

A large, detailed image of a spiral galaxy, likely the Whirlpool Galaxy (M51), is the central focus of the poster. It shows a bright central core and several distinct spiral arms, with some stars appearing as bright points of light with diffraction spikes. The background is a dark field of space with scattered stars and nebulae.

61st Annual Meeting of the Israel Physical Society

Sunday December 13th, 2015

Wohl center, Bar Ilan University, Ramat Gan, Israel

Welcome to IPS 2015

We welcome you to the 61st annual meeting of the Israeli Physical Society. The conference program reflects our effort to arrange an interesting and diverse meeting for us all. I wish to thank the members of the scientific organizing committee (Yuval Garini, Yaron Oz, Nadav Katz, Yigal Meir, Eytan Grosfeld, Yaron Silberberg, and Dafne Guetta), the help of Rahel Rotberg and Lea Keizer (administration) and Rita Goldner (assistance), and the daily support by our IPS treasurer Yuval Garini, our website master Doron Cohen and our IPS administrator Daniella Gabrielovitch-Margalit. We acknowledge the supporting companies and the extra funds from the Bar Ilan University VP of research, from the Dean of Exact Sciences, and from the Institute for Nanotechnology (BINA). We highly appreciate our colleagues who volunteered to chair the sessions, and we thank all of you for coming.

I wish us an exciting and scientifically stimulating IPS-2015.

Avi Pe'er, Organizing Chair

From the President of the IPS

On behalf of the Israel Physical Society (IPS), I welcome you to the 61st annual General Assembly (2015), held this year at Bar Ilan University. The organizing committee, chaired by Avi Pe'er, has put together an exciting program, and I wish us all a stimulating meeting.

As you all know, the IPS is a non-profit association, whose aim is to stimulate physics research and teaching in Israel. In order to enhance the IPS standing, activities and collaborations at the national and international level, we have set last year three goals for the IPS, which we have been pursuing.

Our first goal is to initiate a norm for all physicists in Israel, graduate students, faculty members and scientists at the industry, to register as members of the IPS. This will enhance significantly the standing of the IPS. It will allow us to establish strong relations with supporting companies, stabilize and increase the IPS budget and its activities, and reduce the registration fees. It will position the IPS as an important institution, such that its opinion on matters related to physics in Israel, ranging from high school physics teaching curriculum to the state budgeting of physics research, will carry weight.

Our second goal is to enhance the activities and participation of physics graduate students in the IPS. We believe that an early strong involvement of the next generation of scientists in the IPS will provide a boost to the IPS and its goals. We need your support for achieving this goal, and would like to ask you to encourage your graduate students to take an active role in the IPS activities.

As in the previous two years, we will host a meeting for students at the final stages of their undergraduate or beginning of Master studies. For this we invite presentations of physicists from the academy, as well as physicists from the industry to talk about other aspects of physics research. In addition, we bring Ph.D. graduate students to talk about their experience. The meeting will take place in Akko, 7/4-8/4, 2016. We started last year a new program, where the IPS supports graduate students joint meetings initiated by them, in Israel. We ask you to encourage your graduate students to make use of this program.

Our third goal is to enhance the relations with other similar organizations such as the APS and the EPS.

We welcome any idea and suggestion that you may have regarding the IPS activities, please let us know if you have one.

This year we made a decision to open the IPS membership to any institution that has teaching and research activities.

Let me end by wishing all of us an enjoyable and productive year. Our 62nd General Assembly will be held at Tel Aviv University.

Yaron Oz, President of the IPS

Scientific organizing committee: Avi Pe'er, BIU (chair); Yuval Garini, BIU; Yaron Oz, TAU (IPS president); Yaron Silberberg, Weizmann; Yigal Meir, BGU; Eytan Grosfeld, BGU; Dafne Guetta, Ort-Barude; Nadav Katz, HUJI

Local organizing committee: Avi Pe'er, BIU (chair); Rachel Rotberg (administration); Lea Kaiser (administration); Rita Goldner (assistance)

IPS council: Yaron Oz (president), Joseph Avron (vice), Yuval Garini (treasurer), Doron Cohen (website), Haim Beidenkopf, Muhammad Erew, Dafne Guetta, Ehoud Pazy, Hagai Perets, Dovi Poznanski, Zvi Rosenstock, Eli Sarid, Michael Savin, Eran Sharon

IPS sponsors:



HARDWARE + SOFTWARE + PEOPLE = INSIGHTS

Trade fair:



Rosh Electro-Optics



Lahat Technologies Ltd.

Lahat Technologies Ltd



Eastronics



Edwards Israel Vacuum Ltd

Job fair (bring your CV):



שטח פיזיקה קמ"ג – מחקר מאתגר ומשמעותי

Time	Session & details	Place
8:30	Refreshments and Registration	Wohl center
	Welcome and Plenary Session	Auditorium
9:00 - 9:20	Opening - Avi Pe'er (Chair, IPS 2015)	
	Welcome - Daniel Hershkoviz (President, BIU)	
	Greetings & IPS prizes - Prof. Yaron Oz (President, IPS)	
9:20 - 11:00	Plenary Lectures - Chair: Prof. Yaron Silberberg	Wohl center
9:20 - 10:10	Quantum Universe	Auditorium
	Viatcheslav Mukhanov (Ludwig Maxmillians University, Munich, Germany)	
10:10 - 11:00	Controlling and Exploring Quantum Matter at the Single Atom Level	Auditorium
	Immanuel Bloch (Max-Planck Institut & Ludwig-Maximilians University, Munich, Germany)	
11:00	Break	Wohl center
11:15 - 12:15	Review sessions	Wohl center
	Review 1 - High Energy and Astrophysics Chair: Dr. Tomer Volansky	Auditorium
11:15-11:45	Astrophysical neutrino telescopes	
	Eli Waxman (Weizmann Inst.)	
11:45-12:15	The return of the LHC	
	Erez Etzion (Tel Aviv University.)	
	Review 2 - AMO and Cond-Matt Physics Chair: Prof. Lior Klein	Hall 1
11:15-11:45	Current-Induced Torques in Magnetic Materials	
	Andrew Kent (New York University)	
11:45-12:15	Simulating spin systems with dissipative-coupled lasers	
	Nir Davidson (Weizmann Inst.)	
	Review 3 - Statistical, Soft matter and Bio physics Chair: Prof. Yariv Kafri	Hall 2
11:15-11:45	Antimicrobial resistance: modelling the efficacy of antibiotic treatment	
	Martin R. Evans (University of Edinburgh)	
11:45-12:15	Understanding self-replication	
	Nathalie Q. Balaban (Hebrew University)	

IPS CONFERENCE 2015 PROGRAM SCHEDULE

Time	Session & details	Place
12:30	Lunch break	Engineering
	Posters, Trade fair, Job fair IPS council meeting	
14:15 - 16:00	Parallel sessions A	Engineering
	Astrophysics - Observational Chair: Prof. Hagai Perets	Eng. 329
	High Energy - Theory and Phenomenology Chair: Dr. Amit Sever	Eng. 244
	Nuclear Physics Chair: Prof. Ron Guy	Eng. 249
	Quantum information and Quantum Optics Chair: Ron Folman	Eng. 53
	Mesoscopic and condensed matter physics Chair: Dr. Beena Kalisky	Eng. 2
	Strongly correlated electronic systems Chair: Prof. Efrat Shimshoni	Eng. 22
	Statistical and Nonequilibrium physics Chair: Prof. Yitzhak Rabin	Eng. 42
	Complexity in Biological systems A Chair: Dr. Avraham Be'er	Eng. 271
	Plasma Physics Chair: Dr. Anatoli Shlapakovski	Eng. 243
	Material Physics A Chair: Dr. Ehoud Pazy	Music 111
	Applied Physics Chair: Yossi Paltiel	Music 109
16:00 - 16:15	Coffee break	Engineering

IPS CONFERENCE 2015 PROGRAM SCHEDULE

Time	Session & details	Place
16:15 - 18:00	Parallel sessions B	Engineering
	Astrophysics - Theory Chair: Prof. Tsvi Piran	Eng. 329
	High Energy - Theory Chair: Dr. Amit Sever	Eng. 244
	High Energy - Experiment Chair: Erez Etzion	Eng. 243
	Optics and Photonics Chair: Dr. Ofer Firstenberg	Eng. 53
	Atomic physics and molecules Chair: Prof. Lev Khaykovich	Eng. 42
	Superconductivity and magnetism Chair: Prof. Assa Auerbach	Eng. 22
	Topological phases, excitations, and topological superconductivity Chair: Dr. Hadar Steinberg	Eng. 2
	Soft Matter and Biological Physics Chair: Elisha Moses	Eng. 249
	Complexity in Dynamical systems Chair: Prof. David Mukamel	Music 109
	Complexity in Biological systems B Chair: Dr. Avraham Be'er	Eng. 271
	Material Physics B Chair: Dr. Eyal Yahel	Music 111
18:00	Closing ceremony	Engineering
	Announcing winning poster - Prof. Yaron Oz Hanukkah Candles and sweets Avi Pe'er and the Campus Rabbi Shlomo Shefer	

Plenary sessions

Plenary Lectures

Chair: **Prof. Yaron Silberberg**

Place: Auditorium

Time: 09:20 - 11:00

- 09:20-10:10 **Viatcheslav Mukhanov**
Arnold Sommerfeld Center, Physics Department, Ludwig Maxmillians University, Munich, Germany
Quantum Universe
- 10:10-11:00 **Immanuel Bloch**
Max-Planck Institut für Quantenoptik, Garching, Germany & Ludwig-Maximilians Universität, München, Germany
Controlling and Exploring Quantum Matter at the Single Atom Level

Review sessions

R1: Review 1 - High Energy and Astrophysics

Chair: **Dr. Tomer Volansky**

Place: Auditorium

Time: 11:15 - 12:15

- 11:15-11:45 **Eli Waxman**
Weizmann Institute of Science
Astrophysical neutrino telescopes
- 11:45-12:15 **Erez Etzion**
Tel Aviv University
The return of the LHC

R2: Review 2 - AMO and Cond-Matt Physics

Chair: **Prof. Lior Klein**

Place: Hall 1

Time: 11:15 - 12:15

- 11:15-11:45 **Andrew Kent**
New York University
Current-Induced Torques in Magnetic Materials
- 11:45-12:15 **Nir Davidson**
Weizmann Institute of Science
Simulating spin systems with dissipative-coupled lasers

R3: Review 3 - Statistical, Soft matter and Bio physics

Chair: **Prof. Yariv Kafri**

Place: Hall 2

Time: 11:15 - 12:15

- 11:15-11:45 **Martin R. Evans**
School of Physics and Astronomy - University of Edinburgh
Antimicrobial resistance: modelling the efficacy of antibiotic treatment
- 11:45-12:15 **Nathalie Q. Balaban**
Racah Institute of Physics, the Hebrew University of Jerusalem
Understanding self-replication

Parallel sessions

A1: Astrophysics - Observational

Chair: **Hagai Perets**

Place: Eng. 329

Time: 14:15 - 16:00

- 14:15-14:35 **Eran Ofek (invited)**
Weizmann Institute of Science
Supernova precursors
- 14:35-14:55 **Shai Kaspi (invited)**
Tel Aviv University
Measuring supermassive black hole masses: where we are, where we are going
- 14:55-15:10 **Barak Zackay**, Eran Ofek, Avishay Gal-Yam
Benozio Center for Astrophysics, Weizmann Institute of Science
Proper astronomical image processing - Solving the problems of image coaddition and image subtraction
- 15:10-15:25 **David Polishook**
Weizmann Institute of Science
The Mission Accessible Near-Earth Objects Survey: breaking down the size limit
- 15:25-15:40 **Shlomi Hillel**, Noam Soker
Technion - Israel Institute of Technology
Heating the intra-cluster medium by jet-inflated bubbles
- 15:40-15:55 **Peter Szabo**, Nir Sapir, Eli Waxman
Department of Particle Physics & Astrophysics, Weizmann Institute of Science
Numerical Solutions of Shock Breakouts from Optically Thick Circumstellar Winds

A2: High Energy - Theory and Phenomenology

Chair: **Dr. Amit Sever**

Place: Eng. 244

Time: 14:15 - 16:00

- 14:15-14:40 **Lorenzo Di Pietro (invited)**
Weizmann Institute of Science
QED in $d=3$ from the epsilon-expansion
- 14:45-15:00 **Gabriel Lee, Carlos E. M. Wagner**
Technion – Israel Institute of Technology
Higgs Bosons in Heavy Supersymmetry with an intermediate m_A
- 15:00-15:15 **Yevgeny Kats**
Weizmann Institute of Science
Measuring c -quark polarization in $W+c$ production at the LHC
- 15:15-15:30 **Sho Iwamoto, Jonathan L. Feng, Yael Shadmi, Shlomit Tarem**
Physics Department, Technion
Long-Lived Sleptons at a 100 TeV Proton Collider (and the LHC)
- 15:30-15:45 **Shlomo S. Razamat**
Technion - Israel Institute of Technology
Geometrization of $N=1$ supersymmetric QFTs
- 15:45-16:00 **Daniel Aloni, Yosef Nir, Emmanuel Stamou**
Weizmann Institute of Science
Large $BR(h \rightarrow \tau \mu)$ in the MSSM

A3: Nuclear Physics

Chair: **Prof. Ron Guy**

Place: Eng. 249

Time: 14:15 - 16:00

- 14:15-14:40 **Ishay Pomerantz (invited)**
The School of Physics and Astronomy, Tel-Aviv University
Nuclear Physics Research with High Intensity Lasers
- 14:45-15:00 **Moshe Friedman, for the E08-007 Collaboration**
Racah Institute of Physics, the Hebrew University of Jerusalem
Measurement of the Proton Form Factor Ratio at Low Momentum Transfer
- 15:00-15:15 **Ronen Weiss, Betzalel Bazak, Nir Barnea**
The Racah Institute of Physics, The Hebrew University
The nuclear contact relations

- 15:15-15:30 **Erez O. Cohen, Eli Piassetzky, Or Hen, Meytal Duer, Igor Korover**
School of Physics and Astronomy, Tel Aviv University
A search for three nucleons Short Range Correlated nucleons in nuclei with CLAS detector at Jefferson Laboratory
- 15:30-15:45 **Noam Gavrielov**
Racah Institute of Physics, The Hebrew University, Jerusalem
First order quantum phase transition between spherical and γ -unstable nuclear shapes
- 15:45-16:00 **Mr. Evgeni Iosefovski**
Weizmann Institute of Science
Understanding Peripheral Events in Pb-Pb Collisions

A4: Quantum information and Quantum Optics

Chair: **Ron Folman**

Place: Eng. 53

Time: 14:15 - 16:00

- 14:15-14:30 **Demetry Farfurnik, Andrey Jarmola, My Linh Pham, Zihui Wang, Viatcheslav V. Dobrovitski, Ronald L. Walsworth, Dmitry Budker, Nir Bar-Gill**
The Racah Institute of Physics, The Hebrew University of Jerusalem
Enhanced coherence properties and solid-state spin ensemble magnetometry using optimized dynamical decoupling
- 14:30-14:45 **Ido Schwartz, Dan Cogan, Emma R. Schmidgall, Yaroslav Don, Liron Gantz, Netanel Lindner, David Gershoni**
The Physics Department and the Solid State Institute, Technion Israel Institute of Technology
Deterministic Generation of a Cluster State of Polarization Entangled Single Photons
- 14:45-15:00 **I. Cohen, A. Retzker, S. Weidt, W. K. Hensinger, G. Mikelsons, M. B. Plenio, J. M. Cai, P. Richerme, Z.-X. Gong, C. Senko, J. Smith, A. Lee, C. Monroe**
The Hebrew University of Jerusalem
Quantum information with dressed states using trapped ions
- 15:00-15:15 **Elisha Svetitsky, Nadav Katz**
Hebrew University of Jerusalem
Emulating a Relativistic Quantum Particle with Coupled Qubits
- 15:15-15:30 **Tuvia Gefen, David A. Herrera-Marti, Nadav Katz, Dorit Aharonov, Alex Retzker**
Racah Institute of Physics, The Hebrew University, Jerusalem, Israel
Sensing with quantum error correction
- 15:30-15:45 **Leon Bello, Yaakov Shaked, Avi Peer**
Department of physics and BINA Center for nano-technology, Bar-Ilan university
Coupled parametric oscillators for generation of tuned two-mode squeezing - an RF demonstration
- 15:45-16:00 **Orel Bechler, Serge Rosenblum, Itay Shomroni, Yulia Lovsky, Gabriel Guendelman, Barak Dayan**
AMOS and Department of Chemical Physics, Weizmann Institute of Science
Extraction of a Single Photon from an Optical Pulse

A5: Mesoscopic and condensed matter physics

Chair: Dr. Beena Kalisky

Place: Eng. 2

Time: 14:15 - 16:00

- 14:15-14:45 **M. Ben Shalom, M. J. Zhu, V. I. Fal'ko, A. Mishchenko, A. V. Kretinin, K. S. Novoselov, C. R. Woods, A. K. Geim, J. R. Prance** (invited)
School of Physics & Astronomy, University of Manchester, Manchester, UK
Ballistic transport and superconducting proximity effect in graphene
- 14:45-15:00 **Assaf Hamo**, Avishai Benyamini, Ilanit shammass, Ilya Khivrich, Kirsten Kaasbjerg, Yuval Oreg, Felix von Oppen, Shahal Ilani
Department of Condensed Matter Physics, Weizmann Institute of Science
Attraction by Repulsion: Pairing Electrons using Electrons
- 15:00-15:15 **Iliya Esin**, Alessandro Romito, Yuval Gefen
Department of Condensed Matter Physics, The Weizmann Institute of Science
Non-local composite measurement protocol as a tool to probe non-causal quantum evolution
- 15:15-15:30 **Y. E. Yaish**, G. Zeevi, M. Shlafman, T. Tabachnik, Z. Rogachevsky, S. Maliniak, I. Goldstein, S. Shlafman, N. Gordon, G. Alchanati, Y. Moshe, E. M. Hajaj, H. Nir, Y. Milyutin, T. Y. Izraeli, A. Razin, O. Shtempluck, V. Kotchtakov
Faculty of Electrical Engineering, Technion
Carbon Nanotubes Circuits Made Easy - Optical Imaging of CNTs
- 15:30-15:45 **Jonathan Reiner**, Anderw Norris, Nurit Avraham, Hadas Shtrikman, and Haim Beidenkopf
Department of Condensed Matter Physics, Weizmann Institute of Science
Visualizing One-Dimensional Electronic states and their Scattering in Semi-conducting Nanowires
- 15:45-16:00 **Yoav Kalcheim**, Felix Zeides, Nadav Katz, Eran Katzir, Yossi Paltiel, Oded Millo
Hebrew University of Jerusalem Israel
Manipulation of vortex flow in a superconductor by localized current injection

A6: Strongly correlated electronic systems

Chair: Prof. Efrat Shimshoni

Place: Eng. 22

Time: 14:15 - 16:00

- 14:15-14:45 **Eran Sela**, Gregory Gorohovsky, Rodrigo Pereira (invited)
Tel Aviv University
Chiral Spin Liquids in Arrays of Spin Chains
- 14:45-15:00 **I. Tamir, D. Kalok**, M. Ovadia, S. Mitra, B. Sacepe, D. Shahar
Department of Condensed Matter Physics, Weizmann Institute of Science
Evidence for a finite temperature insulator

- 15:00-15:15 **Ori Alberton**, Jonathan Ruhman, Erez Berg, Ehud Altman
Weizmann Institute of Science
Fate of the Ising Quantum Critical Point Coupled to a Gapless Phonon
- 15:15-15:30 **Rajeev Singh**, Dibyendu Roy, Roderich Moessner
Max Planck Institute for the Physics of Complex Systems, Dresden, Germany
Probing Many-Body Localization by Spin Noise Spectroscopy
- 15:30-15:45 **Ilia Khait**, Snir Gazit, Norman Y. Yao, Assa Auerbach
Physics Department, Technion
Absence of diffusion in disordered spin-chains
- 15:45-16:00 **Yonathan Anahory**, Lior Embon, Chang Jian Li, Sumilan Banerjee, Alexander Meltzer, Hoovinakatte R. Naren, Anton Yakovenko, Jo Cuppens, Yuri Myasoedov, Michael L. Rappaport, Martin E. Huber, Karen Michaeli, Thirumalai Venkatesan, Ariando, Eli Zeldov
Weizmann Institute of Science
Emergent nanoscale superparamagnetism at oxide interfaces

A7: Statistical and Nonequilibrium physics

Chair: Prof. Yitzhak Rabin

Place: Eng. 42

Time: 14:15 - 16:00

- 14:15-14:30 **Tamir Admon**, Dr. Saar Rahav, Dr. Yael Roichman
Department of physical chemistry, Tel Aviv university
Information machine
- 14:30-14:45 **Dino Osmanovic**, Lenin Shagolsem, Yitzhak Rabin
Bar-Ilan University
Statistical Physics of Ensembles of Particles with Random Interactions
- 14:45-15:00 **Doron Grossman**, Eran Sharon
Hebrew University Jerusalem
The statistics of frustrated ribbons
- 15:00-15:15 **Nimrod Segall**, Eial Teomy, Yair Shokef
Tel-Aviv University
Jamming vs Caging in 3D Jamming Percolation
- 15:15-15:30 **Lukas Sieberer**, Gideon Wachtel, Ehud Altman, Sebastian Diehl
Department of Condensed Matter Physics, Weizmann Institute of Science
Vortex unbinding in driven-dissipative condensates
- 15:30-15:45 **Eytan Katzav**
The Hebrew University, Jerusalem
Analytical results for the distribution of shortest path lengths in random networks
- 15:45-16:00 **Daniel Hurowitz**, Doron Cohen
Ben Gurion University
Percolation, sliding, localization and relaxation in glassy circuits

A8: Complexity in Biological systems A

Chair: Dr. Avraham Be'er

Place: Eng. 271

Time: 14:15 - 16:00

- 14:15-14:45 **Yaron Ideses**, Samuel Safran, Karsten Kruse, Anne Bernheim-Groswasser (invited)
Department of Chemical Engineering, Ben Gurion University of the Negev
The dynamics of buckling of self-organizing contractile sheets
- 14:45-15:00 **Inbal Hecht**
School of Physics and Astronomy and Department of Molecular Microbiology & Biotechnology, Tel Aviv University
Diversity and heterogeneity in the service of cancer metastasis
- 15:00-15:15 **Dan Gorbonos**, Reuven Ianconescu, James G. Puckett, Rui Ni, Nicholas T. Ouellette, Nir S. Gov
Department of Chemical Physics, The Weizmann Institute of Science
Long-range Acoustic Interactions in Insect Swarms: An Adaptive Gravity Model
- 15:15-15:30 **Eran Even-Tov**, Avigdor Eldar, Shira omer
Tel Aviv University
Social evolution selects for complexity in bacterial communication systems
- 15:30-15:45 **Adar Sonn-Segev**, Anne Bernheim-Groswasser, Yael Roichman
School of Chemistry, Tel Aviv University
Statistics of discrete motor-driven events in active actin-myosin networks
- 15:45-16:00 **Roman Golkov**, Yair Shokef
School of Mechanical Engineering, Tel Aviv University
Shape regulation generates elastic interaction between active force dipoles

A9: Plasma Physics

Chair: Dr. Anatoli Shlapakovski

Place: Eng. 243

Time: 14:15 - 16:00

- 14:15-14:40 **Eli Jerby** (invited)
Faculty of Engineering, Tel Aviv University
Microwave-generated dusty-plasma fireballs and fire-columns
- 14:45-15:00 **H. R. Strauss**
HRS Fusion
JET disruption simulations
- 15:00-15:15 **J. Papeer**, M. Botton, D. Gordon, R. Bruch, A. Zigler, Z. Henis
Racah Institute of Physics, Hebrew University, Jerusalem
Towards Generation of Long and Continuous Plasma Channels in Air

- 15:15-15:30 **Asher Yahalom**
Ariel University
Simplified Variational Principles for non-Barotropic Magnetohydrodynamics
- 15:30-15:45 **Daniel Shafer**, Victor Tz. Gurovich, Svetlana Gleizer, Kalman Gruzinsky, Yakov E. Krasik
Technion Israel Institute of Technology
Generation of ultra-fast cumulative water jets by sub-microsecond underwater electrical explosion of conical wire arrays
- 15:45-16:00 **Shay I. Heizler**, Tomer Shussman
Department of Physics, Bar-Ilan University
Full self-similar solutions of the subsonic radiative heat equations

A10: Material Physics A

Chair: Dr. Ehoud Pazy

Place: Music 111

Time: 14:15 - 16:00

- 14:15-14:40 **Doron Naveh** (invited)
Faculty of Engineering, Bar-Ilan University
2D Semiconductors: Physical Phenomena and Device Applications
- 14:45-15:00 **Ido Azuri**, Elena Meirzadeh, David Ehre, Sidney R. Cohen, Andrew M. Rappe, Meir Lahav, Igor Lubomirsky, Leor Kronik
Department of Materials and Interfaces, Weizmann Institute of Science
*Unusually large young`s muduli of amino acid molecular crystals**
- 15:00-15:15 **Anna Hirsch**, Dvir Gur, Iryna Polishchuk, Davide Levy, Boaz Pokroy, Aurora J. Cruz-Cabeza, Lia Addadi, Leor Kronik, Leslie Leiserowitz
Department of Materials and Interfaces, Weizmann Institute of Science
Guanigma': the revised structure of biogenic anhydrous guanine
- 15:15-15:30 **Eyal Yahel**, Moran Emuna, Yaron Greenberg, Guy Makov
Department of Physics, NRCN, Beer-Sheva
Pressure dependence of binary alloy systems from sound velocity measurements
- 15:30-15:45 **Eial Teomy**, Corentin Coulais, Koen de Reus, Yair Shokef, Martin van Hecke
Tel Aviv University
Combinatorial Mechanical Metamaterials
- 15:45-16:00 **Jonathan Jeffet**, Victor Garcia-Lopez, James M. Tour, Yuval Ebenstein
Raymond and Beverly Sackler Faculty of Exact Sciences, Tel Aviv University
Nano-submarines

A11: Applied Physics

Chair: Yossi Paltiel

Place: Music 109

Time: 14:15 - 16:00

- 14:15-14:45 **Avi Zadok**, Yair Antman, Yosef London (invited)
Faculty of Engineering, Bar-Ilan University
Liquid sensor using radial acoustic modes of standard fibers
- 14:45-15:00 **Matan Galanty**, Shira Yochelis, Liron Stern, Irene Dujovne, Uriel Levy, Yossi Paltiel
Hebrew University of Jerusalem
Extinction Enhancement from a Self-Assembled Quantum Dots Monolayer using Simple Thin Films Process
- 15:00-15:15 **Doron Azulay**, Isaac Balberg, Oded Millo
Hebrew University of Jerusalem
Effects of grain-boundaries on the performance of polycrystalline Cu(In,Ga)Se₂ solar-cells
- 15:15-15:30 **Sigal Wolf**, Itamar Rosenberg, Ronen Rapaport, Nir Bar-Gill
The Racah Institute of Physics, The Hebrew University of Jerusalem
Purcell-enhanced optical spin readout of Nitrogen-Vacancy centers in diamond
- 15:30-15:45 **Yulia Lovsky***, Serge Rosenblum*, Barak Dayan
Department of Chemical Physics, Weizmann Institute of Science
Cavity ring-up spectroscopy for ultrafast sensing with optical microresonators
- 15:45-16:00 **Moti Fridman**
Faculty of Engineering, Institute of Nanotechnology and Advanced Materials, Bar Ilan University
Optical isolator based on topological insulator nano-particles

B1: Astrophysics - Theory

Chair: Prof. Tsvi Piran

Place: Eng. 329

Time: 16:15 - 18:00

- 16:15-16:35 **Boaz Katz** (invited)
Weizmann Institute of Science
Energy conservation in supernovae
- 16:35-16:55 **Ari Laor** (invited)
Technion - Israel Institute of Technology
The Effect of Radiation Pressure on Photoionized Plasma
- 16:55-17:10 **Hagai Perets**
Technion - Israel Institute of Technology
The multiple impacts origin of the Moon and Earth previous moons
- 17:10-17:25 **Almog Yalinewich**, Reem Sari
The Racah Institute of Physics, The Hebrew University of Jerusalem
Asymptotic Steady State Solution to a Bow Shock with an Infinite Mach Number
- 17:25-17:40 **Ilya Gurwich**, Uri Keshet
Ben Gurion University
Natural model for the Fermi bubbles and Galactic haze
- 17:40-17:55 **Asher Yahalom**
Ariel University
On the Difference between Time and Space

B2: High Energy - Theory

Chair: Dr. Amit Sever

Place: Eng. 244

Time: 16:15 - 18:00

- 16:30-16:45 **Carlos Hoyos**, Adiel Meyer, Yaron Oz
Universidad de Oviedo
Parity Breaking Transport in Lifshitz Hydrodynamics
- 16:45-17:00 **Roy Ben-Israel**, Amit Giveon, Nissan Itzhaki, Lior Liram
Physics Department, Tel-Aviv University
Stringy Horizons and UV/IR Mixing
- 17:00-17:15 **Ruth Shir**
The Hebrew University of Jerusalem
Permutation Symmetries in Scattering Amplitudes

- 17:15-17:30 **Ido Ben-Dayan**
Ben-Gurion University
Gravitational waves in bouncing cosmology
- 17:30-17:45 **Nilanjan Sircar**, Carlos Hoyos, Jacob Sonnenschein
Universidad de Oviedo
New knotted solutions of Maxwell's equations
- 17:45-18:00 **Philipp Burda**
Racah Institute of Physics, Hebrew University of Jerusalem
Vacuum metastability with black holes and fate of the Higgs vacuum

B3: High Energy - Experiment

Chair: Erez Etzion
Place: Eng. 243
Time: 16:15 - 18:00

- 16:15-16:30 **Orel Gueta**
Tel Aviv University
Studies of double parton interactions with the ATLAS detector
- 16:30-16:45 **Eran Erdal**, Lior Arazi, Vitaly Chepel, David Vartsky, Michael Rappaport, Amos Breskin
Weizmann Institute of Science
Novel concepts for noble-liquid radiation detectors
- 16:45-17:00 **Hadar Cohen**, Erez Etzion, on behalf of The ATLAS collaboration
Tel-Aviv University
Search for charged Higgs bosons in the $H^\pm \rightarrow tb$ decay channel in pp collisions at $\sqrt{s}=8$ TeV using the ATLAS detector
- 17:00-17:15 **Michael Pitt**
Weizmann Institute of Science
Search for the Charged Higgs boson in the τ +jets final state
- 17:15-17:30 **Yonatan Mishnayot**, Guy Ron
Racah Institute of Physics
3D Printed Scintillators
- 17:30-17:45 **L. Barak**
CERN
Search for scalar diphoton resonances at $\sqrt{s} = 13$ TeV in the mass range from 150 to [XXX] GeV
- 17:45-18:00 **Jordi Duarte-Campderros**, Avner Soffer, Gilad Perez, Shmuel Nussinov
Tel Aviv University
 $H \rightarrow s\bar{s}$ in ILC

B4: Optics and Photonics

Chair: Dr. Ofer Firstenberg
Place: Eng. 53
Time: 16:15 - 18:00

- 16:15-16:45 **Ori Katz (invited)**
Department of Applied Physics, Hebrew University of Jerusalem
Seeing through the fog: Looking into opaque samples and around corners with scattered light
- 16:45-17:00 **Yaron Bromberg**, Brandon Redding, Sebastien M. Popof, Hui Cao
Racah Institute of Physics, The Hebrew University, Jerusalem
Classical Key Distribution in Multimode Fibers Using Optical Reciprocity
- 17:00-17:15 **S. Bar-Ad**, M. Karpov, V. Fleurov, T. Congy, N. Pavloff, Y. Sivan
Sackler School of Physics and Astronomy, Tel Aviv University
Spontaneously-formed autofocusing caustics in a confined self-defocusing medium
- 17:15-17:30 **Patrick Sebbah**, Renaud Vallée, Nicolas Bachelard, Preeti Gaikwad, Renal Backov
Bar Ilan University, Ramat Gan
Disorder as a playground for coexistence of optical nonlinear effects: Competition between random lasing and stimulated Raman scattering in complex porous materials
- 17:30-17:45 **Mallachi-Elia Meller**, Avi Pe'er
Bar-Ilan University
Mode locking with ultra-low intra-cavity power for high repetition rate frequency combs
- 17:45-18:00 **Yaniv Eliezer**, Liran Hareli, Lilya Lobachinsky, Sahar Froim, Alon Bahabad
Tel Aviv University
Temporal Optical Superoscillations

B5: Atomic physics and molecules

Chair: Prof. Lev Khaykovich
Place: Eng. 42
Time: 16:15 - 18:00

- 16:15-16:30 **Yair Margalit**, Zhifan Zhou, Shimon Machluf, Daniel Rohlich, Yonathan Japha, Ron Folman
Department of Physics, Ben-Gurion University of the Negev, Israel
A self-interfering clock as a "which path" witness
- 16:30-16:45 **Erez Aghion**, Eli Barkai, David A. Kessler
department of physics, institute of Nanotechnology and Advanced Materials, Bar Ilan University
Infinite-density for cold atoms and Levy walks
- 16:45-17:00 **David Eger**, Slava Smartsev, Ofer Firstenberg, Nir Davidson
Department of the Physics of Complex Systems, Weizmann Institute of Science
Optical Coherence in Closed-Loop Double-V Configuration

- 17:00-17:15 **David Avisar**, Arlene D. Wilson-Gordon
Department of Chemistry, Bar-Ilan University
Thermal-Light-Induced Dynamics: Coherence and Revivals in V- and Extended Jaynes-Cummings Systems
- 17:15-17:30 **Shuyu Zhou**, David Groswasser, Mark Keil, Yonathan Japha, Ron Folman
Department of Physics, Ben-Gurion University of the Negev
Robust quantum spatial coherence near a classical environment
- 17:30-17:45 **Asaf Azuri, Eli Pollak**
Chemical Physics Department, Weizmann Institute of Science
First principles based computations of the scattering of Ar from a LiF(001) surface [1,2]
- 17:45-18:00 **Michael Karpov**, Nitzan Akerman, Yair Segev, Natan Bibelnik, Julia Narevicius, Edvardas Narevicius
Chemical Physics Department, Weizmann Institute of Science
Trapping of cold molecular oxygen

B6: Superconductivity and magnetism

Chair: Prof. Assa Auerbach

Place: Eng. 22

Time: 16:15 - 18:00

- 16:15-16:30 **Elran Baruch-Ei**, M. Baziljevich, T. H. Johansen, A. Shaulov, Y. Yeshurun
Institute of Superconductivity and Institute of nanotechnology Department of Physics, Bar-Ilan University
Dendritic flux instabilities in YBCO films exposed to an ultra-fast field ramp
- 16:30-16:45 **Almog Danzig**, Ori Scaly, Emil Polturak
Technion
Detection of a Quantum Friction mechanism in solid helium 4
- 16:45-17:00 **David Dentelski**, Emanuele G. Dalla Torre, Eugene Demler
Bar-Ilan University
Friedel Oscillations as a Probe of Fermionic Quasiparticles
- 17:00-17:15 **Naftali Kirsh**, Elisha Svetitsky, Tmiron Alon, Simcha Korenblit, Nadav Katz
Hebrew University of Jerusalem
How nonlinear is a linear superconducting resonator?
- 17:15-17:30 **Yosef Caplan**, Gideon Wachtel, Dror Orgad
Racah Institute of Physics, The Hebrew University, Jerusalem
Long-Range Order and Pinning of Charge-Density Waves in Competition with Superconductivity
- 17:30-17:45 **Itzik Kapon**, David Ellis, Gil Drachuck, Christof Niedermayer, Markus Hucker, Jörg Stremper, Amit Keren
Technion - Israeli Institute of Technology
Nodal Gap Induced by Spin Density Wave Excitations in $La_{2-x}Sr_xCuO_4$ $x=1.92\%$

- 17:45-18:00 **Yoni Schattner**, Max Gerlach, Simon Trebst, Erez Berg
Weizmann institute of science
Monte Carlo Study of Competing Orders in a Nearly Antiferromagnetic Metal

B7: Topological phases, excitations, and topological superconductivity

Chair: Dr. Hadar Steinberg

Place: Eng. 2

Time: 16:15 - 18:00

- 16:15-16:45 **Ella O. Lachman**, Andrea. F. Young, Anthony Richardella, Jo Cuppens, Naren HR, Yonathan Anahory, Alexander Y. Meltzer, Abhinav Kandala, Susan Kempinger, Yuri Myasoedov, Martin E. Huber, Nitin Samarth, Eli Zeldov (invited)
Department of Condensed Matter Physics, Weizmann Institute of Science
Visualization of superparamagnetic dynamics in magnetic topological insulators
- 16:45-17:00 **Arijit Kundu**, Netanel Lindner
Physics Department, Technion
Quantized Charge Transport in a far-from-equilibrium driven system
- 17:00-17:15 **Eran Sagi**, Yuval Oreg
Department of Condensed Matter Physics, Weizmann Institute of Science
From an array of quantum wires to three-dimensional fractional topological insulators
- 17:15-17:30 **Nurit Avraham**, Andrew Norris, Lin Pan, Shu-Chun Wu, Claudia Felser, Binghai Yan, Haim Beidenkopf
Weizmann Atomic Scale Physics Lab / Weizmann Institute of Science
1-D modes on step edges of the putative weak topological insulator Bi_2Te_3
- 17:30-17:45 **Yuval Baum**, Erez Berg, S. A. Parameswaran, Ady Stern
Weizmann Institute of Science
Current at a distance and resonant transparency in Weyl semimetals

B8: Soft Matter and Biological Physics

Chair: Elisha Moses

Place: Eng. 249

Time: 16:15 - 18:00

- 16:15-16:40 **Eli Sloutskin**, Moshe Deutsch, Shani Guttman (invited)
Physics Department & Institute of Nanotechnology and Advanced Materials, Bar-Ilan University
How faceted liquid droplets grow tails
- 16:45-17:00 **Yohai Bar-Sinai**, Eran Bouchbinder
Department of Chemical Physics, Weizmann Institute of Science
Is Statistical Field Theory applicable to inhomogeneous polymers? (hint: not always)
- 17:00-17:15 **Guy Nir**, Einat Chetrite, Anat Vivante, Yuval Garini, Ronen Berkovich
Bar Ilan University
Near-wall internal diffusion coefficients of a tethered dsDNA molecule under shear flow

- 17:15-17:30 **Ram Adar**, David Andelman, Haim Diamant
Tel Aviv University
Interaction between patchy surfaces: the attraction scenario
- 17:30-17:45 **Lihi Musbat**, Yoni Toker, Jonathan Dilger, David E. Clemmer, Mordechai Sheves, Anastasia V. Bouchenkova
Bar-Ilan University
Direct Measurement of the Isomerization Barrier of the Isolated Retinal Chromophore
- 17:45-18:00 **Alexandra M. Tayar**
University of Minnesota, Weizmann institute of science
Propagating gene expression fronts in a one-dimensional coupled system of artificial cells

B9: Complexity in Dynamical systems

Chair: Prof. David Mukamel

Place: Music 109

Time: 16:15 - 18:00

- 16:15-16:30 **John Kolinski**, Hillel Aharoni, Jay Fineberg, Eran Sharon
Racah Institute of Physics, Hebrew University of Jerusalem
Ringin' the water bell: dynamic modes of curved fluid sheets
- 16:30-16:45 **Shay I. Heizler**, David A. Kessler
Department of Physics, Bar-Ilan University
Microbranching in simulations of mode-I fracture in a three-dimensional perturbed hexagonal close-packed (hcp) lattice
- 16:45-17:00 **Sivan Trajtenberg Mills**, Ady Arie
School of Physics, Faculty of Exact Sciences, Tel-Aviv University
Shaping light in non-linear optical interaction: on-axis holograms and caustic curves
- 17:00-17:15 **Louis M. Shekhtman**, Michael M. Danziger, Yehiel Berezin, Shlomo Havlin
Bar Ilan University
Failure-spreading transition in spatially embedded multiplex networks
- 17:15-17:30 **Asher Yahalom**, Meir Lewkowicz, Jacob Levitan, Gil Elgressy, Lawrence Horwitz, Yossi Ben-Zion
Ariel University
Uncertainty Relation for Chaos
- 17:30-17:45 **Tomer Goldfriend**, Haim Diamant
Raymond & Beverly Sackler School of Physics and Astronomy, Tel Aviv University
Effect of Hydrodynamic Interactions on the Relative Translation between Two Forced Objects of Arbitrary Shape
- 17:45-18:00 **Oz Oshri**, Haim Diamant
School of Physics & Astronomy, Tel Aviv University
Properties of compressible elastica from relativistic analogy

B10: Complexity in Biological systems B

Chair: Dr. Avraham Be'er

Place: Eng. 271

Time: 16:15 - 18:00

- 16:15-16:30 **Shay Be'er**, Michael Assaf
Hebrew university
Effect of reaction-step-size noise on the dynamics of stochastic populations
- 16:30-16:45 **Or Levy**, Binyamin Knisbacher, Erez Levanon, Shlomo Havlin
Department of Physics, Bar-Ilan University
Retroelements Network – activity and dynamics in genome evolution
- 16:45-17:00 **Yael Fried**, David A. Kessler, Nadav M. Shnerb
Bar-Ilan University
Communities as cliques
- 17:00-17:15 **Nimrod Shaham**, Yoram Burak
Racah institute of physics, the Hebrew university of Jerusalem
Continuous parameter working memory in a balanced chaotic neural network
- 17:15-17:30 **Noga Weiss Mosheiff**, Haggai Agmon, Avraham Moriel, Yoram Burak
Racah Institute of Physics, Hebrew University, Jerusalem
An Efficient Coding Theory for a Dynamic Trajectory Predicts non-Uniform Allocation of Grid Cells to Modules in the Entorhinal Cortex
- 17:30-17:45 **Haim Weissmann**, Nadav M. Shnerb
Bar Ilan University
Predicting Catastrophic shifts
- 17:45-18:00 **Merav Stern**, Johnatan Aljadeff, Omri Barak
Medicine Faculty, Technion
Evoked responses in recurrent networks with multiple sub-populations

B11: Material Physics B

Chair: Dr. Eyal Yahel

Place: Music 111

Time: 16:15 - 18:00

- 16:15-16:35 **Tzvi Tempelman**, Michael Shandalov, Eyal Yahel, Itzhak Kelson, Michael Schmidt, Yuval Golan
Materials Engineering Department, Ben-Gurion University of the Negev
A New Approach for Radiation Damage Studies by Incorporation of Dilute Self-Irradiating Defects in Thin Films
- 16:35-16:50 **Uri Argaman**, Eitan Eidelstein, Ohad Levy, Guy Makov
Materials Engineering Department, Ben-Gurion University of the Negev
Thermodynamic properties of titanium from ab initio calculations

- 16:50-17:05 **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 a diamond
- 17:05-17:20 **Alex Axelevitch**, Boris Apter
 Engineering Faculty, Holon Institute of Technology (HIT)
Ion Assisted Evaporation System for Complex Thin Films Deposition
- 17:20-17:35 **Merav Muallem**, Alex Palatnik, Gilbert D. Nessim, Yaakov R. Tischler
 Bar-Ilan Institute for Nanotechnology and Advanced Materials
Molecular vibration polaritons in low-loss dielectric microcavities in the mid-infrared
- 17:35-17:50 **Igor Yulevich, Elhanan Maguid, Nir Shitrit, Dekel Veksler, Vladimir Kleiner, and Erez Hasman***
 Micro and Nanooptics Laboratory, Faculty of Mechanical Engineering, and Russell Berrie
 Nanotechnology Institute, Technion – Israel Institute of Technology
Optical Mode Control by Geometric Phase in Quasicrystal Metasurface

Posters

Posters Categories:

- A - High Energy Physics
- B - Quantum Physics
- C - Condensed Matter
- D - Statistical Mechanics
- E - Complex systems (Bio, Nonlinear dynamics, Fluids)
- F - Applied Physics

- PE-01 **Bella Ilkanaiv**, Gil Ariel, Avraham Be'er
 Zuckerberg Institute/Institute for Water Research, The Jacob Blaustein Institutes for Desert Research,
 Ben-Gurion University of the Negev, Sede Boqer Campus 84990, Midreshet Ben-Gurion, Israel
The impact of cell aspect ratio on bacterial swarming
- PD-02 **Nava Leibovich**
 Department of Physics, Bar-Ilan, Ramat-Gan, Israel
Aging Wiener-Khinchin Theorem
- PE-03 **David Yanuka**, Maxim Kozlov, Hodaya E. Zinowits, Yakov E. Krasik
 Technion, Haifa, Israel
*Convergence of shock waves generated by underwater electrical explosion of cylindrical wire
 arrays between different boundary geometries*
- PD-04 **Tomer Markovich**, David Andelman, Rudi Podgornik
 Raymond and Beverly Sackler School of Physics and Astronomy, Tel Aviv University
Charge regulation: a generalized boundary condition?
- PC-05 **Pavel Tikhonov**, Efrat Shimshoni, H. A. Fertig, Ganpathy Murthy
 Department of Physics, Bar-Ilan University, Ramat-Gan 52900, Israel
Emergence of helical edge conduction in graphene at the $\nu=0$ quantum Hall state
- PC-06 **Yiftach Frenkel**, Noam Haham, Yishai Shperber, Chris Bell, Yanwu Xie, Yasuyuki Hikita, Harold
 Hwang, Beena Kalisky
 Department of Physics, Bar Ilan University, Israel
Imaging and quantifying the effect of STO domains on transport in LAO/STO interfaces
- PE-07 **Yulia Sokolov**, Haim Diamant
 Tel Aviv University
Inflation and deflation of driven colloidal rings
- PC-08 **Mordecai Kot**, Moshe Goldstein
 Tel Aviv University
Hall Viscosity in Solid State Systems
- PB-09 **Daniel Dribin**
 Racah Institute of Physics The Hebrew University of Jerusalem
Building a Positron Annihilation spectroscopy using a DRS4 digitizer

- PE-10 **Michael M. Danziger**, Sebastian M. Krause, Vinko Zlatic
Department of Physics, Bar Ilan University, Ramat Gan, Israel.
Secure communication on networks with no trusted nodes using color avoiding percolation
- PD-11 **Maayan Shalom**, Yael Roichman
Tel Aviv University
The effect of adsorption on the microrheology of nanoparticles/hydrogel composites
- PC-12 **Elhanan Maguid**, Igor Yulevich, Nir Shitrit, Dekel Veksler, Vladimir Kleiner, Erez Hasman
Micro and Nanooptics Laboratory, Faculty of Mechanical Engineering, and Russell Berrie Nanotechnology Institute. Technion – Israel Institute of Technology
Optical spin Hall effect in quasicrystal metasurface
- PC-13 **Omri J. Sharon**, Noam Haham, Avner Shaulov, Yosi Yeshurun
Department of Physics, Bar-Ilan University
Fluxoids configurations in finite superconducting networks
- PB-14 **Daniel Louzon**, Thomas Unden, Priya Balasubramanian, Yuval Vinkler, Martin B. Plenio, Matthew Markham, Daniel Twitchen, Igor Lovchinsky, Alexander O. Sushkov, Mikhail D. Lukin, Alex Retzker, Boris Naydenov, Liam McGuinness, Fedor Jelezko
Racah Institute of Physics, Hebrew University of Jerusalem, 91904 Jerusalem, Israel
Quantum metrology enhanced by repetitive quantum error correction
- PB-15 **Ben Ohayon**, Guy Ron
Racah Institute of physics
An efficient atom-trap setup for beta-decay studies
- PB-16 **Yaakov Shaked**, Rafi Z. Vered, Yoad Michael, Michael Rosenbluh, Avi Pe'er
Department of physics and BINA Center of nano-technology, Bar-Ilan University
Lifting the Bandwidth Limit of Optical Homodyne Measurement
- PD-17 **Mark H Fischer**, Mykola Maksymenko, Ehud Altman
Weizmann Institute of Science
Dynamics of a Many-Body-Localized System Coupled to a Bath
- PC-18 **Yochai Werman**, Erez Berg
Weizmann Institute of Science
Resistivity saturation in a tractable electron-phonon model

- PC-19 **Tony Yamin**, Yakov M. Strelniker, Amos Sharoni
Department of Physics and Bar-Ilan Institute of Nanotechnology Advanced Materials
Bar Ilan University
High Resolution Hall Measurement across the Phase Separated Metal-Insulator Transition in VO₂ Reveals Non-Trivial Relation to Carrier Density
- PB-20 **Chen Avinadav**, Dimitry Yankelev, Nir Davidson, Ofer Firstenberg
Weizmann Institute of Science
Trapped atom interferometry using Bloch oscillations in optical lattices
- PE-21 **Maria Nihamkin**, Jonathan Toker
Bar Ilan University
The Bar Ilan Action Spectrometer
- PC-22 **Aviad Landau**, Stephan Plugge, Eran Sela, Alexander Altland, Sven Albrecht, Reinhold Egger
Tel Aviv university
Towards realistic implementations of a Majorana surface code
- PB-23 **Simcha Korenblit**, Ydan Bendor, Hao Wang, Michael Geller, Nadav Katz
The Hebrew University of Jerusalem
Quantum Walks in a Globally Connected Superconducting Network
- PB-24 **Yossi Rosenzweig**, Yechezkel Schlüssel, Ron Folman
Department of Physics, Ben Gurion University of the Negev
"Doppler-free" type pump-probe spectroscopy in diamond nitrogen-vacancy centers
- PC-25 **Anna Kremen**, Shai Wissberg, Noam Haham, Yiftach Frenkel, Beena Kalisky
Bar-Ilan University, Department of Physics and Institute of Nanotechnology and Advanced Materials, Ramat-Gan, Israel.
Mechanical control of individual superconducting vortices
- PB-26 **Ronen Weiss**, Betzalel Bazak, Nir Barnea
The Racah Institute of Physics, The Hebrew University
The nuclear contact relations
- PF-27 **Gil Atar**, Idan Casif, David Eger, Ariel Bruner, Bruno Sfez, Shlomo Ruschin
Applied Physics Division, Soreq NRC, Yavne 81800
Near-Single-Mode Operation of Highly-Multimode Waveguides Imposed by Sidewall Roughness Scattering
- PF-28 **Omer Amit**, David Groswasser, Meni Givon, Amir Waxman, Avinoam Stern, Ron Folman
Ben-Gurion University
Ultracold-Rb Atomic Clock
- PC-29 **I. C. Fulga**, D. I. Pikulin, T. A. Loring
Department of Condensed Matter Physics, Weizmann Institute of Science, Rehovot 76100, Israel
Aperiodic weak topological superconductors
- PC-30 **Shai Wissberg**, Eylon Persky, Yiftach Frenkel, Anna Kremen, Noam Hacham, Yishai Shperber, Beena Kalisky
Physics Department, Bar Ilan University
Probing complex oxide interfaces with scanning SQUID microscopy

- PB-31 **Parry Y. Chen**, Jacob Ben-Yakar, Yonatan Sivan
Tel Aviv University
Reinterpreting the magnetoelectric coupling of infinite cylinders using symmetry: a simple TM/TE view
- PE-32 **Dolev Roitman**, Itay Kishon, Ishay Pomerantz
School of Physics and Astronomy, Tel-Aviv University, Israel
High Intensity Laser Irradiation of Solid Targets at a High Repetition Rate
- PD-33 **Raz Halifa-Levi**, Yacov Kantor
Raymond and Beverly Sackler School of Physics and Astronomy, Tel Aviv University
Ideal polymers: equilibrium properties from non-equilibrium processes
- PC-34 **Itzhack Dana**
Minerva Center and Department of Physics, Bar-Ilan University, Ramat-Gan 52900, Israel
Topological Properties of Adiabatically Varied Floquet Systems and Coupled Chains
- PC-35 **Arbel Haim**, Erez Berg, Felix von Oppen, Yuval Oreg
Department of Condensed Matter Physics, Weizmann Institute of Science, Rehovot, 76100, Israel
Current Correlations in a Majorana Beam Splitter
- PC-36 **Paul Ben Ishai**, Lawrence M. Anovitz
The Hebrew University of Jerusalem
Ultra-confinement: Unraveling the mysteries of ancient water trapped in natural minerals
- PC-37 **Raul A. Santos**, Dmitri Gutman, Sam Carr
Department of Condensed Matter Physics, Weizmann Institute of Science
Stability of interacting helical modes in a time reversal topological insulator.
- PA-38 **Moran Netser**, Noa Feldman, Yoni Svechinski
Tel Aviv University
Search for Pairs of Long-Lived Particles at BaBar
- PF-39 **Moti Fridman**
Faculty of Engineering, Bar Ilan University
Radial and azimuthal polarizations induced by long period fiber grating
- PB-40 **Shmuel Sternklar**, Moshe Ben-Ayun, Seva Rosenberg, Arye Schwarzbaum
Department of Electrical and Electronic Engineering, Ariel University
Fundamental limits of phase-shift measurement: Comparing optical interferometry to a new technique based on RF phase-shift amplification
- PF-41 **Elyashiv Shacham**, Igor Liokomovich, David Mermelstein, Shmuel Sternklar
Department of Electrical and Electronic Engineering, Ariel University
Brillouin single-sideband amplification of OTDR signals for high sensitivity strain and vibration sensing
- PC-42 **Denis Golosov**
Bar-Ilan University
Stoner-like theory of Magnetism in Silicon MOSFETs

- PB-43 **Igal Aharonovich**, Avi Pe'er
Department of Physics and BINA center for Nano-Technology, Bar-Ilan University
Coherent Amplification of Ultrafast Molecular Dynamics in an Optical Oscillator
- PB-44 **Yuval Shagam**, Ayelet Klein, Wojciech Skomorowski, Renjie Yun, Vitali Averbukh, Christiane P. Koch, Edvardas Narevicius
Department of Chemical Physics, Weizmann Institute of Science, Rehovot 76100, Israel
Probing long-range forces of a molecular quantum rotor in cold reactions
- PE-45 **Zehavit Eizig**, Dan Thomas Major, Harvey Lee Kasdan, Elena Afrimzon, Naomi Zurgil, Maria Sobolev, Mordechai Deutsch
The Biophysical Interdisciplinary Schottenstein Center for the Research and Technology of the Cellome, Physics Department, Bar Ilan University, Ramat-Gan, 5290002 ISRAEL
Spectroscopic Aspects of the Cationic Dye Basic Orange 21
- PC-46 **Avraham Klein**, Igor L. Aleiner, Oded Agam
The Hebrew University
Vortex core deformation in weakly coupled superfluids
- PB-47 **Meytal Duer**, Eli Piasetzky, Or Hen, Erez Cohen, Igor Korover
School of Physics and Astronomy, Tel Aviv University
Study of Short Range Correlations via the $A(e,e'n)$ reaction using CLAS detector at Jefferson Laboratory
- PB-49 **D. Izraeli**, M. Durante, M. Krämer, E. Piasetzky, R. Pleskac, M. Rovituso, C. Schuy
Tel-Aviv University, Israel
Ion Therapy
- PC-50 **Paul Ben Ishai**, Lawrence M. Anovitz
The Hebrew University of Jerusalem
Ultra-confinement: Unraveling the mysteries of ancient water trapped in natural minerals
- PB-51 **Israel Weinberger**, Nir Barnea [1]
The Hebrew University
Removing Center of Mass Effects from Calculated Response Functions
- PB-52 **Nir Nevo Dinur**, Chen Ji, Oscar J. Hernandez, Sonia Bacca, Nir Barnea
The Hebrew University of Jerusalem, Israel
Understanding the proton radius puzzle: Nuclear structure effects in light muonic atoms
- PE-53 **Lerner Eitan**, Chung Sangyoon, Allen Benjamin, Shuang Wang, Jookyung J. Lee, Shijia Winson Lu, Grimaud Wilson Logan, Ingargiola Antonino, Alhadid Yazan, Borukhov Sergei, Strick Terence, Taatjes J. Dylan, Weiss Shimon
Dept. of Chemistry & Biochemistry, University of California Los Angeles, Los Angeles, CA 90095
Pausing in Escherichia Coli transcription initiation
- PE-54 **Chen Bar Haim**, Haim Diamant
Tel Aviv University
Velocity Pair Correlations in a Suspension Confined Between two Elastic Surfaces
- PC-55 **Atindra Nath Pal**, Arindam Ghosh
Department of Physics, Indian Institute of Science, Bangalore-560012, India
1/f noise as a probe to investigate the band structure of graphene

- PC-56 **Atindra Nath Pal**, Fabrizio Nichele, Susanne Mueller, Patrick Pietsch, Thomas Ihn, Klaus Ensslin, Christophe Charpentier, Werner Wegscheider
Solid State Physics Laboratory, ETH Zurich, 8093 Zurich, Switzerland.
Electronic transport in InAs/GaSb composite quantum well: A possible candidate for 2D topological insulator
- PC-57 **M. Ya. Amusia**, L. V. Chernysheva
The Racah Institute of Physics, the Hebrew University of Jerusalem
The role of fullerene shell upon stuffed atom polarization potential
- PC-58 **M. Ya. Amusia**
Racah Institute of Physics, the Hebrew University, Jerusalem,
Light generation in collisions of atoms with a linear chain of fullerenes
- PB-59 **T. Yelin**, R. Korytar, N. Sukenik, R. Vardimon, B. Kumar, C. Nuckolls, F. Evers, O. Tal
Chemical Physics, Weizmann Institute of Science
The Upper Limit of Conductance across a Single Molecule

אוניברסיטת בר-אילן BAR-ILAN UNIVERSITY

ENGINEERING

MUSIC

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מספר	שטח
143	95
168	96
263	94
68	325
70	864
87	818

מספר	שטח
200	210
220	243
230	290
400	400
402	402
87	87
414	414
405	405
407	407

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