

Plenary sessions

Plenary Lectures

Chair: Prof. Amnon Aharony

Time: 09:30 -11:30

09:30-10:30 [APS sponsored]

Shaul Hanany

School of Phys. and Astronomy, Univ. of Minnesota/Twin Cities

Probing the Big Bang with the Cosmic Microwave Background Radiation

10:30-11:30

Mordechai (Moti) Segev

Physics department and Solid State Institute, Technion

Photonic Topological Insulators

Review sessions

R1: Review 1 - High Energy and Astrophysics

Chair: Prof. Adi Nusser

Place: 90/227

Time: 12:00 - 13:00

12:00-12:30

Avishai Dekel

The Hebrew University of Jerusalem

Galaxy Formation in its Most Active Phase

12:30-13:00

Tomer Volansky

Tel Aviv University

The Hunt for Dark Matter

R2: Review 2 - Quantum and Cond-Matt Physics

Chair: Dr. Eytan Grosfeld

Place: 92/001

Time: 12:00 - 13:00

12:00-12:30 [APS sponsored]

Amir Yacoby

Harvard

Induced superconductivity in the quantum spin hall edge

12:30-13:00

Adv Stern

Weizmann Institute

The making and breaking of non-abelian states of matter

R3: Review 3 - Statistical and Soft matter physics

Chair: Prof. Yuval Garini

Place: 92/002

Time: 12:00 - 13:00

12:00-12:30

Alexander Grosberg

Department of Physics, New York University

Nuclear chromodynamics: statistical physics and cell nucleus

12:30-13:00 [EPJ sponsored]

Peter Hänggi

Dept. of Physics, University of Augsburg, Germany

On the use and abuse of THERMODYNAMIC entropy

Parallel sessions

A1: Astrophysics (observational)

Chair: Dr. Dovi Poznanski

Place: 90/227

14:30-15:00 (invited)	<u>Andy Howell</u> LCOGT UC Santa Barbara Exotic explosions and LCOGT
15:00-15:15	<u>Iair Arcavi</u> University of California Santa Barbara Rapidly Rising Luminous Supernovae
15:15-15:30	<u>Ziv Mikulizky</u> , Adi Nusser Technion The kinematics of the Local Group and nearby galaxies
15:30-15:45	<u>Lee Yacobi</u> , Dafne Guetta, Ehud Behar Technion Osservatorio Astronomico di Roma ORT Braude Constraints on The Hadronic Content of Gamma Ray Bursts
15:45-16:00	<u>Ranieri D. Baldi</u> , Ehud Behar, Ari Laor, Assaf Horesh Technion Institute Weizmann Institute of Science Radio-Quiet AGN at high radio frequencies: jet or accretion disk corona?

A2: High Energy (theory)

Chair: Dr. Tomer Volansky

Place: 90/224

14:30-15:00 (invited)	<u>Gilad Perez</u> Particle Physics and Astrophysics, Weizmann Inst. News from the frontier: the LHC battle for naturalness
15:00-15:15	<u>Oren Slone</u> , Tomer Volansky Tel Aviv University Direct Detection of Light Dark Matter via Molecular Bond Breaking
15:15-15:30	<u>Yotam Soreq</u> , Christoph Englert, Michael Spannowsky Department of Particle Physics and Astrophysics, Weizmann Institute of Science, Rehovot 7610001, Israel SUPA, School of Physics and Astronomy, University of Glasgow, Glasgow G12 8QQ, United Kingdom Institute for Particle Physics Phenomenology, Department of Physics, Durham University, Durham DH1 3LE, United Kingdom Off-Shell Higgs Coupling Measurements in BSM scenarios
15:30-15:45	<u>Avia Raviv</u> Tel Aviv University Lifshitz $z=2$ Supersymmetry
15:45-16:00	<u>Prithvi Narayan</u> , Micha Berkooz, Amir Zait Weizmann Institute of Science Chiral 2D Strange Metals from $N = 4$ Super Yang-Mills theory

A3: High Energy - Nuclear Physics A

Chair: Prof. Alexander Milov

Place: 90/226

- 14:30-15:00 (invited) **Michael H. Urin**
National Research Nuclear University MEPhI, 115409 Moscow, Russia
Damping of simple modes of high-energy nuclear excitations: dispersive optical models and their implementations
- 15:00-15:15 **Erez Cohen**, Nikolay Pilip, Eli Piasetzky, Yair Shamai
School of Physics and Astronomy, Tel Aviv University
TASFID - A Scintillating Fiber detector
- 15:15-15:30 **Nir Nevo Dinur**, Chen Ji, Oscar Javier Hernandez, Sonia Bacca, Nir Barnea
The Hebrew University, Jerusalem, Israel
TRIUMF, Vancouver, Canada
University of Manitoba, Winnipeg, Canada
Nuclear Structure Effects in Light Muonic Atoms
- 15:30-15:45 **Or Hen**
Tel-Aviv University, Israel.
Short-range correlations in imbalanced Fermi systems
- 15:45-16:00 **Sourav Tarafdar**, Alexander Milov, Zvi Citron
Weizmann Institute of Science
A Centrality Detector Concept for Heavy Ion Collider

A4: Quantum information

Chair: Dr. Hagai Eisenberg

Place: 90/234

- 14:30-15:00 (invited) **David Gershoni**
The Physics Department and The Solid State Institute, Technion - Israel Institute of Technology
Haifa, 32000, Israel
Quantum Optics with Semiconductor Quantum Dots.
- 15:00-15:15 **Itay Shomroni**, Orel Bechler, Serge Rosenblum, Barak Dayan
Weizmann Institute of Science
Demonstration of Weak Measurement based on Atomic Spontaneous Emission
- 15:15-15:30 **E. Poem**, K. T. Kaczmarek, C. Weinzetl, J. Munns, T. F. M. Champion, D. J. Saunders, J. Nunn, I. A. Walmsley
Clarendon Laboratory, University of Oxford, Parks Road, Oxford OX1 3PU, UK
Proposed ultrafast optical control and broadband optical quantum memory with neutral nitrogen-vacancy centers in diamond
- 15:30-15:45 **I. Cohen**, A. Retzker, S. Weidt, W. K. Hensinger, G. Mikelsons, M. B. Plenio, C. Senko, P. Richerme, J. Smith, A. Lee, C. Monroe
The Hebrew University of Jerusalem
University of Sussex
University of Ulm
Imperial College London
University of Maryland
Dressed states for quantum gates and quantum simulation with trapped ions
- 15:45-16:00 **Yaakov Shaked**, Hillel Sanhedrai, Gill Bashan, Avi Pe'er
Department of physics and BINA Center of nano-technology, Bar-Ilan University
Measuring Bright Two-mode Squeezing without an External Local Oscillator

A5: Quantum (AMO)

Chair: Prof. Ronnie Kosloff

Place: 90/233

- 14:30-15:00 (invited) **Lev Khaykovich**
Department of Physics, Bar Ilan University, Ramat-Gan 52900, Israel
Probing and understanding the few-body physics in ultracold atoms
- 15:00-15:15 **Hagar Veksler**, Shmuel Fishman
Technion
Collapses and revivals of matter waves
- 15:15-15:30 **Shimshon Kallush**, Sharly Fleischer
Department of Physics and Optical Engineering, ORT Braude College
School of Chemistry, Tel Aviv University
Computing alignment and orientation of non-linear molecules in room temperature

- 15:30-15:45 **using random phase wave functions**
David J. Tannor, Elie Assemat, Shai Machnes
 Weizmann Institute of Science
Toward the Simulation and Control of Multielectron Dynamics
- 15:45-16:00 **Menachem Givon**, Yair Margalit, Amir Waxman, Tal David, David Groswasser, Yonathan Japha, Ron Folman
 Ben-Gurion University of the Negev, P.O. Box 653, Beer Sheva 84105, Israel
 Israel Aerospace Industries, Ramta Division, 1 Nafha Street, Beer Sheva 84102, Israel
Magic Frequencies in Atom-Light Interaction for Precision Probing of the Density Matrix

A6: Mesoscopic physics

Chair: Dr. Saar Rahay
 Place: 90/233

- 14:30-14:45 **Ran Fischer**, Gonzalo A. Alvarez, Christian Bretschneider, Paz London
 Chemical Physics, Weizmann Institute, Israel
 Physics Department, Technion-Israel Institute of Technology, Israel
Local and bulk ^{13}C hyperpolarization in NV-centered diamonds at arbitrary fields
- 14:45-15:00 **Ariane Soret**, Evgeni Gurevich, Eric Akkerman
 Technion
 ENS Cachan (France)
Quantum dynamics of a wave packet for a Cantor spectrum
- 15:00-15:15 **Kristen Kaashjerg**, Abraham Nitzan
 Weizmann Institute of Science
 Tel Aviv University
Light emission from high-frequency quantum noise in plasmonic contacts
- 15:15-15:30 **Jinhong Park**, Yuval Gefen, H.-S. Sim
 Department of Physics, Korea Advanced Institute of Science and Technology
 Department of Condensed Matter Physics, Weizmann Institute of Science
Dephasing by Fractionalization in the $\nu = 2/3$ Fractional Quantum Hall Regime
- 15:30-15:45 **Rani Arielly**
 Tel Aviv University
Dynamics of Redox events in Molecular Junctions
- 15:45-16:00 **Haggai Landa**, Georgy Shlyapnikov
 Univ. Paris Sud, CNRS, LPTMS, UMR 8626, Orsay 91405, France
Quasi-Bound States in Periodically-Driven Scattering

A7: Statistical Physics A

Chair: Prof. Eli Barkai
 Place: 90/230

- 14:30-15:00 (invited) **David Mukamel**
 Department of Physics of Complex Systems, the Weizmann Institute, Rehovot, Israel
Long-Range correlations in locally driven systems
- 15:00-15:15 **Daniel Hurowitz**, Doron Cohen
 Ben Gurion University
Nonequilibrium version of the Einstein relation
- 15:15-15:30 **Yosi Hammer**, Yacov Kantor
 Raymond and Beverly Sackler School of Physics and Astronomy, Tel Aviv University
Entropic pressure in lattice models for polymers
- 15:30 - 15:45 **Avi Aminov**, Yariv Kafri, Mehran Kardar
 Technion, Haifa, Israel
 MIT, Cambridge, MA, USA
Fluctuation Induced Forces in Out of Equilibrium Systems
- 15:45 - 16:00 **Johannes H. P. Schulz**, Eli Barkai
 Bar-Ilan University
Infinite densities in continuous-time random walks

A8: Soft Matter and Biological Physics

Chair: Prof. Sam Safran

Place: 90/223

- 14:30-15:00 (invited) **Kinneret Keren**
Physics Department, Technion- Israel Institute of Technology
Artificial cells: model systems for studying the actin cytoskeleton
- 15:00-15:15 **Alexandra M. Tayar**, Eyal Karzbrun , Vincent noireaux , Roy H. Bar-Ziv
Department of Materials and Interfaces, Weizmann Institute of Science, Rehovot, Israel
Department of Physics, University of Minnesota, Minneapolis, Minnesota
Programmable on-chip DNA compartments as artificial cells
- 15:15-15:30 **Anat Vivante**, Irena Bronshtein, Eldad Kepten, Itamar Kanter, Yuval Garini
Bar Ilan University
The effect of nuclear structural proteins on chromatin dynamics - measured by advanced live imaging methods
- 15:30-15:45 **Tomer Markovich**, David Andelman , Rudi Podgornik
Raymond and Beverly Sackler School of Physics and Astronomy Tel Aviv University, Ramat Aviv, Tel Aviv 69978, Israel
Department of Theoretical Physics, J. Stefan Institute
Department of Physics, Faculty of Mathematics and Physics University of Ljubljana, 1000 Ljubljana, Slovenia
Surface tension of electrolyte solutions: a self-consistent theory
- 15:45-16:00 **Michal Sahaf**
The Hebrew University of Jerusalem
Mechanical Stress and Leaf Growth

A9: Complexity in Biological systems

Chair: Dr. Ofer Feinerman

Place: 90/225

- 14:30-15:00 (invited) **David Sprinzak**, Oren Shaya , Sheila Weinreb , Udi Binshtok , Micha Hersch , Liat Zilberstein Amir
Department of Biochemistry and Molecular Biology, Tel Aviv University
University of Lausanne
Know Thy Neighbor: The role of contact area geometry on cell-cell signaling
- 15:00-15:15 **Alon Oyler-Yaniv**, Jennifer Oyler-Yaniv , Gregoire Altan-Bonnet , Oleg Krichevsky
Ben Gurion University of the Negev
Memorial Sloan-Kettering Cancer Center
Cytokine consumption controls the extent of cell-to-cell signaling and dynamically generates cellular microdomains.
- 15:15-15:30 **David Golomb**
Departments of Physiology and Physics, Ben Gurion Univ., Be'er-Sheva, Israel
Is cortical information processing described by the balanced-state model?
- 15:30-15:45 **Amir Goldental**, Shoshana Guberman , Roni Vardi , Ido Kanter
Department of Physics, Bar-Ilan University Ramat-Gan, Israel.
The Goodman Faculty of Life Sciences, Gonda Interdisciplinary Brain Research Center, Bar-Ilan University Ramat-Gan, Israel.
A computational paradigm for dynamic logic gates in neuronal activity
- 15:45-16:00 **Avraham Be'er**, Sivan Benisty , Eshel Ben Jacob , Gil Ariel
Ben Gurion University
Tel Aviv University
Bar Ilan University
Antibiotic-induced anomalous statistics of collective bacterial swarming

A10: Strongly correlated electronic systems

Chair: Prof. Dror Orgad

Place: 92/001

- 14:30-15:00 (invited) **Emanuele G. Dalla Torre**, Nathan R. Bernier , Eugene Demler
Department of Physics, Bar Ilan University, Ramat Gan 5290002, Israel
Department of Physics, Harvard University, Cambridge MA 20138, U.S.A.
Department of Physics, Boston University, Boston MA 02215, U.S.A.
Oscillatory Pattern Formation in Non-Equilibrium Many-Body Systems

- 15:00-15:30 (invited) **Maxim Khodas**
The Racah Institute of Physics, The Hebrew University of Jerusalem
Inelastic light scattering in iron based superconductors: competing orders and electronic anisotropy
- 15:30-15:45 **Yoni Schattner**, Samuel Lederer, Erez Berg, Steven A. Kivelson
Weizmann Institute of Science
Stanford University
Quantum Monte Carlo study of the nematic quantum critical point in a metal
- 15:45-16:00 **Ofer Shlagman**, Efrat Shimshoni
Department of physics, Bar-Ilan university
Plaquette Order in a Frustrated Dimerized Spin-Ladder

A11: Superconductivity and magnetism

Chair: Dr. Ophir Auslaender

Place: 92/002

- 14:30-15:00 (invited) **Yonathan Anahory**, Lior Embon, Alexander Suhov, Dorri Halbertal, Jo Cuppens, Anton Yakovenko, Aviram Uri, Michael L. Rappaport, Martin E. Huber, Alexander V. Gurevich, E. Zeldov
Weizmann Institute of Science
University of Colorado Denver
Old Dominion University
Vortex dynamics at the sub-nanometer scale
- 15:00-15:15 **Jonathan Reiner**, Yonathan Anahory, Lior Embon, Dorri Halbertal, Anton Yakovenko, Yuri Myasoedov, Michael L. Rappaport, Martin E. Huber, Eli Zeldov
Weizmann Institute of Science, Department of Condensed Matter Physics, Rehovot, Israel
Department of Physics, University of Colorado Denver, Denver, Colorado, USA
A three-junction SQUID-on-tip with tunable in-plane and out-of-plane magnetic field sensitivity
- 15:15-15:30 **Anna Kremen**, Beena Kalisky
Department of Physics and Institute of Nanotechnology and Advanced Materials, Bar-Ilan University
Effect of strain on individual vortices in superconducting thin films.
- 15:30-15:45 **Alon Ron**, Eran Maniv, David Graf, Ju-Hyun Park, Yoram Dagan
Tel Aviv University
Florida State University
Anomalous Magnetic Ground State in an LaAlO₃/SrTiO₃ Interface Probed by Transport through Nanowires
- 15:45-16:00 **Eran Maniv**, Moshe Ben Shalom, Alon Ron, Izhar Neder, Moshe Goldstein, Alexander Palevski, Yoram Dagan
Tel Aviv University
Link Between Mobile Band Population and Superconductivity in SrTiO₃/LaAlO₃ Interface

A12: Material Physics A

Chair: Prof. Yuval Golan

Place: 90/235

- 14:30-15:00 (invited) **Guy Makov**
Ben-Gurion University
Liquids: Transitions, thermo-physical anomalies and structure
- 15:00-15:15 **Arik Yochelis**
Department of Solar Energy and Environmental Physics and Ben-Gurion National Solar Energy Center, Jacob Blaustein Institutes for Desert Research (BIDR), Ben-Gurion University of the Negev, Sede Boqer Campus, Midreshet Ben-Gurion 84990, Israel
What drives the layered nano-structure of electrical diffuse layers in ionic liquids?
- 15:15-15:30 **Eli Kraissler**, Leeor Kronik
Department of Materials and Interfaces, Weizmann Institute of Science, Rehovoth 76100, Israel
The problem of fractional dissociation in Density Functional Theory, and how it can be resolved using the ensemble-generalization approach
- 15:30-15:45 **Tzvi Templeman**, Michael Schmidt, Eyal Yahel, Yuval Golan, Itzhak Kelson, Michael Shandalov
Department of Materials Engineering, and Ilse Katz Institute for Nanoscale Science and Technology, Ben-Gurion University, Beer Sheva 84105, Israel
School of Physics and Astronomy, Tel-Aviv University, Tel-Aviv 84105, Israel
Department of Physics, Nuclear Research Center-Negev, Beer-Sheva 84190, Israel
A New Approach for the Incorporation of Dilute Self-Irradiating Defects in Thin Films

15:45-16:00

Shlomi Matityahu, Moran Emuna , Guy Makov , Yaron Greenberg , Eyal Yahel
Department of Physics, NRCN, P.O. Box 9001, Beer-Sheva 84190, Israel
Department of Physics, Ben-Gurion University, Beer Sheva 84105, Israel
Department of Materials Engineering, Ben-Gurion University, Beer Sheva 84105, Israel
Novel experimental design for high pressure - high temperature electrical resistance measurements in a "Paris-Edinburgh" large volume press

A13: Applied Physics A

Chair: Prof. Dan Oron

Place: 90/236

14:30-15:00

Gadi Eisenstein

Technion

Quantum Coherent Effects in Room Temperature Quantum Dot Optical Amplifiers

15:00-15:15

Noga Meir, Ohr Lahad , Iddo Pinkas , Dan Oron

Department of Physics of Complex Systems, Weizmann Institute of Science

Department of Chemical Research Support, Weizmann Institute of Science

Long-Lived Population Inversion in Isovalently Doped Quantum Dots

15:15-15:30

Assaf Manor, Leopoldo Martin , Carmel Rothschild

RBNI, Technion

Mechanical Engineering, Technion

On the transition from photoluminescence to thermal emission and its implication on solar energy conversion

15:30-15:45

Adel Zeidan, Lior Golan, Daniela Yeheskely-Hayon, Limor Minai, Eldad J Dann , Dvir Yelin

Technion-Israel Institute of Technology, Faculty of Biomedical Engineering, Haifa, 3200003

Israel

High resolution microscopy of flowing blood cells in vivo

15:45-16:00

Doron Gilboa, Shamir Rosen , Ori Katz , Yaron Silberberg

Department of Physics of Complex Systems, Weizmann Institute of Science

Institut Langevin, ESPCI ParisTech

Focusing light through a multimode fiber

A14: Physics teaching

Chair: Prof. Ricardo Trumper

Place: 90/237

14:30-15:00 (invited)

Igal Galili

Science Teaching Center, Mathematics and Natural Science Faculty

The Hebrew University of Jerusalem

Cultural Content Knowledge (CCK) of physics and possible ways of the correspondent curricular and pedagogy change

15:00-15:20

Jorge Berger

Department of Physics and Optical Engineering, Ort-Braude College

Active learning of Physics 1M

15:20-15:40

Alexander Reznik

Afeka Academic College of Engineering, Tel-Aviv

Self-directed research tasks in physics laboratory course

15:40-16:00

Ricardo Trumper

Faculty of Natural Sciences, University of Haifa

Faculty of Advanced Studies, Oranim Academic College of Education

Work after Energy

B1: Astrophysics (theory)

Chair: Dr. Uri Keshet

Place: 90/227

- 16:30-17:00 (invited) **Boaz Katz**, Doron Kushnir , Subo Dong
Weizmann Institute of Science
Institute for Advanced Study, Princeton
The Kavli Institute for Astronomy and Astrophysics at Peking University
We believe type Ia supernovae are direct White Dwarf-White Dwarf collisions in triple stellar systems
- 17:00-17:15 **Aviad Cohen**, Rennan Barkana , Anastasia Fialkov
Tel Aviv University
Ecole Normale Supérieure, Paris
Reconstructing the nature of the first cosmic sources from the anisotropic 21-cm signal
- 17:15-17:30 **Tal Alexander**
Weizmann Institute of Science
Rapid black hole formation in the early universe
- 17:30-17:45 **Asaf Pe'er**, Dangbo Liu , Abraham Loeb
University College Cork (UCC)
Shanghai
CfA/ ITC
A two-component jet model for the tidal disruption event Swift J164449.3+573451
- 17:45-18:00 **Elad Steinberg**, Almog Yalinewich, Re'em Sari
Hebrew University
Should We Move to Moving Mesh?

B2: High Energy (experiment)

Chair: Prof. Eilam Gross

Place: 90/224

- 16:30-16:45 **Adi Ashkenazi**
Tel Aviv University
Trigger Level Analysis and Search for New Physics at the LHC
- 16:45-17:00 **Daniel Turgeman**, Itamar Roth, Ehud Duchovni
The Weizmann Institute of Science
Low-Scale Gravity searches in multi-jet final states at the LHC
- 17:00-17:15 **Eitan Gozani**
Technion
A search for dark matter in the ATLAS detector
- 17:15-17:30 **Shikma Bressler**, Avital Dery, Aielet Efrati
Weizmann Institute of Science
Asymmetric Lepton Flavor Violating Higgs Decays
- 17:30-18:00 (invited) **Erez Etzion**
Tel Aviv University
The return of the LHC

B3: High Energy - Nuclear Physics B

Chair: Prof. Alexander Milov

Place: 90/226

- 16:30-17:00 (invited) **Zvi Citron**
Weizmann Institute of Science
Recent Results from Heavy Ion Collisions Measured by the ATLAS Experiment
- 17:00-17:15 **Shalom Shlomo**
Cyclotron Institute, Texas A&M University
Determining a modern energy density functional for properties of finite nuclei and nuclear matter
- 17:15-17:30 **Markus K. Koehler**
Weizmann Institute of Science
Dielectron measurements in pp collisions with ALICE at the LHC
- 17:30-17:45 **Ronen Weiss**, Betzalel Bazak , Nir Barnea
The Racah Institute of Physics, The Hebrew University
Experimental evaluation of the nuclear neutron-proton contact

17:45-18:00

David Izraeli
School of Physics and Astronomy, Tel Aviv University
Medium Modification in 12C and 2H

B4: Plasma Physics

Chair: Prof. Amnon Fruchtman

Place: 90/223

16:30-17:00 (invited)

Michael Mond
Department of Mechanical Engineering, Ben-Gurion University of the Negev
On the Dynamics of Thin Rotating Astrophysical Disks

17:00-17:15

L. Beilin, A. Shlapakovski, M. Donskoy, T. Queller, Y. Hadas, Ya. E. Krasik
Physics Department, Technion
Department of Applied Physics, Rafael
Nanosecond timescale plasma density temporal evolution in a switch of a high-power microwave pulse compressor

17:15-17:30

Guy Rosenzweig, Eyal Kroupp, Alexander Starobinets, Amnon Fisher, Yitzhak Maron, Henry R. Strauss, John L. Giuliani, J. Ward Thornhill, Alexander L. Velikovich
Weizmann Institute of Science, Rehovot, Israel
Technion - Israel Institute of Technology, Haifa, Israel
HRS Fusion, West Orange, NJ, USA
Plasma Physics Division, Naval Research Laboratory, Washington, DC, USA
Measurements of the magnetic field distribution in a z-pinch plasma during and near stagnation, using polarization spectroscopy*

17:30-17:45

Asher Yahalom
Ariel University
Variational Principles for Topological Barotropic Fluid Dynamics

17:45-18:00

Gennady Makrinich, Amnon Fruchtman, Raymond Boxman
Holon Institute of Technology
Tel-Aviv University
The forces on the plasma in a radial plasma source

B5: Quantum (photonics)

Chair: Prof. Oren Cohen

Place: 90/234

16:30-17:00 (invited)

Barak Dayan
Weizmann Institute of Science
Controlling Light with Light: Demonstration of Deterministic Photon-Photon Interactions

17:00-17:15

Itai Epstein, Ana Libster-Hershko, Ady Arie
Tel Aviv University
Generation of Paraxial and Non-paraxial Self-accelerating Plasmonic Light Beams

17:15-17:30

Moshe G. Harats, Andreas Tittl, Ramon Walter, Xinghui Yin, Martin SchÄ¶ferling, Ronen Rapaport, Harald Giessen
The Racah Institute of Physics, The Hebrew University of Jerusalem
The Applied Physics Department, The Hebrew University of Jerusalem
4th Physics Institute and Research Center Scope, University of Stuttgart
Quantitative angle-resolved small-spot reflectance measurements on plasmonic perfect absorbers: impedance matching and disorder effects

17:30-17:45

Chene Tradonsky, Micha Nixon, Eitan Ronen, Vishwa Pal, Ronen Chriki, Asher A. Friesem and Nir Davidson
Weizmann Institute of Science, Department of Physics of Complex Systems
The use of second harmonics in phase locked laser arrays.

17:45-18:00

Ido Kaminer, Maor Mutzafi, Gal Harari, Hanan Herzig Sheinfux, Amir Levy, Scott Skirlo, Jonathan Nemirovsky, John D. Joannopoulos, Mordechai Segev, Marin SoljaÄ¶iÄ¶
Department of Physics, Massachusetts Institute of Technology, 77 Massachusetts Avenue, Cambridge, Massachusetts, USA
Physics Department and Solid State Institute, Technion, Haifa 32000, Israel
Quantum Cherenkov Radiation from Electron Vortex Beams

B6: Ultracold Atoms and Quantum Gases

Chair: Prof. Amichay Vardi

Place: 90/231

- 16:30-17:00 (invited) **Nir Navon**
University of Cambridge
Bose-Einstein Condensation in a Box
- 17:00-17:15 **Yoav Sagl**, Tara E. Drake , Rabin Paudel , Roman Chapurin , Deborah S. Jin
JILA, NIST and the University of Colorado, Boulder, CO, USA
Physics Department, Technion - Israel Institute of Technology, Haifa, Israel
Breakdown of Fermi Liquid Behavior in the Normal State of an Ultracold Fermi Gas
- 17:15-17:30 **Avraham Klein**, Igor L. Aleiner , Oded Agam
The Racah Institute of Physics, The Hebrew University of Jerusalem
Physics Department, Columbia University, New York
Vortex core deformation and its impact on the behaviour of weakly coupled superfluids
- 17:30-17:45 **Orel Bechler**, Serge Rosenblum, Itay Shomroni, Roy Kaner, Talya Arusi-Parpar, Oren Raz,
Barak Dayan
Weizmann Institute of Science
Catastrophes in Cold Atoms
- 17:45-18:00 **Yair Margalit**, Shimon Machluf , Yonathan Japha , Ron Folman
Ben-Gurion University of the Negev
Coherent Stern-Gerlach momentum splitting on an atom chip

B7: Nonequilibrium and mesoscopic physics

Chair: Dr. Saar Rahav

Place: 90/233

- 16:30-17:00 (invited) **Ronnie Kosloff**, Amikam Levy, Tova Fledman, Raam Uzdin
Hebrew University
The Dynamical Versions of the III-law of Thermodynamics
- 17:00-17:15 **Yehuda Dinaii**, Alexander Shnirman , Yuval Gefen
Department of Condensed Matter Physics, The Weizmann Institute
Institut für Theorie der Kondensierten Materie and DFG Center for Functional Nanostructures
(CFN), Karlsruhe Institute of Technology, Germany
Institut für Nanotechnologie, Karlsruhe Institute of Technology, Germany
Statistics of energy dissipation in a quantum dot operating in the cotunneling regime
- 17:15-17:30 **Mark H Fischer**, Ronen Vosk, Ehud Altman
Weizmann Institute of Science
A macroscopic 'order parameter' for many-body localization
- 17:30-17:45 **Tal Goren**, Eric Akkermans
Technion
Schwinger effect in a tunnel junction
- 17:45-18:00 **Eugene Kanzielper**
Department of Applied Mathematics, Holon Institute of Technology
Random matrix theory of quantum transport in chaotic cavities with non-ideal leads

B8: Statistical Physics B

Chair: Prof. Eli Barkai

Place: 90/230

- 16:30-16:45 **Eial Teomy**, Yair Shokef
Tel Aviv University
Jamming by Shape
- 16:45-17:00 **Itamar Kolvin**, Gil Cohen, Jay Fineberg
The Racah Institute of Physics, The Hebrew University of Jerusalem,
Crack front dynamics: the interplay of singular geometry and crack instabilities
- 17:00-17:15 **Ido Levin**, Eran Sharon
The Hebrew University of Jerusalem
Anomalously soft non-Euclidean springs
- 17:15-17:30 **Ohad Shpielberg**, Eric Akkermans
Technion
Additivity principle and stability of out-of-equilibrium open systems : extension of Le Chatelier principle

- 17:30-17:45 **Eli Sloutskin**, Alexander V. Butenko , Pilkhaz M. Nanikashvili , David Zitoun
Physics Department, Bar-Ilan University, Israel
Bar-Ilan Center of Nanotechnology and Advanced Materials, Bar-Ilan University, Israel
Department of Chemistry, Bar-Ilan University, Israel
Who ordered these fluid nanoparticle suspensions?
- 17:45-18:00 **Adar Sonn-Segev**, Haim Diamant , Anne Bernheim-Groswasser , Yael Roichman
School of Chemistry, Tel Aviv University
Department of Chemical Engineering, Ben Gurion University of the Negev
Microrheology of in-Vitro Acto-Myosin Networks in Steady State

B9: Complexity in Dynamical systems

Chair: Dr. Arik Yochelis

Place: 90/225

- 16:30-17:00 (invited) **Gabriel Seiden**
Max Planck Institute for Physics of Complex Systems, Dresden, Germany
The tongue as an excitable medium
- 17:00-17:15 **Golan Bel**, Hezi Yizhaq
Department of Solar Energy and Environmental Physics, Blaustein Institutes for Desert Research, Ben-Gurion University of the Negev, Sede Boqer Campus 84990, Israel
The Dead Sea and Arava Science Center, Tamar Regional Council, Israel
Effects of quenched disorder on critical transitions in pattern-forming systems
- 17:15-17:30 **Shay Be'er**, Michael Assaf, Baruch Meerson
Racah Institute of Physics, Hebrew University
Against all odds: how a stochastic population colonizes a territory at low immigration rates
- 17:30-17:45 **Yuval Zelnik**, Shai Kinast , Golan Bel , Ehud Meron
Department of Solar Energy and Environmental Physics, Ben-Gurion University
Physics Department, Ben-Gurion University
Competing Turing Mechanisms in Dryland Pattern Forming Systems
- 17:45-18:00 **Yoav Green**, Sinwook Park, Gilad Yossifon
Faculty of Mechanical Engineering, Technion
Concentration Polarization and Electroconvection in a Nanochannel Array System

B10: Topological phases and excitations

Chair: Prof. Dror Orgad

Place: 92/001

- 16:30-16:45 **Maciej Koch-Janusz**, D.I. Khomskii , Eran Sela
Weizmann Institute of Science
University of Cologne
Tel Aviv University
Valence bond solid (AKLT) state from t_2g electrons
- 16:45-17:00 **Amir Rosenblatt**, Itamar Gurman, Ron Sabo, Moty Heiblum, Vladimir Umansky, Diana Mahalu
Braun Center for Submicron Research, Department of Condensed Matter Physics, Weizmann Institute of Science
Structure of the Charged Edge Modes in the $\hat{\nu}=2/3$ Fractional Quantum Hall State
- 17:00-17:15 **Raul Santos**, Chia-Wei Huang , Yuval Gefen , Dmitri Gutman
Department of Physics, Bar-Ilan University, Ramat Gan, 52900, Israel
Department of Condensed Matter Physics, Weizmann Institute of Science, Rehovot 76100, Israel
Max Planck Institute for Solid State Research, Stuttgart, Germany
Fractional Topological Insulators: from sliding Luttinger Liquids to Chern-Simons theory
- 17:15-17:30 **Eyal Cornfeld**, Michael Becker , Izhar Neder , Simon Trebst , Eran Sela
Tel Aviv University
University of Cologne
Soreq Nuclear Research Center
Fractional Phases in Partially Gapped 1D systems
- 17:30-17:45 **Arbel Haim**, Erez Berg , Felix von Oppen , Yuval Oreg
Department of Condensed Matter Physics, Weizmann Institute of Science, Rehovot, 76100, Israel
Dahlem Center for Complex Quantum Systems and Fachbereich Physik, Freie Universität Berlin, 14195 Berlin, Germany
Signatures of Majorana Zero Modes in Spin-Resolved Current Correlations
- 17:45-18:00 **Anna Keselman**, Erez Berg
Weizmann Institute of Science
Gapless topological phase in a time-reversal-invariant quantum wire

B11: Superconductivity and topological superconductivity

Chair: Prof. Yoram Dagan

Place: 92/002

- 16:30-17:00 (invited) **Roni Ilan**
Department of Physics, University of California, Berkeley, California 95720, USA
Transport signatures of topological superconductivity in topological insulator nano-wires
- 17:00-17:15 **Amit Ribak**, Zaher Salman, Cinthia Piamonteze, Ekaterina Pomjakushina, Amit Kanigel
Technion
Laboratory for Muon Spin Spectroscopy, Paul Scherrer Institute
Swiss Light Source, Paul Scherrer Institute
Laboratory for Development and Methods, Paul Scherrer Institute
Time reversal symmetry breaking in a magnetically doped topological insulator
- 17:15-17:30 **Yonatan Cohen**, Yuval Ronen, Jung-Hyun Kang, Hadas Shtrikman, Moty Heiblum
Condensed Matter dept., Weizmann Institute of Science
Quantized charge staircase in Multiple Andreev Reflection processes
- 17:30-17:45 **A. Yagil**, Y. Lamhot, N. Shapira, S. Kasahara, T. Watashige, T. Shibauchi, Y. Matsuda, O. M. Auslaender
Technion
Kyoto University
University of Tokyo
Local characterization of superconductivity in an isovalently doped pnictide
- 17:45-18:00 **David Shai Ellis**, Yaobo Huang, Paul Olalde-Velasco, Gil Drachuck, Rinat Ofer, Galina Bazalitsky, Jorge Berger, Thorsten Shmitt, Amit Keren
Physics Department, Technion-Israel Institute of Technology
Swiss Light Source, Paul Scherrer Institute
Department of Physics and Optical Engineering, ORT-Braude College
The Dependence of Tc on Spin and Orbital Excitation Energy in Ca(x)La(1-x)Ba(1.75-x)La(0.25+x)Cu(3)O(y) measured by Resonant Inelastic X-ray Scattering

B12: Material Physics B

Chair: Dr. Eyal Yahel

Place: 90/235

- 16:30-17:00 (invited) **Roy Beck**, Guy Jacoby, Keren Cohen, Kobi Barkan, Yeshayahu Talmon, Dan Peer
School of Physics and Astronomy, Tel Aviv University
Department of Cell Research and Immunology, Tel Aviv University
Technion-Israel Institute of Technology
Predetermined and temporally controlled metastability in lipid-based particles
- 17:00-17:15 **Giora Kimmel**, Dror Kadosh, Dmitry Mogilyanski, Jacob Zabicky
Ben Gurion University of the Negev
Grain-size effects of yttrium and rare earth oxides formed by the sol-gel technique
- 17:15-17:30 **Ran Vardimon**, Marina Klionsky, Oren Tal
Department of Chemical Physics
Weizmann Institute of Science
Spin-polarized conductance in atomic nickel-oxide junctions
- 17:30-17:45 **Shimon E Lerner**, Paul Ben Ishai, Yuri Feldman
JCT Lev Academic Center
Hebrew University of Jerusalem
Meyer-Neldel Compensation as a feature of the Johari-Goldstein Beta relaxation
- 17:45-18:00 **Jennifer Galanis**, Yoav Tsori
Ben Gurion University
Phase Separation Dynamics of Simple Liquids in Non-Uniform Electric Fields

B13: Applied Physics B

Chair: Uriel Levy

Place: 90/236

- 16:30-17:00 (invited) **Aharon Agranat**
The Hebrew University of Jerusalem
Electrooptical and photorefractive effects in glass forming liquids of dipolar nano-clusters embedded in a paraelectric environment

- 17:00-17:15 **Dekel Veksler**, Elhanan Maguid, Dror Ozeri, Nir Shitrit, Vladimir Kleiner, Erez Hasman
Micro and Nanooptics Laboratory, Faculty of Mechanical Engineering, and Russell Berrie
Nanotechnology Institute, Technion " Israel Institute of Technology, Haifa 32000, Israel
Multifunctional optical disordered gradient metasurface
- 17:15-17:30 **Ronen Chriki**, Micha Nixon, Vishwa Pal, Chene Tradonsky, Gilad Barach, Asher A. Friesem,
Nir Davidson
Weizmann Institute of Science, Department of Physics of Complex Systems, Rehovot 76100,
Israel
Efficient control of spatial coherence
- 17:30-17:45 **Noa Rosenthal**, Gilad Marcus
Affiliations : "Department of Applied Physics at the Hebrew University"
**Enhancement of High Harmonic Generation Yield by Using Quasi Phase Matching and
Resonance Conditions**
- 17:45-18:00 **Nir Peer**
The Hebrew University of Jerusalem
Nano Scale Charge separation using Chiral Molecules

Posters

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- A - Plenary
- B - Astro
- C - Plasma and Fluids
- D - QM
- E - CondMat
- F - StatMech
- G - NLD
- H - Applied Physics
- I - Computational Physics

- PE-01 **Yuval Vardi**, Avraham Guttman, Israel Bar-Joseph
Department of Condensed Matter Physics, Weizmann Institute of Science
Random Telegraph Signal in a Metallic Double-Dot System
- PE-02 **Jorge Berger**
Department of Physics and Optical Engineering, Ort-Braude College
Flux-induced Nernst effect in a superconducting loop
- PB-03 **Lee Yacobi**
Technion
ISS-Lobster / GTM
- PD-04 **A. Pick**, A. Cerjan, D. Liu, A. W. Rodriguez, A. D. Stone, Y. D. Chong, S. G. Johnson
Department of Physics, Harvard University, Cambridge, Massachusetts 02138, USA
Department of Applied Physics, Yale University, New Haven, Connecticut 06520, USA
Department of Physics, Massachusetts Institute of Technology, Cambridge, Massachusetts 02139, USA
Department of Electrical Engineering, Princeton University, Princeton, New Jersey 08544, USA
Division of Physics and Applied Physics, School of Physical and Mathematical Sciences, Nanyang Technological University, Singapore 637371, Singapore
Department of Mathematics, Massachusetts Institute of Technology, Cambridge, Massachusetts 02139, USA
Multimode laser-linewidth theory for complex wavelength-scale laser cavities
- PD-05 **Geva Arwas**, Amichay Vardi, Doron Cohen
Ben-Gurion University
Superfluidity and Chaos
- PD-06 **Shuyu Zhou**, Julien Chabe, Ran Salem, Tal David, David Groswasser, Mark Keil, Yonathan Japha, Ron Følman
Department of Physics, Ben-Gurion University of the Negev
Phase space tomography of cold-atom dynamics in a weakly corrugated potential
- PG-07 **Baruch Barzel**
Bar Ilan University
Peeking Into the Black Box: Reverse Engineering the Dynamics of Complex Systems
- PG-08 **Nathaniel Wagner**, Lilia Vasilkovsky
Dept. of Chemistry
Ben-Gurion University of the Negev
Modeling Circadian Clocks using Catalytic Networks
- PD-09 **Tamir Admon**, Yael Roichman
Department of physical chemistry, Tel Aviv university
Information Machine
- PF-010 **Harel Nagar**, Yael Roichman
Department of physical chemistry Tel aviv univesity
Collective excitations of hydrodynamically coupled driven colloidal particles
- PH-11 **Sigal Wolf**, Itamar Rosenberg, Ronen Rapaport, Nir Bar-Gill
The Racah Institute of Physics, The Center for Nanoscience and Nanotechnology, The Hebrew University of Jerusalem, Jerusalem 91904, Israel
Dept. of Applied Physics, Rachel and Selim School of Engineering, Hebrew University, Jerusalem 91904, Israel
Proposal for plasmonically-enhanced optical spin readout of Nitrogen-Vacancy centers in diamond
- PC-12 **Yair Kurzweil**, Sylvian Kahane, Giora Hazak
Physics Department, Nuclear Research Center-Negev, POB 9001, Beer-Sheva, Israel
The effect of ion-ion correlation on the atomic energy levels and absorption of radiation in dense plasmas
- PC-13 **Dimitry Mikitchuk**, Eyal Kroupp, Ramy Doron, Christine Stollberg, Yitzhak Maron, Henry R. Strauss, Alexander L. Velikovich, John L. Giuliani
Weizmann Institute of Science
HRS Fusion

- Plasma Physics Division, Naval Research Laboratory
The effects of preembedded axial magnetic field on z-pinch plasma implosion
 PD-14 **David Rakhmilevitch**, Richard Koryta'r , Alexej Bagrets , Ferdinand Evers , Oren Tal
 Department of Chemical Physics, Weizmann Institute of Science, Israel
 Institute for Nanotechnology, Karlsruhe Institute of Technology (KIT), Karlsruhe, Germany
 DFG Center for Functional Nanostructures, Karlsruhe Institute of Technology (KIT), Karlsruhe, Germany
 Institut fuer Theorie der Kondensierten Materie, Karlsruhe Institute of Technology (KIT), Karlsruhe, Germany
- PD-15 **Electron-vibration interaction in presence of a switchable Kondo resonance**
Shay Keren-Zur, Nadav Segal, Netta Hendler, Tal Ellenbogen
 Tel Aviv University
- PF-16 **Construction of functional nonlinear optical metamaterials**
Maoz Shamir
 Ben Gurion University
- PE-17 **Balancing feed-forward excitation and inhibition via inhibitory spike timing dependent plasticity**
Ran Vardimon, Tamar Yelin, Marina Klionsky, Soumyajit Sarkar, Ariel Biller, Leeor Kronik, Oren Tal
 Department of Chemical Physics
 Department of Materials and Interfaces
 Weizmann Institute of Science
- PE-18 **Probing the orbital origin of conductance oscillations in atomic chains**
Ofir Shein, Ran Vardimon, Oren Tal
 Weizmann Institute of Science
- PF-19 **Local heating in atomic gold junctions at cryogenic temperature**
Erez Aghion
 Department of Physics, Faculty of Exact Sciences, Bar-Ilan University
- PD-20 **Excursions, Meanders and Bridges for cold atoms and more**
Y. Schlüssel, A. Waxman , V.M. Acosta , D. Budker , L.-S. Bouchard , R. Folman
 Department of Physics, Ben Gurion University of the Negev, Be'er Sheva
 Department of Physics, University of California at Berkeley
 Google [x] , 1600 Amphitheatre Parkway, Mountain View, California
 Department of Chemistry and Biochemistry University of California, Los Angeles, California
- PE-21 **Diamond Magnetometry of Superconducting Thin Films**
Amir Broide, Itzhak Halevy , Silvie Maskova , Oleg Rivin , Matthew S. Lucas , Amir Hen , Itzhak Orion , Shai Salhov , Michael Shandalov , Antonio F Moreira Dos Santos , Jamie Molaison
 Dept. of physics, NRCN, P.O.Box 9001, Beer-Sheva, ISRAEL
 Nuclear engineering Department, Ben Gurion Univ., Beer-Sheva, ISRAEL
 Department of Condensed Matter Physics, Charles University Prague, The Czech Republic
 Air Force Research Laboratory, OH, USA
 5European Commission, Joint Research Centre, Institute for Transuranium Elements, Postfach 2340, D-76125 Karlsruhe, Germany
 BL3, Spallation Neutron Source, Oak Ridge National Laboratory Oak Ridge, TN, USA
- PG-22 **Neutrons High Pressure crystallographic structure and magnetic Study of the Fe-Cr-Hx Phase Diagram.**
Itamar Shani, Tsevi Beatus , Roy Bar-Ziv
 Department of Materials and Interfaces, The Weizmann Institute of Science
 Department of Physics, Cornell University
- PE-23 **Correlations screening, pairing direction switching, and rotation reversal due to attractive forces of microfluidic droplets**
A. Hen, E. Colineau , R. Eloirdi , J.-C. Griveau , N. Magnani , J.-P. Sanchez , I. Halevy , I. Orion , R. Caciuffo
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 5SPSMS, UMR-E CEA/UJF-Grenoble N 1, INAC, FR-38054 Grenoble, France
- PD-24 **Crystallographic, electronic and magnetic properties of Np₂Ni₁₇.**
Omer Amit
 Physics Department - Ben-Gurion University
- PD-25 **Normalized Measurement of the Clock-States in Rb⁸⁷.**
Ofir Flom, Haggai Zilberbeg, Asher Yahalom, Yaakov Levitan
 Ariel University
- PD-26 **Tunneling as a Source for Quantum Chaos**
Asaf Farhi, David J. Bergman
 Tel Aviv University
- PD-27 **Analysis of a Veselago lens in the quasistatic regime**
Tomer Shushi
 University of Haifa
- The Connection between Quantum and Classical Physics: The Measurement Device's Viewpoint**

- PA-28 **Ben Bar-Or**, Tal Alexander
Weizmann institute of science
The statistical mechanics of relativistic orbits around a massive black hole
- PE-29 **Yuval Vardi**, Avraham Guttman, Israel Bar-Joseph
Department of Condensed Matter Physics, Weizmann Institute of Science
Random Telegraph Signal in a Metallic Double-Dot System
- PE-30 **Robert Englman**
Soreq NRC and Ariel University
An "unreasonable effectiveness" of Hilbert transform for the transmission phase behavior in a quantum dot two-path interferometer.
- PF-31 **Sela Samin**, Manuela Hod, Eitan Melamed, Moshe Gottlieb, Yoav Tsori
Department of Chemical Engineering, Ben-Gurion University of the Negev
Stabilization of Colloids by Addition of Salt
- PE-32 **Yevgeni Estrin**, Dan Rich
Department of Physics and The Ilse Katz Institute for Nanoscale Science and Technology, Ben-Gurion University of the Negev
Temperature dependence of the exciton-surface plasmon polariton coupling in Ag, Au, and Al films deposited on the surface of InGaN/GaN quantum wells
- PD-33 **Demetry Farfurnik**, Andrejs Jarmola, Linh M. Pham, Zhi-Hui Wang, Viatcheslav Dobrovitski, Ronald L. Walsworth, Dmitry Budker, Nir Bar-Gill
The Racah Institute of Physics, The Center for Nanoscience and Nanotechnology, The Hebrew University of Jerusalem, Jerusalem 9190401, Israel
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Harvard-Smithsonian Center for Astrophysics, Cambridge, MA 02138, USA
Department of Chemistry, University of Southern California, Los Angeles, California 90089, USA
Ames Laboratory, Iowa State University, Ames, Iowa 50011, USA
Department of Physics, Harvard University, Cambridge, Massachusetts 02138, USA
Helmholtz Institute, JGU, Mainz, Germany
Dept. of Applied Physics, Rachel and Selim School of Engineering, Hebrew University, Jerusalem 9190401, Israel
Optimizing a Dynamical Decoupling Protocol for Nitrogen-Vacancy Center Ensembles
- PD-34 **Sivan Trajtenberg-Mills**, Ana Libster-Hershko, Ady Arie
"Tel Aviv University"
Dynamic Control of Light Beams in a Quadratic Nonlinear Process
- PE-35 **Eran Sagi**, Yuval Oreg, Ady Stern, Bertrand I. Halperin
Department of Condensed Matter Physics, Weizmann Institute of Science, Rehovot 76100, Israel
Department of Physics, Harvard University, Cambridge, MA 02138
Imprint of topological degeneracy in quasi-one-dimensional fractional quantum Hall states
- PD-36 **Ronen Berkovich**, Rodolfo I. Hermans, Ionel Popa, Guillaume Stirnemann, Sergi Garcia-Manyes, Bruce J. Berne, Julio M. Fernandez
Department of Chemical-Engineering and the Ilse Katz Institute for Nanoscience and Technology, Ben-Gurion University of the Negev, Beer-Sheva 84105, Israel
Department of Biological Sciences, Columbia University, New York, NY 10027, USA
London Centre for Nanotechnology, University College London, London WC1H 0AH, United Kingdom
Department of Chemistry, Columbia University, New York, NY 10027, USA
Department of Physics and Randall Division of Cell and Molecular Biophysics, King's College London, London WC2R 2LS, United Kingdom
Force application effects on the internal-diffusion of a tethered protein
- PD-37 **Yaakov Shaked**, Shai Yefet, Tzahi Geller, Avi Pe'er
Department of physics and BINA Center of nano-technology, Bar-Ilan University
A Prism-pair with Negative Separation for Dispersion Compensation of Ultra Broadband Bi-photons Over a Full Octave
- PI-38 **Maayan Shalom**, Yael Roichman
Department of Physical Chemistry, Tel Aviv University
Microrheology of hydrogels based composites with an internal stress-release mechanism
- PD-39 **Nezah Balal**, Eyal Magori, Igor Dyunin, Aharon Friedman, Asher Yahalom
Ariel University
Design of a Permanent Magnet Wiggler for a THz Free Electron Laser
- PD-40 **Ben Ohayon**, Guy Ron
Racah Institute of Physics, Hebrew University.
Towards the Trapping of Metastable Neon
- PI-41 **Asaf Azuri**, Eli Pollak
Chemical Physics Department, Weizmann Institute of Science, 76100 Rehovot, Israel
First principles based computations of the scattering of Ar from a room temperature LiF(100) surface {1}
- PF-42 **Lenin S. Shagolsem**, Yitzhak Rabin
Department of Physics, Bar-Ilan University, Israel
Institute of Nanotechnology and Advanced Materials, Bar-Ilan University, Israel
Statistical Physics of the 'All Particles are Different' model

- PD-43 **Elad Eizner**, Tal Ellenbogen
Department of Physical Electronics, School of Electrical Engineering , Tel Aviv University,
Israel
Coupling light to strongly coupled exciton-surface plasmons polaritons by nanoantennas
- PE-44 **David Rakhmilevitch** , Soumyajit Sarkar , Ora Bitton , Leeor Kronik , Oren Tal
Department of chemical physics, Weizmann institute of science, Israel
Department of materials and interfaces, Weizmann institute of science, Israel
Department of chemical research support, Weizmann institute of science, Israel
Conjugated molecules as amplifiers of anisotropic magneto-resistance in molecular junctions
- PE-45 **Tzipora Y. Izraeli**, Ziv Even Zur , Yuval E. Yaish
Faculty of Physics, Technion
Faculty of Electrical Engineering, Technion
Modeling of MOS Capacitors with Metal Nanoparticles
- PE-46 **Uri Argaman** , Eitan Eidelstein , Ohad Levi , Guy Makov
Materials Engineering Department, Ben-Gurion University of the Negev, Beer Sheva 8410501,
Israel
Department of Physics, NRCN, P.O. Box 9001, IL Beer-Sheva, 84190, Israel
Thermodynamic properties of titanium from ab-initio calculations
- PD-47 **Eliahu Cohen** , Yakir Aharonov
Tel Aviv University
Chapman University
Theoretical and Experimental Aspects of Quantum Protective Measurement
- PD-48 **Yuval Shagam**, Ayelet Klein, Edvardas Narevicius
Department of Chemical Physics, Weizmann Institute of Science
Direct observation of universal Langevin rates in strongly anisotropic neutral-neutral reactions down to the quantum threshold
- PE-49 **Igor Kuzmenko**, Tetyana Kuzmenko, Yshai Avishai
Ben Gurion University of the Negev, Beer Sheva, Israel
Carbon Nanotube Quantum Dot: Realization of Two-Channel Kondo Effect
- PE-50 **Yoav Romach**
The Racah Institute of Physics, The Center for Nanoscience and Nanotechnology, The Hebrew
University of Jerusalem
Spectroscopy of surface-induced magnetic noise using shallow spins in diamond
- PF-51 **Erez N Ribak**, Amichai M Labin, Shadi Safuri, Ido Perlman
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Color separation in the retina
- PD-52 **E. Schleifer, M. Botton, A. Zigler**
Racah Institute of Physics, The Hebrew University of Jerusalem, Jerusalem 91904, Israel
Enhanced Proton Acceleration by an Ultrashort Laser with Structured Dynamic Plasma Targets