | Th1.1.2   | Th1.2.2<br>Shoot and Bouncing Propagation Model In Complex Tunnels<br>Ravid Borichovtce, Gad A. Pinhasi, Ori Glikstein, and Yosef Pinhasi  | Th1.3.2<br>Meaningful Color Presentation for Infrared Imaging<br>D. E. Bar, A. Giladi, A. Epstein, M. Weinstein, E. Shunem, Y. Shamay and T. Markovitz | Th1.4.2<br>probeless vs probe-based variable-strength eavesdropping in quantum key distribution<br>Yuval Idan, Tal Gofman, Ziv Abelson, Isabelle Cestier, Elad Mentovich and Eliahu Cohen                                | Th1.5.2<br>Fast Power-Flow Approximation for Distribution Systems Using a Hierarchical Tree of Uniform MLP Regressors<br>Arbel Yaniv and Yuval Beck   |  |
| 09:30-09:45   | Th1.1.3   | Th1.2.3<br>Toward Wi-Fi 8 Ultra-High Reliability: Null Steering Using Data-Embedded Pilots<br>Shimi Shilo, Rani Keren, Nadav Basson, Shachar Shayovitz, Doron Ezri, Ezer Melzer and Yoav Levinbook | Th1.3.3<br>Calibration-Free Global Offset Compensation for Array-Based Detectors<br>Yoram Karni  | Th1.4.3<br>Tutorial: Structured Photons for High-Dimensional Quantum Information Processing<br>Prof. Ebrahim Karimi<br>Chapman University  | Th1.5.3<br>Dynamic analysis for parameter selection in local power systems for ai data centers<br>Elinor Ginzburg-Ganz and Yoash Levron   |  |
| 09:45-10:00   | Th1.1.4   | Th1.2.4<br>Advances in Hard Successive Interference Cancellation for 5G-NR<br>Itay Yakuti, Avner Elgam, Yossi Peretz, and Yosef Pinhasi  | Th1.3.4<br>Identification of Guitar Types Using Ultrasonic Frequency<br>Izhak Kapash and Ram Zamir   |  | Th1.5.4<br>Closed-loop dynamics in multi-resonant current controllers<br>Moria Sassonker Elkayam and Moshe Sitbon   |  |
| 10:00-10:15   | Th1.1.5   | Th1.2.5<br>Invited: Neural Network Approach for Polar Codes Decoding<br>Prof. Haim Permuter<br>Ben-Gurion University   | Th1.3.5<br>Invited: Plant-emitted sounds: detection, interpretation and ecological implications<br>Prof. Lilach Hadany<br>Tel-Aviv University          |  | Th1.5.5<br>Reduced Device Count DC/AC Converter with Output Switching Ripple Elimination<br>Riccardo Mandrioli and Alon Kuperman  |  |
| 10:15-10:30   | Th1.1.6<br>Plasmonic Vortex Generation by Hybrid Poincare Beams Using Nematic Liquid Crystals<br>Sahil Sahoo, Ahmed Lafeef EN, Andrey Yaroshevsky and Yuri Gorodetski   | Th1.2.6  | Th1.3.6  |  | Th1.5.6<br>Dual-PI Voltage Control for Attaining Arbitrary Output Voltage Ratio in Synchronous Single-Inductor Dual-Output Buck Converters<br>Andrey Vulfovich, Yegal Darhovsky and Alon Kuperman |  |
| 10:30-11:00   | Coffee Break  |  |  |  |   |  |
| Hall B   Th2 Plenary Session B  |   |  |  |  |   |  |
| 11:00-11:45   | Th2.1.1<br>AI-Powered Data Centers: Building a Sustainable Future by Scaling the Package<br>Dr. Anuradha Agarwal<br>Principal Research Scientist, MIT Microphotonics Center and Materials Research Laboratory |  |  |  |   |  |
| 11:45-12:15   | Th2.1.2<br>ICSEE2026 Awards and Recognitions  |  |  |  |   |  |
| 12:15-13:00   | Th2.1.3<br>Devices for generation and detection of light at the single photon level<br>Prof. Val Zwiller<br>KTH Royal Institute of Technology, Division of Quantum and Nano Physics                           |  |  |  |   |  |
| 13:00-14:00   | Lunch Break   |  |  |  |   |  |

| Hall B<br>Th3.1 Optics-5<br>President: Yuri Gorodetski, Ariel University |  | Hall A<br>Th3.2 BioEngineering-2<br>President: TBD   |  | Hall C<br>Th3.3 High-Speed Interfaces Symposium<br>President: Prof. Ariel Cohen, Technion   |   | Hall D<br>Th3.4 Quantum Technologies: From Research to Market Impact. President: Eli Bordo, IMOD |  | Hall E<br>Th3.5 Power Electronics-3<br>President: Yuval Beck, Tel-Aviv University |  |
|--|--|--|--|---|---|--|--|---|--|
| 14:00-14:15  | Th3.1.1<br>Invited: Photonic Origami for On-chip 3D Micro-Optics<br>Prof. Tal Carmon<br>Tel-Aviv University  | Th3.2.1<br>Invited: The silicon photonics acoustic detector (SPADE): a versatile platform for biomedical imaging and sensing<br>Prof. Amir Rosenthal<br>Technion   | Th3.3.1<br>Tutorial: Transceiver Architectures for Future System Interconnect Demands<br>Prof. Sam Palermo<br>Texas A&M    | Th3.4.1<br>Engineering a Neutral-Atom Quantum Computer<br>Prof. Ofer Firstenberg<br>Weizmann Institute and Q-Factor   | Th3.5.1<br>High-Altitude Tethered Cable-Powered Drones: Electric Power Analysis<br>Yehoshua Socol   |  |  |   |  |
| 14:15-14:30  |  |  |  | Th3.4.2<br>Robust Quantum Integrated Photonics<br>Prof. Haim Suchowski<br>Tel Aviv University & Quantum Pulse   | Th3.5.2<br>Synchronverters with Adaptive Harmonic Mitigation Capability<br>Adir Goldovsky, Aaron Zharnest, Fabio Mandrile, and George Weiss   |  |  |   |  |
| 14:30-14:45  | Th3.1.3<br>Development of a Real-Time Terahertz Imaging System Using a Glow Discharge Detector Focal Plane Array and Lock-In Camera Detection<br>Dor Azran, Lidor Ladany, Tomer Latucha, Or Kakon, Daniel Rozban, Arun Ramachandra Kurup, Yitzhak Yitzhaky, Amir Abramovich and Nathan Kopeika | Th3.2.3<br>VLSI Accelerates Cell Model Development<br>Shlomo Koifman, Rotem Solomon and Ramez Daniel   |  | Th3.4.3<br>The Three Basic Primitives of Quantum Communication<br>Prof. Hagai Eisenberg<br>The Hebrew University of Jerusalem & HEQA Security   | Th3.5.3<br>IEEE 3 Bus Systems Under Varying Operational Conditions: A Comparative Study under effectiveness of linear control<br>Ido Karbot, Uriel Aferiat, Moshe Sitbon, Moria Sassonker, Riccardo Mandrioli and Martin Mellincovsky |  |  |   |  |
| 14:45-15:00  | Th3.1.4<br>Design, Simulation and Fabrication Development of Polymer Bragg Gratings on Side-Polished Fibers via Two-Photon Polymerization<br>Abhishek Singh Rathore, Ksenia Shukhin, Parvinder Kaur Gill and Dan M. Marom  | Th3.2.4<br>Reinforcement Learning-Driven Personalized Guided Breathing for Blood Pressure Reduction<br>Regev Azran, Elliot Sprecher, Ron Meir, and Daniel H. Lange |  | Th3.4.4<br>Rapid generation of photonic cluster states with a single atom<br>Prof. Barak Dayan<br>Weizmann Institute & Quantum Source   | Th3.5.4<br>Data-Driven Circuit Model For Soft Sources<br>Aaron Shmaryahu, Roni Zakay and Ilan Aharon  |  |  |   |  |
| 15:00-15:15  | Th3.1.5<br>Faraday effects driven by the magnetic component of optical radiation<br>Benjamin Assouline and Amir Capua  | Th3.2.5<br>Ablative Tm:YAP pulsed laser<br>Salman Noach, Neria Suliman and Rotem Nahear  | Th3.3.5<br>Invited: Co-Packaged Optical Transceivers for HPC, Data Centers and AI Applications<br>Dr. Dan Kuchta<br>Nvidia | Th3.4.5<br>Panel discussion, moderated by Prof. Alex Retzker, Hebrew University, with:<br>• Prof. Ofer Firstenberg<br>• Prof. Haim Suchowski<br>• Prof. Hagai Eisenberg<br>• Prof. Barak Dayan<br>• Prof. Nadav Katz, Hebrew University & Qarakal Quantum<br>• Dr. Yehuda Naveh - Classiq | Th3.5.5<br>Passive Thermomagnetic Solar Trackers: Concepts and Architectures<br>Yehoshua Socol and Yosef Golovachev   |  |  |   |  |
| 15:15-15:30  | Th3.1.6<br>Thick Silicon Photonics Spatial Mode Multiplexer with 3D-Printed Fiber Interface for Rectangular-Core Fibers<br>David Halfon, Aleksei Kukin, Ksenia Shukhin, Jeffery S. Stone, Gaozhu Peng, Ming-Jun Li and Dan M. Marom  | Th3.2.6<br>Integrated optical imaging system for quantitative evaluation of tissue optical and physiological properties<br>David Abookasis                         |  |   | Th3.5.6   |  |  |   |  |
| 15:30-16:00  | Coffee Break   |  |  |   |   |  |  |   |  |

|             |                                 | Hall B<br>Th4.1 Optics Industry Session<br>President: Yonatan Sivan, Ben-Gurion University  | Hall A<br>Th4.2 Communications-2<br>President: Ram Zamir, Tel Aviv University   | Hall C<br>Th4.3 Signals-4<br>President: Tirza Routtenberg, Ben-Gurion University  | Hall D<br>Th4.4 Quantum Technologies-3<br>President: Eli Bordo, IMOD | Hall E<br>Th4.5 Computing<br>President: Freddy Gabbay, Hebrew University   |         |
|-------------|---------------------------------|---|---|---|--|--|---------|
| 16:00-16:15 | Th4.1.1                         | Invited: Photonics Technologies in CMOS Foundries<br>Yakov Rozin<br>Tower Semiconductors  | Invited: Impossibility Results in Channel Coding via Auxiliary Channels and Genie-Aided Techniques<br>Anelia Somekh-Baruch<br>Bar-Ilan University | Invited: Deep Learning Meets Beamforming: Recent Advances in Multi-Microphone Spatial Filtering<br>Prof. Sharon Gannot<br>Bar-Ilan University | Th4.4.1  | Tutorial: VLSI Complexity Superconductive Quantum Integrated Circuits<br>Prof. Eby Friedman<br>University of Rochester |         |
| 16:15-16:30 |                                 |   |   |   |  |  |         |
| 16:30-16:45 | Th4.1.3                         | Tunable Directional Coupler on the SiN platform for On-chip Commercial Photonic Gyroscope<br>Loren Gamrasni, Saawan Kumar Bag and Itzik Engel   | Th4.2.3   | State Estimation with Measurement Sign Errors<br>Nadav Jacob Lustig, Yuval Kochman, and Anatoly Khina   | Th4.3.3  |  |         |
| 16:45-17:00 | Th4.1.4                         | Free Spectral Range Stability under Linear Thermal Tuning in a Dual-Coupled Microring Resonator<br>Joseph Meyer, Alexander Grebenchukov, Astrid Barreiro, Jose A. Jaramillo-Villegas, J. J. Vegas Olmos and I. Tafur Monroy | Th4.2.4   | Copying Versus Randomization in Lempel-Ziv Music Synthesis<br>Nadav Mishan and Ram Zamir  | Th4.3.4  |  |         |
| 17:00-17:15 | Th4.1.5                         | Invited: Defense Photonics: When 'Light' is the Spec and the Technology<br>Michal Vadai<br>Elbit Systems  | Th4.2.5   | Application of the measure-transformed (MT) GLASSO to financial data<br>Nitai Buchnik, Koby Todros and Tirza Routtenberg                      | Th4.3.5  |  | Th4.5.5 |
| 17:15-17:30 |                                 |   |   |   |  |  | Th4.5.6 |
| 17:30-17:45 | Th4.1.7                         | Invited: Recent Advances in Specialty Fibers: From Research to Optoelectronic Applications<br>Ariel Bruner<br>Israel Center for Advanced Photonics (ICAP)   | Th4.2.7   |   | Th4.3.7  |  | Th4.5.7 |
| 17:45-18:00 |                                 |   | Th4.2   | Th4.3   |  | Th4.5  |         |
| 18:00-19:30 | Three Minute Thesis Competition |   |   |   |  |  |         |

# Poster Presentations

| Paper Nr. | Title   | Authors   |
|-----------|---|---|
| We5.P1    | Field-Deployable OSNR and Spectrum Analytics Using Transceivers for Network-Wide Diagnostics                                  | Abhishek Anchal and Avi Levy  |
| We5.P2    | Visible and infrared self-supervised fusion trained on a single example   | Nati Ofir and Jean-Christophe Nebel   |
| We5.P3    | Defect Detection Approaches Based on Simulated Reference Image  | Nati Ofir, Yotam Ben Shoshan, Ran Badanes and Boris Sherman   |
| We5.P4    | Integrated Dataset Generation and Testing Platform for Dynamic Graph Neural Network ETA Prediction                            | Guy Tordjman and Nadav Voloch   |
| We5.P5    | FPGA based image content recognition system   | Dar Eshel Epstein and Binyamin Abramov  |
| We5.P6    | Life-and-Death Decisions of Autonomous Vehicles: Engineered Cut of the Ethical Gordian Knot                                   | Yair Y. Shaki, Moshe Yanovskiy and Yehoshua Socol   |
| We5.P7    | A Compact Cavity-Backed Antenna with Enhanced Bandwidth   | A. Aflalo, L. Galanti and V. Vulfin   |
| We5.P8    | Microwave Link Attenuation under Rain and Hail: Insights into Hail Effects  | Liora Mazangia, Jonatan Ostrometzky, Hagit Messer   |
| We5.P9    | A Controller-Agnostic COI-Frame Test for Transient Stability of Grid-Forming Converters                                       | Alan Valadez and George Weiss   |
| We5.P10   |   |   |
| We5.P11   | A comparative analysis of solar panel performance fixed orientation versus astronomical and LDR-based sun tracking algorithms | Yosef Golovachev, Evyatar Har-zvi and Moshe Boyer   |
| We5.P12   | Language-Vision Model Navigation for Indoor Robots Using Semantic Landmark Grounding  | Tamir Basson and Amir Shapiro   |
| We5.P13   | Machine-Learning-Driven Computational Spectroscopy based on Optoelectronic Chromatic Dispersion in Photodiodes                | Endalamaw Ewnu Kassa, Ziv Glasser, Uttama K Saint, Roi Yozevitch and Shmuel Sternklar   |
| We5.P14   | Influence of Molecular Beam Epitaxy Interface Characteristics on Temperature Limits in Advanced THz Quantum Cascade Lasers.   | Nathalie Lander Gower, Shiran Levy, Maor Engel, Sadhvikas J. Addamane and Asaf Albo   |
| We5.P15   | FeFET-based Reconfigurable Voltage-to-Time Converter in 28 nm CMOS  | Hanaa Egeiq, Jeries Mattar, Stefan Dunkel, Halid Mutaosmanovic, Gunda Beernink, Sven Beyer and Nicolas Wainstein                            |
| We5.P16   | Analytical Expressions for Photonic Band Structure of One-Dimensional Arrays of Identical Waveguides for Integrated Photonics | Hodaya Teitelbaum, Vladislav Shteeman and Amos A. Hardy   |
| We5.P17   | Tight Binding Solution for Quantum Wire Arrays  | Hodaya Teitelbaum, Vladislav Shteeman and Amos A. Hardy   |
| We5.P18   | TCAD based numerical analysis of optoelectronic chromatic dispersion in silicon photodiodes                                   | Meir Itzhaki, Pini Medved, Maor Engel, Ziv Glasser, Shmuel Sternklar and Asaf Albo  |
| We5.P19   | Hybrid Quantum Neural Networks vs. YOLO for Drone Detection   | Gokul Manavalan and Shlomi Arnon  |
| We5.P20   | Early Detection of Astrocytoma Using an AI-Based Scalp-Mounted Brain Chip   | Gokul Manavalan, Ayush Mehra and Shlomi Arnon   |
| We5.P21   | Low-temperature plasma-enhanced atomic layer deposition of AlN for GaN process integration                                    | Pini Medved, Silvia Piperno, Valentina Korchnoy, Meir Itzhaki, Maor Engel and Asaf Albo   |
| We5.P22   | Near-infrared Imaging through Scattering Tissue Using an Auto-Encoder Neural Network  | Alon Silberschein, Eliran Talker, Chanan Berkovitz, Yair Engler, Amir Shemer and Yossef Danan   |
| We5.P23   | Robust Deep Reinforcement Learning Under Action-Signal Mismatches   | Oren Fivel, Matan Rudman, and Kobi Cohen  |
| We5.P24   | Hebrew Offensive Language Detection via Prompt-Guided LLM Annotation and Transformer Fine-Tuning                              | Gili Berger, Yossef Haim Shrem and Chaya Liebeskind   |
| We5.P25   | Engineering Angular Dispersion via Hybrid Local-Nonlocal Metasurfaces   | Shany Z. Cohen, Luna Sinitsky, Sukanta Nandi, Leeju Singh, Amos Sharoni and Tomer Lewi  |
| We5.P26   | Scalable toffoli quantum gate based on OAM-structured light   | Ayush Mehra and Shlomi Arnon  |
| We5.P27   | Learned hyperspectral compressive imaging with application for cancer detection   | Shadi Kandalaf and Adrian Stern   |
| We5.P28   | Investigating the On-time Resistance Time Dependence in GaN using a Modified Boost Converter Technique                        | Moshe Azoulay, Gilad Orr and Gady Golan   |
| We5.P29   | Mitigation of transformer load stress using Battery Energy Storage Systems (BESS)   | Martin Mellincovsky, Uriel Afriat, Tom Trigano, Ido Karbol and Moshe sitbon   |
| We5.P30   | Functional sEMG Tomographic Imaging of Forearm for Gesture Classification: A Proof of Concept                                 | Ytshak Levy, Daniel Rabinovitch, Yehuda Newton and Marcelo David  |
| We5.P31   | Recording Subtle Facial Expressions During Dreaming with High-Resolution EMG  | Heloise Mimoun Weiss and Yael Hanein  |
| We5.P32   | Compact Circular Loop Antenna for 2.4 GHz Band Smartwatch Applications  | I. Dudchenko, I. Madar and V. Vulfin  |
| We5.P33   | direct interferometric measurement of nonreciprocity induced by a plasmonic metasurface with false chirality                  | Ahmed Lafeef Ettapuram Naduvilepurayil, Harel Ginat, Fernando Loren, Luis Martin-Moreno, Shmuel Sternklar and Yuri Gorodetski               |
| We5.P34   | Electro-Optic Control of Nerve Regeneration: A Personalized Bio-Hybrid Implant System   | Reut Plen Gueta, Dafna Rivka Levenberg, Avia Ben Zvi Kuznitz, Zehavit Shapira and Orit Shefi  |
| We5.P35   | sensitive magneto-optic kerr effect microscope using lock-in camera   | Gilad Lev, Eyal Allegro and Amir Capua  |
| We5.P36   | Learning Power System State Estimation Priors   | Shakked River, Jean Alisse, Igal Goldshtein, Lilach Sabban, Vladimir Lechtman, Tirza Routtenberg and Eran Treitser                          |
| We5.P37   | One-Sample Mean Test for Multivariate Samples   | Alexander Novoselsky and Evgeny Kagan   |
| We5.P38   | Side-by-Side Comparison of FIB-Made Plasmonic Nanostructures for Spectral Imaging: Tips vs. Holes                             | Ya'akov Mandelbaum, Maria Tkachev, Abhijit Sanjeev, Zeev Zalevsky, David Zitoun and Avi Karsenty  |
| We5.P39   | A Wavelet Based Online Algorithm for Fast Detection of Change Points in Noisy Piecewise-Constant Signals                      | Alexander Novoselsky and Evgeny Kagan   |
| We5.P40   | Design of a Planar objective for multiphoton mouse brain imaging  | Jacob Engelberg and David Sinefeld  |
| We5.P41   | Zero-shot Shape Analysis of Nanoparticles in SEM Images using Vision AI Foundation Models                                     | Ya'akov Mandelbaum, Freida Barnatan, Emunah Goldstein, Einav Kalimian, Orchen Madar, Yishai Cohen, Avi Huri, David Zitoun, and Moshe Amitay |
| We5.P42   | Asymmetric Transistor Aging Under Thermal Gradients   | Alex Grinshpun, Firas Ramadan and Freddy Gabbay   |
| We5.P43   | Synthesis of Programmable Photonics Lattice-Form Spectral Filters with Phase Error Compensation                               | Ariel Malitsky, Bashar Bsoul and Dan M. Marom   |
| We5.P44   | SquiggleAI: AI-driven bacterial pathogen classification with raw ONT output   | Ori Maimon and Leonid Yavits  |
| We5.P45   | Optical Modeling of Focal-Point Divergence between Surgical Nd:YAG and Aiming Lasers  | Ya'akov Mandelbaum, Yaakov Slushetz, Edward Averbukh, Jaime Levy, Rani Patal and Yoel Arieli  |
| We5.P46   | An Extended PUF-based Protocol  | Francesco Berti and Itamar Levi   |
| We5.P47   | On-Chip Micro-Optics for VCSELs: Directly Printed Microlenses and Photonic Lantern Multiplexers                               | Ksenia Shukhin, Yoav Dana, Aleksei Kukin and Dan M. Marom   |
| We5.P48   | RDDiffusion: A Dual Head Heavy-Tailed Diffusion Model for Robust Multi-Target Radar Detection                                 | Ari Granevich, Igal Bilik, Haim Permuter and Joseph Tabrikian   |