

**PRELIMINARY PROGRAM**  
As of 7 June, 2026 (subject to changes)



International Convention Center Haifa | 19 October 2026



08:00-09:00 Registration, Networking and Hanging of Posters Foyer

**09:00-10:15** Parallel 1: Brain Engineering & Neuromodulation Technologies Hadas Hall  
**Chairpersons:** Dekel Rosenfeld & Lior Lev-Tov

- 09:00 Bioinspired Nanoscale Intra and Extracellular Optoelectronic Biointerface  
**Hemi Rotenberg**, Technion Israel Institute of Technology, Israel
- 09:12 Development of a Magneto-Conductive Implant for Neural Regeneration and Modulation in Peripheral Nerve Injuries  
**Ariella Noman**, Tel Aviv University, Israel
- 09:24 Breaking Barriers with Bubbles: Ultrasound Nanotechnology for Brain Therapy and Molecular Diagnostics  
**Tali Ilovitsh**, Tel Aviv University, Israel
- 09:36 Fabrication of a Magnetic Implant for Treating Nerve Injuries  
**Gal Shklarski Shchori**, Tel Aviv University, Israel
- 09:48 Electrotherapeutic Modulation of Cerebral Vasospasm: A Novel Approach Enabled by Neoflow Technologies  
**David Skorohod**, Neoflow Technologies, Israel
- 09:58 Sleep-Guided Closed-Loop Deep Brain Stimulation for Disease-Modifying Neuromodulation in Parkinson's Disease  
**Samer Abboud**, Pulsetech Medical, Israel

**09:00-10:15** Parallel 2: Bio Convergence from Lab to Market Oren Hall  
**Chairpersons:** Yaakov Diminsky & Shai Melcer

- 09:00 Medical Bio Convergence in Israel  
**Shai Melcer**, Israel Innovation Authority, Israel
- 09:12 Nanopore-AI: Combining Biology, Electronics and Machine Learning to Solve Emerging Biomedical Challenges  
**Amit Meller**, Technion Israel Institute of Technology, Israel
- 09:24 Intraoperative Sensor and Alerting System for Phacoemulsification  
**Yoav Nahum**, Rabin Medical Center, Israel
- 09:36 Bio Convergence-Driven In Vitro Models for Studying Cardiovascular System Interactions in Health and Disease  
**Moran Yadid**, Bar Ilan, Israel
- 09:48 From Lab to Market in Bio Convergence  
**Yaakov Diminsky**, Deep-Tech Venture Builder, Israel
- 10:00 Q & A

<b>09:00-10:15</b>	Parallel 3: Biomechanics and Human Performance <b>Chairpersons:</b> Sara Naftali & Mark Levy	Tamar Hall
09:00	Comparative Finite Element Evaluation of a Hybrid Total Wrist Arthroplasty Design: Biomechanical Analysis of Load Transfer and Stress Distribution <b>Moshe Brand</b> , Ariel University, Israel	
09:12	From Injury to Performance: Wearable Biomechanics for Improving Human Movement <b>Arielle Fischer</b> , Technion Israel Institute of Technology, Israel	
09:24	Reverse Biomimetics of Structural Mechanisms in Soft Biological Composites <b>Mirit Sharabi</b> , Ariel University	
09:36	Unified Multimodal E-Skin: A Single-Layer Nanocomposite Platform with Synergistic Tactile, Thermal, and Magnetoreceptive Capabilities <b>Amos Bardea</b> , Holon Institute of Technology (HIT)	
09:48	Engineering Impact on Treatment of the Musculoskeletal System: Advances in Orthopaedics and Rehabilitation <b>Mark Levy</b> , Orthopaedic Regenerative Medicine Engineering Impact Musculoskeletal System, Israel	
10:00	An Integrated 3D Platform for Micro- and Nanobubble Cavitation Dynamics under Low-Frequency Ultrasound <b>Ilia Mezdokhin</b> , Tel Aviv University, Israel	
<b>09:00-10:15</b>	Parallel 4: Medical Imaging, Image Processing and Devices <b>Chairpersons:</b> Or Perlman & Yosi Hazan	Rimon Hall
09:00	Ultrafast Dynamic Contrast-Enhanced MRI with Flexible Temporal Resolution aided Deep Learning <b>Eddy Solomon</b> , Technion Israel Institute of Technology, Israel	
09:15	Revelan™, AI-Enabled Robotic Ultrasound: The "Da Vinci" of the Imaging World <b>Moshe Shoham</b> , Endocure, Israel	
09:30	Electromagnetic Sensors for Anatomical Navigation <b>Amir Weizman</b> , Quasar, Israel	
09:45	Ultrasound Speed-of-Sound Shift Imaging for Spatiotemporal Monitoring of Clot Formation and Lysis <b>Shir Gershon</b> , Tel Aviv University, Israel	
10:00	AI in Molecular Imaging <b>Omri Ziv</b> , GE Healthcare, Israel	
<b>10:15-10:45</b>	<i>Coffee Break</i>	<i>Foyer</i>
<b>10:45-12:00</b>	Plenary 1 <b>Chairperson:</b> Rafael Beyar	Oren Hall
	<b>Opening Remarks</b> <b>Rafael Beyar</b> , Rambam Friends Organization <b>Amir Landesberg</b> , ISBME President <b>Moshe Brand</b> , ISBME Vice President <b>Moti Meir</b> , ISBME CEO <b>Meital Zilberman</b> , Head of Scientific Committee <b>Rani Bender</b> , Haifa City Council Member & Chairman of Haifa Economic Corporation	
	<b>Honorary Members Award</b> Presented to <b>Zohar Gendler</b> For his exceptional and long-standing contribution to the ISBME Society and its activities	
	<b>Keynote Lecture</b> Presented in honour of the late Prof. Yoram Palti, founder of Novocure Novocure: From a Revolutionary Technology to Clinical Applications <b>Moshe Giladi</b> , Novocure, Israel	

**12:00-13:15** Parallel 5: Optical Technologies & Therapeutic Ultrasound Hadas Hall  
**Chairpersons:** Yoav Shectman & Avinoam Bar-Zion

- 12:00 Separation and Identification of Age-Related Macular Degeneration Protein Biomarkers in Nanochannels  
**Marzia Iarossi**, Technion Israel Institute of Technology, Israel
- 12:10 Symmetric Cancer Spheroid-Fibroblast 3D Organization Revealed and Characterized by PSF-Engineered High-Throughput Microscopy  
**Noam Zoref**, Technion Israel Institute of Technology, Israel
- 12:20 Conformal Piezo-Phototronic Optoelectronic Device for Low-Power Wireless Biological Stimulation  
**Shirley Yitzhak-David**, Technion Israel Institute of Technology, Israel
- 12:30 Real-Time Localization and Control of Anti-Vascular Ultrasound in the Brain  
**Sharon Katz**, Technion Israel Institute of Technology, Israel
- 12:40 Leveraging Nanobubble-Mediated Ultrasound to Improve CAR-T Efficacy in Solid Tumour Treatment  
**Ariel Werblowsky**, Tel Aviv University, Israel
- 12:50 An Advanced Platform for Monitoring Thrombolysis in Small Vessels using Comparative Ultrasound Localization Microscopy  
**Yarin Gershman**, Tel Aviv University, Israel
- 13:00 Non-Invasive Blood Analysis: From Lab to Practice  
**Or Peleg**, Litebc, Israel

**12:00-13:15** Parallel 6: Go to Market: Lessons from CEO's Experiences Oren Hall  
**Chairperson:** Amir Ronen

**Amir Ronen**, CEO, Levron Medical  
**Andrei Yosef**, President & General Manager, LTS Device Technologies  
**Imad Younis**, President, Alfa-Omega  
**Assaf Klein**, CEO, Limaca Medical  
**Nora Nseir**, CEO, Narumi  
**Ariel Rabin**, CEO, MCI – MedTech

**12:00-13:15** Parallel 7: Novel Cardiovascular Technologies (1) Tamar Hall  
**Chairpersons:** Rafael Beyar and Idit Avrahami

- 12:00 Novel Cardio-Respiratory Physiological Assist Technology for Alleviating Pulmonary Congestion in Patients with Chronic Heart Failure: First-in-Human Study  
**Amir Landesberg**, Technion Israel Institute of Technology, Israel
- 12:12 Hemodynamic Effects of Aortic Stenosis on Coronary Flow Dynamics  
**Idit Avrahami**, Ariel University, Israel
- 12:24 Nuclear Strain and Fragility in Beating Cardiomyocytes: Implications for Laminopathies  
**Daria Pavlov Amiad**, Technion Israel Institute of Technology, Israel
- 12:36 Impedance Pumping in Rectangular Microchannels: A Fluid-Structure Interaction Study for Biochip Design  
**Dikla Kesner**, Afeka Academic College of Engineering in Tel Aviv
- 12:48 Sex-Specific Differences in Sinoatrial Node Function Are Driven by Mitochondrial Ca<sup>2+</sup> Influx  
**Rami Eid**, Technion Israel Institute of Technology, Israel
- 13:00 Cardiovascular Bio Convergence: First-in-Class Light-Induced Cardioversion Platform Integrating Gene Therapy and Flexible Micro-LED Bioelectronics for Atrial Fibrillation  
**Yaki Eidelstein**, Optorhythm, Israel

<b>12:00-13:15</b>	Parallel 8: Tissue Engineering & Regenerative Medicine <b>Chairpersons:</b> Meital Zilberman & Josef Haik	Rimon Hall
12:00	Use of Electrospinning and Different Materials with CEA for Building Skin <b>Josef Haik</b> , Sheba Tel Hashomer Medical Center, Israel	
12:15	Advanced Tools to Study Human Physiology <b>Ben Maoz</b> , Tel Aviv University, Israel	
12:30	Enhancing Structural and Vascular Stability in Engineered Cardiac Tissues through Material and Cellular Strategies <b>Shira Landau-Levi</b> , Technion Israel Institute of Technology, Israel	
12:45	Micro and Nano- Structuring of Hydroxyapatite-MMT Loaded Hydrogels for Bone Regeneration Applications <b>Tom Hanoon Kogan</b> , Tel Aviv University, Israel	
12:55	Regenerative Potential of Mesenchymal Stem Cell-Derived Extracellular Vesicles Loaded with PTEN siRNA for Facial Nerve Injury <b>Ayelet Lotan</b> , Technion Israel Institute of Technology, Israel	
13:05	Hybrid Bioprinting of Vascularized Bone Tissue Using a Thermosensitive, Mechanically Robust Bioink <b>Majd Machour</b> , Technion Israel Institute of Technology, Israel	

**13:15-14:30** *Lunch Break, Networking & Poster Session* *Foyer*

<b>14:30-15:45</b>	Plenary 2: The Leading Future Technologies (Investors/Researchers/Physicians/Hospitals) <b>Chairpersons:</b> Amir Landesberg & Meital Zilberman	Oren Hall
	<b>Uzi Levy</b> , CEO, MIVNE Real Estate <b>Yuval Garini</b> , Executive VP, Innovation & Industrial Relations, Technion <b>Shimon Eckhouse</b> , Founder and Chairman, Alon-Medtech <b>Erez Levy</b> , Executive Director, GE HealthCare <b>Nissim Darvish</b> , Healthcare Innovation Strategist, Venture Capital Leader <b>Shai Policker</b> , Managing Partner, Edge Medical Ventures <b>Zohar Gendler</b> , CEO, NGT <b>Tamar Ben-Zvi</b> , VP Business Development, Incentive Incubator <b>Amir Lichter</b> , Head of Innovation Centre, ARC-CardioVascular	

<b>15:45-17:00</b>	Parallel 9: Nanotechnology & Microfluidic <b>Chairpersons:</b> Amit Meller & Tali Ilovitsh	Hadas Hall
15:45	Magnetic Nanocomposites for Controlling Cell Signalling <b>Dekel Rosenfeld</b> , Tel Aviv University, Israel	
15:57	AI in Cancer Nanomedicine: From Text Mining to Meta-Synergy and Automated Discovery <b>Yosi Shamay</b> , Technion Israel Institute of Technology, Israel	
16:09	Ultrasound Mediated Polymerization for Cell Delivery, Drug Delivery, and 3D Printing <b>Lior Debbi</b> , Technion Israel Institute of Technology, Israel	
16:21	Coupling Electrokinetic Bioparticle Focusing on Continuous Microfluidics with Electrowetting-on Dielectric Droplet-Based Extraction <b>Amir Hillman</b> , Tel Aviv University, Israel	
16:33	Engineering a Mechanoresponsive DNA Origami Capsule for Drug Delivery to Narrowed Arteries <b>Hadas Omer</b> , Technion Israel Institute of Technology, Israel	
16:45	Low-Frequency Ultrasound-Enhanced Microdroplet Cavitation for Active Scaffold Modulation in Tissue Engineering <b>Hen Shenhav</b> , Tel Aviv University, Israel	

<b>15:45-17:00</b>	Parallel 10: Investor Arena I <b>Chairperson:</b> Ariel Sverdluk	Oren Hall
	<b>Panelists:</b> Gil Hakim, Ifat Lavi, Ishay Attar <b>Ido Goldberg</b> , Emsight <b>Doron Bushi</b> , Fastbreak Medical <b>Hagit Alon</b> , KollagenBio	

**15:45-17:00** Parallel 11: Novel Cardiovascular Technologies (II) Tamar Hall  
**Chairpersons:** Moshe Brand & Chen Speter

15:45 Biomechanical Characterization of Arteries Using a Novel Pressure–Pressure Loop Approach  
**Zehava Blechman**, Afeka Academic College of Engineering, Israel

15:57 Hemodynamic Engineering for Vascular Surgery Challenges  
**Chen Speter**, Sheba Tel Hashomer Medical Center, Israel

16:09 Toward Physiological Performance: Reinforced Polymeric Valves with Embedded Fiber Architecture  
**Omer Tal**, Technion Israel Institute of Technology, Israel

16:20 Interfacial Fluid Confinement-Based Intravascular Device for Targeted Brain Aneurysm Therapy  
**Tirosh Mekler**, Technion Israel Institute of Technology, Israel

16:30 CereNex Medical: A Versatile Intracardiac System for Enhanced Cerebral Aneurysm Treatment  
**Reuven Filman**, CereNex Medical, Israel

16:40 Acunex Vascular Systems: A Catheter-Delivered Continuous Suturing System  
**Yathreb Asaad-Helou**, Acunex Vascular Systems, Israel

16:50 ViaOne - Safe Access to the Pericardial Space Utilizing a Blunt Tip Concealed Needle Mechanism  
**Ziv Menshes**, CardioVia, Israel

**15:45-17:00** Parallel 12: Artificial Intelligence & Deep Learning Applications Rimon Hall  
**Chairpersons:** Yael Yaniv & Danny Eytan

15:45 The Deep Learning Revolution in Single-Molecule Localization Microscopy  
**Yoav Shechtman**, Technion Israel Institute of Technology, Israel

15:57 Molecular MRI Meets Physics-Guided Deep Learning: From Neurodegeneration Biomarkers to Cancer Treatment Response  
**Or Perlman**, Tel Aviv University, Israel

16:09 Label-Free AI-Aided Imaging Flow Cytometry of Cancer Cells  
**Natan T. Shaked**, Tel Aviv University, Israel

16:21 Artificial Intelligence as an Infrastructure Component of Modern Cardiology: An Overview of Promising Solutions and Clinical Effectiveness  
**Igor Grinshteyn**, Point of Care Clinic, Slovenia

16:33 Physics-Informed Self-Supervised Generative Model for 3D Localization Microscopy  
**Ofri Goldenberg**, Technion Israel Institute of Technology, Israel

16:45 X-Ray2CTPA: Leveraging Diffusion Models to Enhance Pulmonary Embolism Classification  
**Noa Cahan**, Tel Aviv University, Israel

**17:00-17:15** Short Break Foyer

**17:15-18:30** Parallel 13: Home Care, Telemedicine & Wearable Technologies Hadas Hall  
**Chairpersons:** Zehava Blechman & Michael Hauzer

17:15 An Augmented Reality Tool for Obstacle Avoidance Rehabilitation Paradigms  
**Shachar Maidenbaum**, Ben Gurion University of the Negev, Israel

17:27 Lessons Learned: Telemedicine & Remote Care Technologies  
**Rachel Sarafraz**, Sheba Tel Hashomer Medical Center, Israel

17:39 Old Medicine, High-Tech Medicine, The Right Way to Practice Medicine f  
**Amir Shahar**, Tromiyun Tele-Medical Services, Israel

17:51 Command and Control System - Information Continuity Along the Evacuation and Treatment Chain as a Basis for Life-Saving Decision-Making  
**LTC I.**, Medical Corps, Israel Defence Forces, Israel

18:03 Speculate Gynaecology  
**Or Weis Ginsburg**, Technion Israel Institute of Technology, Israel

18:15 GerdCare Medical: Israel-Based Digital Therapeutics Innovator Delivering eGERD, a First-in-Class Wearable, Drug-Free GERD Therapy Restoring EGJ Barrier Function and Tackling the Disease at Its Root  
**David Hanuka**, Gerdcare Medical, Israel

<b>17:15-18:30</b>	Parallel 14: Investor Arena II <b>Chairperson:</b> Ariel Sverdlík	Oren Hall
	<b>Panelists:</b> Gil Hakim, Ifat Lavi, Ishay Attar <b>Ziv Menshes</b> , CardioVia <b>Ziv Heller</b> , Alvox Bio <b>Tamir Nahmias</b> , Crossevia Medical <b>Hai Zaguri</b> , FiBreath	
<b>17:15-18:30</b>	Parallel 15: Biomedical Robotics Surgical Procedure <b>Chairpersons:</b> Ilana Nisky & Moshe Shoham	Tamar Hall
17:15	Embedding Human-like Coordination in the Design and Control of Bionic Limbs <b>Nili Krausz</b> , Technion Israel Institute of Technology, Israel	
17:35	Bowel Incision Closure with a Semi-Automated Robot-Assisted Laser Tissue Soldering System <b>Uri Netz</b> , Ben-Gurion University and Soroka Medical Center, Israel	
17:55	Crossevia Medical is Revolutionizing Cath Lab Interventions with Advanced Access Devices and Enabling Endovascular AI Robotic Navigation <b>Tamir Nahmias</b> , Crossevia Medical, Israel	
18:07	LapBox: Setting a New Safety Standard in Minimally Invasive and Robotic Surgery <b>Stav Tori</b> , Ark Surgical, Israel	
18:19	Preclinical Evaluation of the MicroSteer FALCON System for Device-Assisted Endoscopic Submucosal Dissection in a Porcine Gastrointestinal Model <b>Eyal Ben-Esti</b> , MicroSteer, Israel	
<b>17:15-18:30</b>	Parallel 16: Biomaterials, Drug Delivery & Immunotherapy <b>Chairpersons:</b> Moran Yadid & Yosi Shama	Rimon Hall
17:15	Engineering Nanoscale Hierarchy for Tailored Biomaterial Design <b>Zohar Arnon</b> , Ben Gurion University, Israel	
17:27	Tailoring the Structure and Antibacterial Properties of Self-Assembled Fmoc-Phenylalanine Nanostructures through Positional Fluorination <b>Moran Aviv</b> , Afeka Academic College of Engineering, Israel	
17:39	Novel Antibiotic-Eluting Gelatin-Alginate Soft Tissue Adhesives for Various Wound Closing Applications <b>Adaya Shefy Peleg</b> , Tel Aviv University, Israel	
17:51	Dissolving Microneedles for Systemic and Brain Delivery of Melatonin <b>Aiman Abu Ammar</b> , Azrieli College of Engineering, Jerusalem	
18:03	Transmuting Long-Acting Injectables Platforms <b>Peter Siman</b> , Intragel, Israel	
18:13	A Novel Device to Enhance the Hemostatic Efficacy of Plasma in Hemorrhagic Events <b>Ze'ev Dvashi</b> , Plas-Free, Israel	

1. Analysis of High-Resolution X-Ray Images for Hgb (Hemoglobin) Level Detection  
**Omri Adler**, Rambam Health Care Campus, Israel
2. Light- and Ultrasound-Induced Antibacterial Properties of Pistacia lentiscus and Laurus Nobilis Leaf Extracts  
**Tigabu Haddis Ale**, Ariel University, Israel
3. An Implantable Nitinol-Based Micro-Actuated Drug Delivery Device  
**Israel Alexandron**, Ben Gurion University of the Negev, Israel
4. An Active Nitinol-Based Orthosis to Facilitate Mobility in Patients with Drop Foot  
**Israel Alexandron**, Ben Gurion University of the Negev, Israel
5. Long-Term Learning Analysis Via Image Processing and Kinematic Analysis in Knot-Tying Task  
**Raz Am Shalem**, Ben Gurion University of the Negev, Israel
6. Engineering a 3D-Bioprinted Model for In Vitro Cancer Research  
**Adi Amrusi**, Technion Israel Institute of Technology, Israel
7. Expanding VR Exposure Therapy for PTSD to Civilian Scenarios  
**Bsant Anabosy**, Ben Gurion University of the Negev, Israel
8. Mechanical Ventilation Induced Increase in Intrapulmonary Postcapillary Resistance Play Key Role in Diminishing Left Ventricle Filling and Cardiac Output  
**Ofri Andriesse**, Technion Israel Institute of Technology, Israel
9. From High Flow to Healthy Perfusion: A Turbulent Flow Simulation of Arteriovenous Fistula Steal Syndrome Treatments  
**Galina Antonov**, Ariel University, Israel
10. Tasks Design and Evaluation of Bimanual Interaction with Real-World Soft Elastic Objects in Robot-Assisted Minimally Invasive Surgery  
**Shani Arusi**, Ben Gurion University of the Negev, Israel
11. Multimodal Haptic Interfaces for Upper-Limb Prosthetics: Integrating Force and Thermal Feedback  
**Barak Arvili**, Ariel University, Israel
12. Illuminating the Underlying Mechanism of Intracellular Optoelectronic Modulation Using Silicon Nanowires  
**Tania Assaf**, Technion Israel Institute of Technology, Israel
13. Mechanical Properties and Stress Shielding Analysis of Ti-6Al-4V TPMS lattice made via SLM for hip implant Application  
**Chen Atias**, Ariel University, Israel
14. A Feedback Scaffold for Predictive Control in de novo Motor Learning  
**Chen Avraham**, Technion Israel Institute of Technology, Israel
15. Acceleration of Molecular Cardiac MRI using a Physics-Aware Vision Transformer  
**Hadas Avraham**, Tel Aviv University, Israel
16. Anatomical Token Uncertainty for Transformer-Guided Active MRI Acquisition  
**Lev Ayzenberg**, Tel Aviv University, Israel
17. Development of Sports Protectors Based on 3D-Printed Anisotropic Lattices  
**Claude Azaria**, Ariel University, Israel
18. Similarly Fluent? Similarity Analysis in Children with Epilepsy and Children with Dyslexia in Relation to Reading Fluency: An fMRI Study  
**Marwan Bebar**, Technion Israel Institute of Technology, Israel
19. Quantitative AI-Boosted Molecular Magnetic Resonance Fingerprinting of Lipids and Macromolecules in Multiple Sclerosis In Vivo  
**Ruth Ben Chaim**, Tel Aviv University, Israel
20. Predictive Sensor Fusion Architecture for CPG-Driven Lower-Limb Exoskeleton Gait Control  
**Tal Ben Eli**, Ariel University, Israel

21. Digital Implementation of a Scalable Virtual-Cell Framework  
**Yael Ben Nahum**, Technion Israel Institute of Technology, Israel
22. Targeted Therapeutic Release via Ultrasound Nanodroplets for Tumour Therapy  
**Tiran Bercovici**, Tel Aviv University, Israel
23. 3D Bioprinting of Elastic Macro-Vessel Networks within Multi-Layered Tissue Flaps  
**Tom Blechman**, Technion Israel Institute of Technology, Israel
24. Leadless Optoelectronic Artificial Axons for Studying Activity-Dependent Myelination  
**Alexander Borodetsky**, Technion Israel Institute of Technology, Israel
25. A Data-Driven Approach for SFA Restenosis Prediction: Integrating Patient-Specific CFD and Machine Learning  
**Moshe Brand**, Ariel University, Israel
26. Daily Living Gait Measures Derive from Wrist Accelerometers and a Deep Learning Pipeline are Associated with Postmortem Brain Pathologies  
**Yonatan Brand**, Tel Aviv University, Israel
27. AI-Driven Patient Phenotyping for ICU Nutrition  
**Eden Breen**, Ariel University, Israel
28. Ophthalmology foundation models for clinically significant age macular degeneration detection  
**Benjamin A. Cohen**, Technion Israel Institute of Technology, Israel
29. Novel Edible Bioinks for Cultivated Meat: Evaluating Feasibility and Effects on Intestinal Epithelium  
**Shlomit David**, Technion Israel Institute of Technology, Israel
30. Guiding Epidural Needle Insertion Training with Task-Specific Metrics and Motor Control Principles  
**Nitsan Davidor**, Ben Gurion University of the Negev, Israel
31. Parallel and Targeted Cell Electroporation via Optoelectronic Ally Controlled Janus Micromotors  
**Srikanta Debata**, Tel Aviv University, Israel
32. Compact 3D Imaging Flow Cytometry for Volumetric Analysis of Nanoparticle Uptake  
**Roni Ehrlich**, Technion Israel Institute of Technology, Israel
33. Vascular Inflammatory Signalling at the Blood–Brain Barrier: A Model for Hypertensive Neurovascular Injury  
**Reem Fahmawi**, Technion Israel Institute of Technology, Israel
34. Development of a Novel Sensor-Integrated Eight-Plate for Adolescent Limb Deformity Correction  
**Nirel Fedida**, Ariel University, Israel
35. Multiparameter Uncertainty Mapping in Quantitative Molecular MRI by a Physics-Structured Variational Autoencoder (PS-VAE)  
**Alex Finkelstein**, Tel Aviv University, Israel
36. 3D Printed Vascularized Tissue Flaps Enabling Direct Anastomosis for Reconstructive Clinical Applications  
**Eliana Fischer**, Technion Israel Institute of Technology, Israel
37. Numerical analysis of the hemodynamics and performance of miniature ventricular assist devices  
**Yuval Gabso**, Ariel University, Israel
38. Targeting Ubiquitin Signalling: A Novel Cyclic Peptide Therapy for Multiple Myeloma  
**Dima Ghannam Shahbari**, UB Therapeutics, Israel
39. Mechano-Profiling and Modulation of Red Blood Cell-Based Shear-Responsive Carriers  
**Anat Glozman**, Technion Israel Institute of Technology, Israel
40. A Novel Active Transparent Model for In-Vitro PIV Investigation of Left Ventricular Hemodynamics.  
**Itamar Goshen**, Ariel University, Israel
41. Super-Resolution Intracellular Ultrasound Imaging using Blinking Nanodroplets  
**Saar Gotshal**, Tel Aviv University, Israel
42. Leveraging Symmetrical Flow Matching for Source-Free Domain Adaptation in Medical Image Segmentation  
**Tal Grossman**, Tel Aviv University, Israel

43. CERNAL: A Transcriptome-Driven Compiler for RNA-Based Cellular Logic Circuits  
**Mor Gurwicz**, Tel Aviv University, Israel
44. Experimental Quantification of Three-Dimensional, Time-Resolved Fluid-Structure Interaction in a Left-Ventricular Phantom  
**Omer Hadar**, Tel Aviv University, Israel
45. Leadless Biomechanical Innovative Technologies for Cardiac Repair  
**Layan Habib**, Technion Israel Institute of Technology, Israel
46. Visualizing Vascular Bone Marrow Niche Alterations in Diabetes  
**Narmeen Haj**, Technion Israel Institute of Technology, Israel
47. Advanced Signal Processing and Multi-Criteria Ranking Framework for Cuffless Systolic Blood Pressure Estimation Based on Photoplethysmography (PPG) Signal Analysis  
**Ami Hauptman**, Afeka Academic College of Engineering in Tel Aviv, Israel
48. Multi-Contrast Generation and Quantitative MRI using a Transformer-Based Framework with RF Excitation Embeddings  
**Sahar Ifrah**, Tel Aviv University, Israel
49. Brightfield Snapshot 3D Microscopy: Towards In-Vivo Imaging  
**Leen Ilеimi**, Technion Israel Institute of Technology, Israel
50. A 3D Bioprinted Vascularized, Perfusable Intestinal Model for Drug Evaluation and Disease Modeling  
**Adina Israel Fried**, Technion Israel Institute of Technology, Israel
51. Exploring Genome Organization at the Nanometric Scale in the Cell Nucleus  
**Rand Kamal**, Technion Israel Institute of Technology, Israel
52. Ultrasonic Speed-of-Sound Shift Imaging for Microbubble-Mediated Therapeutic Applications  
**Keren Tchelet Karlinsky**, Tel Aviv University, Israel
53. Exploring the Distance-Dependent Mechanical Communication During Sprouting Angiogenesis  
**Oryan Karni**, Technion Israel Institute of Technology, Israel
54. Corticomotoneuronal Suppression and Facilitation Map onto Null and Potent Population Dynamics during Dexterous Movements  
**Daniel Katz**, Technion Israel Institute of Technology, Israel
55. Toward Patient-Specific Optimization of Systemic-to-Pulmonary Shunts in Single-Ventricle Physiology  
**Adi Konsens**, Tel Aviv University, Israel
56. Three-Dimensional Magneto Responsive Scaffolds for Remote Cellular Stimulation  
**Ekaterina Kuznetsova**, Tel Aviv University, Israel
57. Cryoablation Temperature Monitoring with Dense Ultrasonic Slowness Shift Imaging  
**Gaya Lamm**, Tel Aviv University, Israel
58. Medical Device Lifecycle and Regulatory Compliance Diagram  
**Shay Leventhal Gabay**, RA360 Consulting, Israel
59. Cellulose Fibres Enhance the Function of Hemostatic Composite Medical Sealants  
**Inbar Levi**, Tel Aviv University, Israel
60. Selective Targeting of Non-Small Cell Lung Cancer in Three-Dimensional Models by Non-Thermal Millimetre-Wave Irradiation  
**Stella Liberman-Aronov**, Ariel University, Israel
61. Biomechanics Modelling of Traumatic Spinal Cord Injury Due to Ischemia  
**Guy Lilling**, Tel Aviv University, Israel
62. Virtual Reality Systems for Treating PTSD: Israeli-Tailored Prolonged Exposure and Place Attachment Therapy  
**Shachar Maidenbaum**, Ben Gurion University, Israel

63. Effects of Arterial Wall Roughness and Mechanical Stiffness on Hemodynamics in 3D-Printed Vessel Models  
**Shai Maman**, Afeka Academic College of Engineering in Tel Aviv, Israel
64. Biomimetic Silk-Reinforced IPN Hydrogel Composite Tubular Constructs for Coronary Artery Replacement: Mechanical Performance  
**Dekel Maroz**, Ariel University, Israel
65. Soft Tissue Hybrid Bioprinting for Tissue Engineering Using a PLGA-Particle Reinforcement Bioink  
**Roy Meretzki**, Technion Israel Institute of Technology, Israel
66. Quantitative Monitoring of Immunotherapy Treatment Response in Paediatric Tumours Using Molecular CEST MRI  
**Ron Moneta**, Tel Aviv University, Israel
67. Fiber-Reinforced Interfaces Enhance Mechanical Integrity in Biomimetic Intervertebral Discs  
**Haim Salim Mordechai**, Ariel University, Israel
68. Synthetic Modular Contact-Dependent Microbe-to-Mammalian Communication  
**Roei Samuel**, Technion Israel Institute of Technology, Israel
69. Seaweed-derived Cellulose Scaffolds: A Novel Platform for Mammalian Cell Cultures with 3D Infiltration and Proliferation  
**Orna Sharabani-Yosef**, Tel Aviv University, Israel
70. Biomechanics Modelling of Traumatic Spinal Cord Injury Due to Haemorrhage  
**Ilana Nachshon**, Tel Aviv University, Israel
71. Benchmarking AI Against Expert Ophthalmologists for Clinical Detection of Referable Eye Diseases  
**Renee Najman**, Technion Israel Institute of Technology, Israel
72. A Microfluidic Nanoliter-Well Platform for Direct-from-Sample Rapid Phenotypic Antimicrobial Susceptibility Testing  
**Michal Nehrer**, Technion Israel Institute of Technology, Israel
73. Enhancing Drug Permeability into Solid Tumours Via Opto-Electronic Silicon Nanowires Mediated Electroporation  
**Dana Nir**, Technion Israel Institute of Technology, Israel
74. Combining Supramolecular and Covalent Chemistry to form versatile Reinforced Fibrillar Network Hydrogels from Fibrin and Methacrylated Fibrinogen  
**Noa Notea-Debutton**, Technion Israel Institute of Technology, Israel
75. Programmable Hybrid Systems for Targeted Cancer Therapy: Integrating Engineered Bacteria and Mammalian Cells  
**Siraj Nsraldeen Halabi**, Technion Israel Institute of Technology, Israel
76. Early Detection of CAR-T-Associated Neurotoxicity via Cytokine Monitoring in Serum  
**Amit Parizat**, Technion Israel Institute of Technology, Israel
77. Selective Anti-Cancer Influence of Millimetre-Wave Irradiation on Solid Tumour Viability and Division  
**Dhavalkumar Patel**, Ariel University, Israel
78. Design of Bioactive Titanium Porous Structures via Binder Jetting, Partial Sintering and Surface Modification  
**Vladimir Popov**, Ariel University, Israel
79. Fiber-Oriented Composite Design for Biomimetic Aortic Valves  
**Yana Portnov**, Ariel University, Israel
80. Predicting Arteriovenous Fistula Failure: An Iterative CFD Framework for Intimal Hyperplasia Progression  
**Dmitry Reshetnikov**, Tel Aviv University, Israel
81. Quantitative Assessment of Early Post-Type 2 Myocardial Infarction Remodelling  
**Maya Rom**, Technion Israel Institute of Technology, Israel

82. Intracellular  $\text{Ca}^{2+}$  Modulates PKA Compartmentalization and Dynamics in Human iPSC-Derived Cardiomyocytes  
**Anat Rotschild**, Technion Israel Institute of Technology, Israel
83. The Effect of Aortic Valve Stenosis on the Hemodynamic of the Coronary Arteries  
**Sofia Runshteyn**, Ariel University, Israel
84. Beyond Glucose: Evidence that  $^{18}\text{F}$ -FDG PET Underestimates Bone Marrow Activation in Diabetes  
**Dareen Saab**, Technion Israel Institute of Technology, Israel
85. Wearable K Band Sensors for Healthcare, IoT, and Telemedicine Systems  
**Albert Sabban**, Braude College of Engineering, Israel
86. Studying Fluorescent Properties of Olive Carbon Dots using Time-Resolved Fluorescence Measurements  
**Ulugbek Saidvaliev**, Tel Aviv University, Israel
87. Vortex-Driven Perfusion: The Impact of Aortic Root Hemodynamics on Coronary Flow in Aortic Stenosis and Valve Replacements  
**Oren Salimi**, Ariel University, Israel
88. End-to-End Joint Optimization of Z-Encoding Phase Mask and Z-Stack Reconstruction for Single-Shot 3D Fluorescence Microscopy  
**Danielle Sapir**, Technion Israel Institute of Technology, Israel
89. Integration of MRI and Computational Hemodynamic Modelling for the Assessment of Human Placental Vasculature and Function  
**Dana Schonberger**, Tel Aviv University, Israel
90. Structural Motifs Promote Tear Resistance and Flaw Tolerance in Silk Fibroin–Alginate Bio Composites  
**Smadar Sharon**, Ariel University, Israel
91. An Abdominal Aortic Aneurysm Micro-Physiological Model for the Study of Localized Therapeutics  
**Suzan Shehday**, Technion Israel Institute of Technology, Israel
92. Automated Detection of Freezing of Gait in Complex Environments From simple 2D Video Using Spatiotemporal Graph Convolutional Networks  
**Arik Shkolnikov**, Tel Aviv University, Israel
93. A Robotic Platform for Surgical Site Infection Simulation  
**Yael Shlomo**, Tel Aviv University, Israel
94. Skeletal Muscle-Derived Extracellular Vesicles and Their Impact on Glucose Regulation in Type 2 Diabetes  
**Hagit Shoyhet**, Technion Israel Institute of Technology, Israel
95. Acunex Vascular Systems: A Catheter-Delivered Continuous Suturing System for Durable EVAR Graft Fixation  
**Areen Shtewe**, Acunex Vascular Systems, Israel
96. Bioengineered Human Neurovascular Unit: A Perfusable In Vitro Platform  
**Rita Shuhmaher Bialik**, Technion Israel Institute of Technology, Israel
97. Architected Hybrid Scaffolds for Patient-Specific, Mechanically Compliant Breast Tissue Engineering  
**Asaf Silverstein**, Technion Israel Institute of Technology, Israel
98. Macroscopic Fourier-Based Spectral Imaging for Biopsy Analysis and Diagnosis  
**Adam Soker**, Technion Israel Institute of Technology, Israel
99. Toward Distortion–Perception–Balanced MRI Reconstruction with Rectified Flow  
**Omer Taub**, Tel Aviv University, Israel
100. Engineering a Fetal-Like Wound Microenvironment: Controlled TGF- $\beta$ 3 Delivery via FibMA Hydrogel Reduces Adult Skin Fibrosis  
**Victoria Teichman**, Technion Israel Institute of Technology, Israel
101. Cell-Cell Interactions in Bio Printed Vascularized Composite Soft Tissue Flaps with an Integrated Arterial-Venous Loop  
**Anna Tsukerman**, Technion Israel Institute of Technology, Israel

102. Improving Ligamentum Flavum Haptic Rendering in a Bimanual Epidural Needle Insertion Simulator  
**Mohamad Usman**, Ben Gurion University of the Negev, Israel
103. Simulations and Classification of Flow Fields in Different Umbilical Cord Models  
**Anna Vassart**, Afeka College of Engineering, Israel
104. Clinical Progression of Dystrophinopathies: Exploring the Role of Autonomic Nervous System Activity and Machine Learning Models  
**Bar Vinder**, Ariel University, Israel
105. End-to-End Deep-Learning-Based Discovery of Quantitative Molecular MRI Acquisition Protocols  
**Nikita Vladimirov**, Tel Aviv University, Israel
106. A Novel Approach for Electrophysiological Profiling of Cardiac Organoids Using Spatiotemporal Analysis and Beat Rate Variability  
**Ido Weiser-Bitoun**, Rambam Health Care Campus, Israel
107. A High-Throughput Perfusable Platform for Generating Vascularized Tissues  
**Maya Yaakov**, Technion Israel Institute of Technology, Israel
108. Predicting Subject-Specific fMRI Activation Maps from Cognitive Profiles using a Spatial Basis Decomposition  
**Ori Zehngut**, Technion Israel Institute of Technology, Israel
109. Combined Discrete Wavelet Transform and Machine Learning from Reflectance Spectra for Screening Types of Skin Cancer in Patients  
**Yoav Zuntz**, Ariel University, Israel