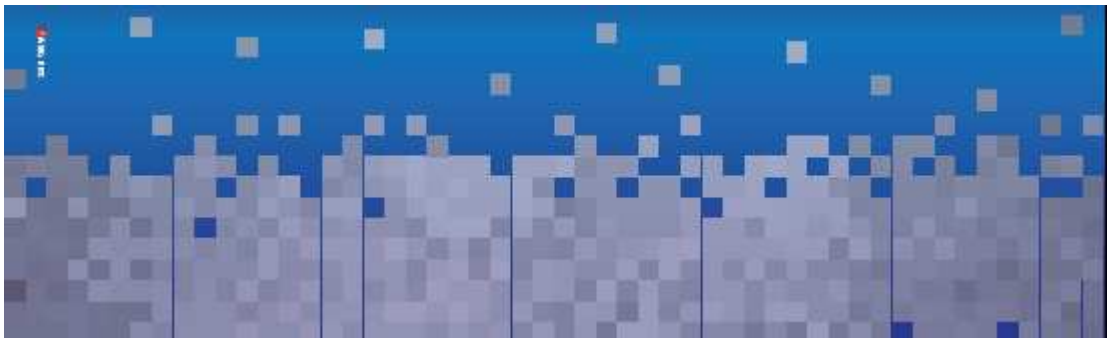
Program תכנית הכנס

Bulletin of the

ISRAEL PHYSICAL SOCIETY

Volume 54, 2008



The Israel Physical Society

Council:

Corporate members:

Bar-Ilan University
Ben-Gurion University of the Negev
The Hebrew University of Jerusalem
Israel Atomic Energy Commission
Technion - Israel Institute of Technology
Tel Aviv University
Weizmann Institute of Science
Ort Braude College
College of Judea and Samaria

IPS2008 Organizing committees

Scientific

- Amnon Aharony, Ben Gurion University (chair)
- Rennan Barkana, Tel Aviv University
- Elisha Cohen, Technion
- Avishai Dekel, Hebrew University (IPS president)
- Yuval Garini, Bar Ilan University
- Michael Gedalin, Ben Gurion University (co-chair)
- Barak Kol, Hebrew University
- Oleg Krichevsky, Ben Gurion University
- Ron Lifshitz, Tel-Aviv University
- Israel Mardor, Soreq
- Zvi Rosenstock, RAFAEL
- Michael Savin, Weizmann Institute
- Dan Shahar, Weizmann Institute
- Yaron Silberberg, Weizmann Institute

Local

- Amnon Aharony (chair)
- Michael Gedalin (co-chair)
- Doron Cohen
- Dan Rich (trade and job fairs)
- Shlomo Nahum (administration)

Websites

- The IPS 2008 meeting site is designed and maintained by Doron Cohen
- The IPS registration site is designed and maintained by Nir Shaviv

Bldg. 73 – Zonnenfeld Hall (planery session)	בניין 73 - אולם זוננפלד (התאספות)
Bldg. 90 – all other sessions	בניין 90 - מקום הכינוס בהמשך היום
Bldg. 54 – Physics department	בניין 54 - בניין המחלקה לפיסיקה

Food: **נקודות אוכל :**

1. mensa (students)	1. מנזת סטודנטים בשרית - בנין 70
2. mensa (faculty)	2. מנזת סגל בשרית - בנין 70 כניסה מזרחית
3. Karnaf – salads, soups, sandwiches	3. קרנף - בר סלטים ומרקים - בנין 28
4. Lemon grass – asian food	4. למון גראס - אסייתי - בנין 32
5. Aroma – coffee	5. ארומה - בית קפה - בנין 74
6. Macdonald's – near Bldg. 90	6. מקדונלד'ס - מתחם בנין 90
7. Drink and food stands – Bldg. 90	7. דוכני שתיה ואוכל – בנין 90

From the president of the IPS

On behalf of the the Israel Physical Society (IPS), I wish to welcome all of us to the 54th annual General Assembly (2008), held this year in Ben Gurion University.

The IPS is a voluntary non-profit association which acts to stimulate physics research and education in Israel. Membership is open to all physicists, from Israel and abroad, including students and all those who conduct research and education in physics. An IPS membership carries partial memberships in the APS, EPS and CAP, involving reduced rates for symposia and subscriptions and eligibility to serve in their committees.

We are in a process of trying to revamp the IPS status and activity. Our aim is to make it a worthwhile organization for the benefit of our physics community, following the examples set by the APS and EPS while adding special features relevant to physics in Israel. Our current emphasis is on improving the content and format of our annual meetings, establishing IPS named prizes, solidifying the IPS magazine PhysicaPlus, upgrading the IPS webpage and creating a timely NewsLetter, setting up joint activities with sister societies in Israel and abroad as well as with the Israeli Academy of Sciences, and enlarging the body of IPS members both within the institutions of high education and among teachers and researchers in the industry.

On the administrative side, we are approaching the conclusion of the very long-term formal process of registration as a society and balancing our budget. Special thanks are due to our treasurer, Israel Mardor.

I would like to highlight our newly established IPS prize for a young physicist, being awarded this year for the first time. It is awarded to a physicist less than 10 years after the PhD, for research of special impact. The winner has been selected by a distinguished committee, based on nominations made by the deans/chairs of physics in the institutions of high education and the industry. The award is tentatively set to a starting sum of 10,000 shekels, and we are working on naming it and crystallizing the long-term funding for it. The aim is to make this the most prestigious prize for a young physicist in Israel, and we try to establish a sponsorship by the Israeli Academy of Sciences.

This is in addition to the existing prizes for physics graduate students, which we attempt to revamp as well. As a first step, one of these prizes is being named after our late member Ze'ev Fraenkel, for excellence in research in the fields of particle physics, nuclear physics and astrophysics.

The scientific organizing committee of IPS08, led by Amnon Aharony, has put together an exciting program. It includes three rich review sessions led by senior experts, following the format first introduced in IPS06 at the Hebrew University. Following IPS07 at the Weizmann Institute, the parallel sessions are organized along the lines of the APS March meeting, usually comprising of an invited talk followed by 10+2 minutes long contributed talks.

The IPS activities are managed by a council representing the member institutions. I

wish to thank each of the council members for their invaluable contributions to our current revamp campaign.

In order to allow all the above and more, the IPS needs your support. To begin with, by becoming a member and paying the annual fees. In addition, you can make an impact by encouraging all your associates to join the IPS, especially students. Finally, you are most welcome to participate in the council work, by contributing ideas for new initiatives or for potential funding sources.

I wish us all an enjoyable meeting, and a year of productive activity in physics research and education.

Avishai Dekel,
President of the IPS

IPS prizes

Three graduate students will receive the IPS prizes for 2008:

Theoretical physics: **Netanel Lindner** (Technion), for his excellent work on quantum information/Condensed matter theory, under the supervision of Prof. Assa Auerbach.

Experimental physics: **Shmuel Rubinstein** (Hebrew University), for his excellent work on Nonlinear dynamics, under the supervision of Prof. Jay Fineberg.

The Ze'ev Fraenkel Prize in Particle physics, Nuclear physics and Astrophysics: **Avi Shporer** (Tel-Aviv University) for his excellent work on Astronomy, under the supervision of Prof. Tsevi Mazeh**.**

The prizes will be awarded during the opening ceremony. All three students will deliver invited talks in the relevant parallel sessions.

The new prize for a young faculty member will be announced at the conference.

Welcome message

Ben Gurion University welcomes the participants of the 54th annual meeting of the Israel Physical Society. Since the last annual meeting at BGU, there have been many changes on this campus. You already noticed the new train station and/or highway 6, which bring us closer to wherever you came from. You are all invited to visit our new physics building and the adjoining Ilan Ramon youth physics center, as well as the fabrication and atomchip labs in building 95. You can also see the new nano-center building, which will open soon next to the physics building.

Following the example of last year, we have also accepted all the contributed papers, with the only requirement that abstracts by students should be approved by their thesis advisors. We trust that this will establish a tradition, in which the IPS annual meeting is the place where faculty and students have a chance to advertise their work, meet their peers and exchange useful and stimulating information.

Following tradition, we also have three review sessions. The speakers in these sessions were asked to present reviews of their fields, at a level which can be followed by a general physics audience. Therefore, do not hesitate to join any of the three sessions, and learn about exciting new physics. Many parallel sessions also include invited contributions, mainly by young faculty members. We hope that this exposure will make these people better known to the community, and we wish them success. Three of the invited talks are given by the IPS student prize winners.

A few technical points: (1) all contributed talks are exactly 10 minutes long, with 2 minutes for discussion. Invited talks have 25 minutes. Please show up in the lecture room at least 15 minutes before your session, to coordinate your talk with the chair and the assistant in charge (BGU people have different badges). Also, please keep the schedule, so that people can move between sessions. (2) The poster session is on the second floor of building 90. Please place your poster at 11:00, and be around it during all the breaks. (3) As usual, we also have trade and job fairs. Please visit these fairs, so that they will be encouraged to continue this useful tradition. (4) Following the example of the APS, and in the interest of saving the environment, we avoided printing a full booklet of the abstracts. Those who have not printed the abstracts of interest before coming can still access this information via the conference web site, using the wireless connections or the terminals in both buildings (instructions available separately).

Many of you experienced some difficulties registering, because the new IPS website was not fully functional on time. On behalf of the IPS, I apologize for that. However, I urge all those who did not yet register and pay to do so immediately. Our small budget depends on your payments, and on these tough times we could not raise much other support. Hopefully, everything will work well for the next IPS meeting.

Many people deserve thanks. In particular, I am very grateful to Doron Cohen, who constructed the web page and helped with many other issues, Dan Rich, who organized the job and trade fairs, and Shlomo Nahum, who ran all the logistics at BGU. I also thank the session chairs for their help.

I wish all of us a stimulating and exciting meeting.

Amnon Aharony, Chair of the organizing committee

Trade fair – Lobby, 1st floor, Bldg. 90, 11:00 – 18:30

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Job fair - Lobby, 1st floor, Bldg. 90, 11:00 – 18:30

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IPS 2008 - Program

09:00-09:50	Refreshments and fast track registration **[1,2]**			Bldg.73 Zonnenfeld hall
	Plenary session *chair:* Prof. Amnon Aharony (BGU)			
09:50-10:00	*Welcome:* Prof. Rivka Carmi (BGU president)			
10:00-10:15	*Opening and IPS prizes:* Prof. Avishai Dekel (IPS president)			
10:15-11:00	*Plenary Lecture:* Prof. Moty Heiblum (WIS), *Fractionally charged quasiparticles in the fractional quantum Hall effect.*			
11:00-11:40	Registration for non-registered participants **[1,2]**, Posters and Fairs **[3]**			Bldg.90 Rooms: 90/227 92/001 92/002
	Review 1 High energy and Astrophysics *chair:* R. Brustein (BGU)	**Review 2** *Quantum and Solid state physics* *chair:* G. Deutscher (TAU)	**Review 3** *Biophysics and Statistical Physics* *chair:* E. Domany (WIS)	
11:40-12:10	*LHC - a theorist's perspective,* Yossi Nir (WIS)	*Experimental quantum information processing - the $\|\psi\rangle$ of the art,* Nadav Katz (HU)	*From bioinformatics to systems biology: what's the physicist's role?* Eli Eisenberg (TAU)	
12:10-12:40	*Magnetars,* David Eichler (BGU)	*Electronic structure of the cuprate superconducting and pseudogap states from spectroscopic imaging STM,* Seamus Davis (Cornell)	*Imaging physical concepts: A review of Bose-Einstein condensation,* Jeff Steinhauer (Technion)	
12:40-14:00	Lunch break, Posters, Trade fair, Job fair **[4]**, IPS council meeting **[5]**			Campus
14:00-16:00	**Parallel sessions A**			Bldg. 90
16:00-16:30	Coffee break			
16:30-18:30	**Parallel sessions B**			

[1] Fast track registration is intended for those who have registered in advance and filled the payment webform.
[2] There will be 6 PC stands available for web browsing, as well as wireless network coverage for guests.
[3] Posters and fairs are expected to be available earliest at 11:00 at the 2nd and 1st floor lobbies of Bldg.90.
[4] Posters and fairs are expected to be available from 12:40 till 18:30.
[5] The IPS Council will be held at room 90/129, during 12:45-13:45.

IPS 2008 - Parallel Sessions

List of the parallel sessions

	Parallel Session	Room	Chair	Assistant
14:00-16:00	A1. Solid state physics - superconductivity I	92/001	Jorge Berger (Ort Braude)	Barboy, Ilan
	A2. Solid state physics - nanophysics I	02/002	Efrat Shimshoni (BIU)	Machluf, Shimon
	A3. Soft condensed matter and biophysics	90/227	Yitzhak Rabin (BIU)	Gilboa, Barak
	A4. Statistical physics I	90/226	Ron Lifshitz (TAU)	Shusterman, Olga
	A5. Quantum physics	90/224	Avraham Schiller (HUJI)	Aviv, Gal
	A6. Optics	90/222	Yaron Silberberg (WIS)	Golan, Amir
	A7. High energy physics I	90/223	Barak Kol (HUJI)	Levy, Daniel
	A8. Astrophysics I	90/230	Rennan Barkana (TAU)	Barzilay, Yudith
	A9. Non-linear physics	90/225	David Kessler (BIU)	Kletter, Assaf
16:30-18:30	B1. Solid state physics - superconductivity II	92/001	Amit Keren (Technion)	Erez, Amir
	B2. Solid state physics - nanophysics II	92/002	Yuval Gefen (WIS)	Moshe, Ofer
	B3. Biophysics	90/227	Oleg Krichevsky (BGU)	Maman, Nizan
	B4. Statistical physics II	90/226	Ron Lifshitz (TAU)	Shusterman, Olga
	B5. Solid state physics - magnetic and electric properties	90/224	Alexander Gerber (TAU)	Levy, Roi
	B6. Plasma physics	90/222	Michael Mond (BGU)	Haim, Lev
	B7. High energy physics II	90/223	Barak Kol (HUJI)	Ben-Dayan, Ido
	B8. Astrophysics II	90/230	Rennan Barkana (TAU)	Barzilay, Yudith

A1. **Solid state – superconductivity I**

chair: J. Berger (Braude)
Assistant: Barboy, Ilan
Room: 92/001

#	Time	Speaker	Title
1	14:00	Keren Amit	Experimental investigation of the coupling between magnetic and superconducting order parameters in underdoped LSCO thin films
2	14:13	Golubchik Daniel	Magneto-optical imaging of phase transitions out of equilibrium
3	14:25	Barness Doron	Magnetic flux oscillations in partially irradiated $Bi_2Sr_2CaCu_2O_{8+x}$ crystals
4	14:37	Leibovitch Guy	Bean-Livingstone barrier enhancement on nodal surface of the d-wave superconductor YBa2Cu3O7-x
5	14:49	Kraus Kobi	Observing Majorana Zero Modes in a Px+iPy Superconductor at High Temperature by Tunneling Spectroscopy
6	15:01	Shwartz Eli	Vortex annihilation effect on ac magnetic response in type-II superconductors
7	15:13	Dvash Eyal	Dendritic Instability of Magnetic Flux in Anisotropic Type-II Superconducting Slab.
8	15:25	Meidan Dganit	Superconductor insulator transition in thin films driven by an orbital parallel magnetic field effect
9	15:37	Ovadia Maoz	The superconductor-insulator transition: is there a new insulating state?
10	15:49	Zaberchik Moran	Properties of superconducting $TiSe_2Cu_x$

A2. **Solid state – nanophysics I**

chair: E. Shimshoni (BIU)
Assistant: Machluf, Shimon
Room: 92/002

#	Time	Speaker	Title
1	14:00	Ilani Shahal	Coupling of Spin and Orbital Motion of Electrons in Ultra-Clean Carbon Nanotubes
2	14:25	Bid Aveek	Fabŕy-Perot interferometer in the Quantum Hall regime
3	14:37	Levy Shai	Electric properties of a MOS structure containing nano-crystalline Ge imbedded into a thick SiO_2 film
4	14:49	Machluf Shimon	A novel atom trap based on a carbon nano-tube
5	15:01	Stotland Alexander	Semilinear response for the heating rate of cold atoms in vibrating traps
6	15:13	Steiner Dov	Electronic level structure of semiconductor nanocrystals in 2D arrays and in core/shell heterostructures
7	15:25	Lewkowicz Meir	Dynamics of the particle-hole pair creation in suspended graphene
8	15:37	Freilikher Valentin	Transport and localization in periodic and disordered graphene superlattices
9	15:49	Shafir Oren	Electromagnetic radiation emanating from the molecular nanomagnet Fe8

A3. **Soft Condensed matter and biophysics**

chair: Y. Rabin (BIU)
Assistant: Gilboa, Barak
Room: 90/227

#	Time	Speaker	Title
1	14:00	Diamant Haim	Critical swelling of fluctuating capsules
2	14:25	Frydel Dariusz	Short time Dynamics in Quasi-One-Dimensional (Q1D) Colloidal Suspension
3	14:37	Shlomovitz Roie	Curved inclusions surf membrane waves.
4	14:49	Lindner Moshe	Novel 3D Tethered Particle Motion (TPM)
5	15:01	Granek Rony	Active Transport on Disordered Microtubule Networks: The Generalized Random Velocity Model
6	15:13	Nir Guy	Studying the interactions of a single enzyme and DNA using tethered particle motion method (TPM)
7	15:25	Naoz Moshe	A physical model of cellular "feet"
8	15:37	Rappaport Shay. M	Model of DNA Bending by Cooperative Binding of Proteins

A4. **Statistical Physics I**

chair: R. Lifshitz (TAU)
Assistant: Shusterman, Olga
Room: 90/226

#	Time	Speaker	Title
1	14:00	Taitelbaum Haim	Reactive-Wetting in Room Temperature: Bulk Spreading and Interface Kinetic Roughening
2	14:25	Rotman Ziv	Slow dynamics and glassiness in a lattice model
3	14:37	Gupta Shamik	Dynamics of fluctuations in driven diffusive systems: Finite-size effects
4	14:49	Veksler Alexander	Generalized fractional Fokker-Planck equation for anomalous diffusion
5	15:01	Roichman Yael	Crossover from sub-diffusion to super-diffusion in a tilted washboard potential
6	15:13	Maruvka Yosef	Polymorphism data may reveal the origin of species abundance statistics. Is it natural selection? or genetic drift?
7	15:25	Yaari Gur	In Random Multiplicative Environments – Charity Pays Off.
8	15:37	Kenett Dror	The stock market as a complex adaptive system - the functional role of the index

A5. **Quantum Physics**

chair: A. Schiller (HU)
Assistant: Aviv, Gal
Room: 90/224

#	Time	Speaker	Title
1	14:00	Doucot Benoit	Physical implementation of protected qubits
2	14:25	Aviv Gal	Bloch Qbit Multiphoton Coherent Manipulations of an Atomic Two-State System
3	14:37	Shahmoon Ephraim	Qubit Coherent Control with Squeezed Light Fields
4	14:49	Panich Alexander	73Ge nuclear spin decoherence and germanium-based quantum computer
5	15:01	Amusia Miron	Interference resonances in endohedral atoms
6	15:13	Kot Eran	Coherent Scattering of a Single Atom by Localized BEC in Optical Lattice
7	15:25	Chuchem Maya	Dynamics of condensed Bose particles in a driven few site system, and the many body Landau-Zener transition
8	15:37	Etzioni Yoav	Particle Dynamics on a Ring Affected by Noisy Environments
9	15:49	Waxman Amir	Modulation Enhancement of a Laser Diode in an External Cavity

A6. **Optics**

chair: Y. Silberberg (WIS)
Assistant: Golan, Amir
Room: 90/222

#	Time	Speaker	Title
1	14:00	Cohen Oren	Optically-induced quasi-phase-matching in high-harmonic generation
2	14:25	Natan Adi	Strong field photodissociation control of H_2^+ with chirped laser pulses
3	14:37	Golan Amir	Raman Spectral Signatures as Conformational Probes of Biomolecules
4	14:49	Kapilevich Boris	THz Characterization of Lossy Materials Using Multi-Layers Measuring Cell
5	15:01	Pugatch Rami	Universal Spectra of Coherent Random Recurrence
6	15:13	Fridman Moti	Fiber Lasers with Increase Output Brightness
7	15:25	Grinvald Eran	Photonic crystal approach to guided mode resonance
8	15:37	Gersten Alexander	The mystery of the connection between the photon wave function and Maxwell's equations

A7. **High energy physics I**

chair: B. Kol (HU)
Assistant: Levy, Daniel
Room: 90/223

#	Time	Speaker	Title
1	14:00	Stelle Kelly	Is N=8 Supergravity Finite?
2	14:40	Brandhuber Andreas	Hidden structures in gauge theory and gravity
3	15:20	Bringoltz Barak	Lattice explorations of QCD flux-tubes/strings, and their large-N limit

A8. **Astrophysics I**

chair: R. Barkanna (TAU)
Assistant: Barzilay, Yudith
Room: 90/230

#	Time	Speaker	Title
1	14:00	Nakar Ehud	Studying gamma-ray bursts with the Fermi observatory
2	14:25	Katz Boaz	The energy production rate & the generation spectrum of UHECRs
3	14:37	Naoz Smadar	Detecting the first generation of galaxies through their 21-cm signature
4	14:49	Woo Joanna	Environment and Star Formation
5	15:01	Perets Hagai	On the triple origin of blue stragglers
6	15:13	Polishook David	Spin Rate Distribution of Small-Sized Main Belt Asteroids
7	15:25	Lemze Doron	Are large bound objects easy to study? - not for sure!
8	15:37	Zinger Elad	The Role of Gas Streams in the Formation and Structure of Galaxy Clusters

A9. **Non-linear physics**

chair: D. Kessler (BIU)
Assistant: Kletter, Assaf
Room: 90/225

#	Time	Speaker	Title
1	16:30	Rubinstein Shmuel M.	Triggering and control of stick-slip friction
2	16:55	Efrati Efi	Elastic theory of unconstrained non-Euclidean plates and shells
3	17:07	Kletter Assaf	Periodic and scale-free patterns: reconciling the dichotomy of dryland vegetation
4	17:19	Yochelis Arik	Selection of periodic and localized states in Reaction-Diffusion-Advection systems
5	17:31	Kenig Eyal	Pattern selection in parametrically-driven arrays of nonlinear resonators
6	17:43	Yaakobi Oded	Multidimensional, autoresonant three-wave interactions
7	17:55	Nathan Jonathan	Modeling community-level properties of vegetation in a water limited system.

B1. **Solid state – superconductivity II**

chair: A. Keren (Technion)
Assistant: Erez, Amir
Room: 92/001

#	Time	Speaker	Title
1	16:30	Lindner Netanel	Vortex quantum dynamics of two dimensional lattice bosons
2	16:55	Bary-Soroker Hamutal	Effect of Pair Breaking on Mesoscopic Persistent Currents Well above the Superconducting Transition Temperature
3	17:07	Erez Amir	How to determine Tc for disordered superconducting films
4	17:19	Goren Lilach	Enhancement of the superconducting transition temperature in cuprate heterostructures
5	17:31	Michaeli Karen	Fluctuations of the superconducting order parameter as an origin of the Nernst effect
6	17:43	Diamant Itay	Are cuprates BCS superconductors?
7	17:55	Almog Boaz	Observation of Andreev Saint-James reflections in nano-scale planar superconductor To ferromagnet contacts
8	18:07	Lindenfeld Ze'ev	Pairing interaction in ultra-small nano-particles

B2. **Solid state – nanophysics II**

chair: Y. Gefen (WIS)
Assistant: Moshe, Ofer
Room: 92/002

#	Time	Speaker	Title
1	16:30	Sonin Edouard	Gauge-field rotation of electrically polarized Bose condensate due to Aharonov-Bohm effect
2	16:43	Puller Vadim	Breaking of Phase Symmetry in Non-Equilibrium Aharonov-Bohm Oscillations through a Quantum Dot
3	16.55	Goldstein Moshe	Interacting resonant level side-coupled to a Luttinger liquid: Duality to resonant tunneling
4	17:07	Goberman Dotan	Shot noise and noise power spectrum for tunneling through a quantum dot in the Kondo regime
5	17:19	Rothstein Eitan	The noise spectra of a biased quantum dot
6	17:31	Ringel Zohar	Delayed currents and interaction effects in mesoscopic capacitors.
7	17:43	Bitton Liora	Controllable Metallic Quantum Dot
8	17:55	Moshe Ofer	Perturbing GaN/AlN quantum dots with uniaxial stressors
9	18:07	Sela Itamar	Quantum Stirring of electrons in low dimensional devices

B3. **Biophysics**

chair: O. Krichevsky (BGU)
Assistant: Maman, Nizan
Room: 90/227

#	Time	Speaker	Title
1	16:30	Bar-Ziv Roy	Towards Synthetic Gene Systems on a Chip
2	16:55	Garini Yuval	Spatial and temporal organization of telomeres in the nucleus
3	17:07	Altman Liat	Studying single gene transcription by autocorrelation analysis
4	17:19	Feingold Mario	Cell Shape Dynamics with Sub-pixel Accuracy
5	17:31	Friedlander Tamar	Adaptive response from state-dependent inactivation
6	17:43	Labin Moshe	Vision effects caused by glial cells in the retina
7	17:55	Ankri Rinat	Estimation of the Optimal Wavelengths for Low-Level-Laser Therapy in Skin Tissue
8	18:07	Doron Itai	Mapping and assessment of epileptogenic foci using frequency-entropy templates

B4. **Statistical Physics II**

chair: R. Lifshitz (TAU)
Assistant: Shusterman, Olga
Room: 90/226

#	Time	Speaker	Title
1	16:30	Ben-Abraham Shelomo I	Crystals and beyond
2	16:43	Amir Ariel	Diffusion of a quantum particle in a time-correlated noisy environment
3	16.55	Assaf Michael	Spectral theory and WKB approximation for population quasi-stationarity and extinction
4	17:07	Efraim Hadar	Dual-Transceiver Quantization Can Improve Error Performance in CDMA

B5. **Solid State – Magnetic and electric**

chair: A. Gerber (TAU)
Assistant: Levy, Roi
Room: 90/224

#	Time	Speaker	Title
1	16:30	Wachtel Gideon	Inhomogeneous phases in a double-exchange magnet with long range Coulomb interactions
2	16:43	Naftalis Netanel	Anisotropic magnetoresistance and planar Hall effect in Manganites: The role of crystal symmetry effects
3	16.55	Golosov Denis	Two-fluid behaviour at the origin of the resistivity peak in doped manganites
4	17:07	Kanzieper Eugene	Integrable theory of quantum transport in chaotic cavities
5	17:19	Strelniker Yakov	Manipulating the optical transparency of meta-materials with a strong magnetic field
6	17:31	Seri Snir	Transport properties of Ar^{+} irradiated $SrTiO_3$
7	17:43	Shperber Yishai	Field induced resistivity anisotropy in $SrRuO_3$ films
8	17:55	Levy Roi	Quantum Hall Insulator
9	18:07	Ben Shalom Moshe	Anomalous magneto-transport properties of a two dimensional electron gas formed at the interface between the insulators SrTiO3 and LaAlO3
10	18:19	Rosenblatt Daniel Pablo	Extraordinary Hall effect in thin Co-Pd multilayers

B6. **Plasma physics**

chair: M. Mond (BGU)
Assistant: Haim, Lev
Room: 90/222

#	Time	Speaker	Title
1	16:30	Fruchtman Amnon	The blue mode in Helicon plasma
2	16:55	Alumot Dror	Determination of the spatial distribution of the properties and size of plasma at stagnation
3	17:07	Dyunin Egor	A new THz FEL Development Project
4	17:19	Pinhasi Yosef	Space-frequency model for pulsed beam free-electron laser operating in the space-charge (collective) dominated regime
5	17:31	Barth Ido	A water bag model of driven phase space holes in non-neutral plasmas
6	17:43	Sarid Eli	Antihydrogen formation and trapping
7	17:55	Yahalom Asher	Non-Stationary Barotropic Magnetohydrodynamics as a Four Function Field Theory

B7. **High energy physics II**

chair: B. Kol (HU)
Assistant: Ben-Dayan, Ido
Room: 90/223

#	Time	Speaker	Title
1	16:30	Yigal Shamir	Lattice gauge theory meets technicolor
2	16:43	Vivek Kumar	Evolution of Nuclear Shape in the Light Radon Isotopes
3	16.55	Ben-Dayan Ido	Phenomenological Consequences of Modular Inflation
4	17:07	Blum Kfir	Beyond MSSM Baryogenesis
5	17:19	Sadeh Iftach	Luminosity Measurement at the International Linear Collider
6	17:31	Boaz Karni	Crystal Structure in High Dimensions
7	17:43	Hochberg Yonit	Splitting the Wino Multiplet by Higher-Dimensional Operators in Anomaly Mediation
8	17:55	Stern Amir	Measurement of the energy dependence of the total photon-proton cross-section at HERA
9	18:07	Stern Merav	Corrected Charged Black Strings

B8. **Astrophysics II**

chair: R. Barkanna (TAU)
Assistant: Barzilay, Yudith
Room: 90/230

#	Time	Speaker	Title
1	16:30	Shporer Avi	Searching For and Studying Transiting Extrasolar Planets
2	16.55	Myers Zacharia	Neutrino Signatures of Dark Matter Annihilation in the Galactic Disc
3	17:07	Shaham Alon	Rotational Properties of the Maria Asteroid Family
4	17:19	Ofir Aviv	An Algorithm For The Detection Of Transiting Circumbinary Planets

IPS 2008 - Posters

List of Posters sorted by *topic*.

- `#01` Quantum physics
- `#02` Statistical physics and complex systems
- `#03` Solid state physics (theoretical)
- `#04` Solid state physics (experimental)
- `#05` Optics and photonics
- `#06` Particle and nuclear physics
- `#07` Plasma physics
- `#08` Astrophysics and cosmology
- `#09` Biological and soft condensed matter physics
- `#10` Medical physics
- `#11` Non-linear physics
- `#00` Other

Location: Bldg.90, 2nd floor lobby
Assistants: Maya Chuchem and Eitan Rothshtein

#	Submitted by	Topic Category	Poster title
1	**Bavli Pavel**	#00-1	Bulk and surface melting HCP crystal - magnesium
2	**Pine Polina**	#00-1	Vibrational analysis of thermal oscillations of SWCNT
3	**Amusia Miron**	#01-1	Modification of the Koester-Kronig decay in endohedral atoms
4	**Brandhuber Andreas**	#01-1	Hidden structures in gauge theory and gravity
5	**Glickman Yinnon**	#01-1	Quantum Information studies with trapped ions and flying photons
6	**Amitai Assaf**	#02-1	Anomalous diffusion of a monomer between absorbing boundaries
7	**Amusia Miron**	#02-1	Fermion condensation: a strange idea successfully explaining behavior of numerous objects in Nature
8	**Amusia Miron**	#02-1	Common quantum phase transition in strongly correlated Fermi systems
9	**Efraim Yael**	#02-1	Persistence in Reactive-Wetting Interfaces
10	**Harel Meital**	#02-1	The Effect of Temperature on the Dynamics and Geometry of Reactive-Wetting Interfaces
11	**Mints Roman**	#03-1	High-field vortices in dense chains of 0 and \pi shifted Josephson junctions
12	**Yahalom Asher**	#03-1	Covariant formulation of the dynamics in a dissipative quantum dielectric obtained from a simplified Lagrangian
13	**Barness Doron**	#04-1	Anisotropy induced pattern formation by thermomagnetic instability on interface separating regions of different voltage-current characteristics in $Bi_2Sr_2CaCu_2O_{8+\delta}$ crystals
14	**Gerber Alexander**	#04-1	Magnetization driven metal – insulator transition in strongly disordered magnetic semiconductors.

15	**Levi Daniel**	#04-1	Enhancement of disordered metastable vortex states in $Bi_2Sr_2CaCu_2O_{8+x}$ crystals by columnar defects
16	**Levy Shai**	#04-1	Electric properties of a MOS structure containing nano-crystalline Ge imbedded in a thick SiO_2 film
17	**Levy Shai**	#04-1	Electric properties of a MOS structure containing nano-crystalline Ge imbedded into a thick SiO_2 film
18	**Shelukhin Victor**	#04-1	Induced magnetization due to inverse proximity effect in S/F bilayers
19	**Aharoni Herzl**	#05-1	A performance comparison of three terminal and four terminal monolithically integrated silicon light emitting devices (SiLEDs)
20	**Axelevitch Alex**	#05-1	Photovoltaic Laboratory Tester
21	**Bruma Cezar**	#05-1	Building and Testing Small Diode Pumped Solid State Nd:YVO_4 Laser
22	**Gusarov Alexander**	#05-1	3D multi-channel atomic magnetometer for bio-magnetism
23	**Nusinsky Inna**	#05-1	Approximate analytical model for two-dimensional photonic crystal
24	**Samelsohn Gregory**	#05-1	Diffuse time tomography of random heterogeneous materials
25	**Yahalom Asher**	#05-1	RF Transmission through multiple layers
26	**Chen Or**	#06-1	Using Geant4 based simulations in Positron Annihilation Spectroscopy experiments
27	**Hirsh Tsviki**	#06-1	Intense Production of Light Radioactive Beams for Astrophysics and Neutrino Physics using Secondary Fast Neutrons
28	**Beilis Itzhak**	#07-1	Aluminum film deposition by an expanding plasma from a Hot Refractory Anode Vacuum Arc
29	**Molcho Jonathan**	#07-1	Plasma-Lined Linac of Super-High Acceleration Gradient
30	**Yarmolich David**	#07-1	Phenomena of non-complete ferroelectric surface discharge
31	**Farbiash Netzach**	#08-1	The Physics of Modification of the Maxwell-Boltzman Velocity Distribution
32	**Sarid Gal**	#08-1	Thermal evolution of planetesimals beyond the "snow-line"
33	**Sarid Gal**	#08-1	Methane and ice water retention in large Kuiper belt objects
34	**Yahalom Asher**	#08-1	The Geometrical Meaning of Time
35	**Bubis Roy**	#09-1	Statistical properties of polymers attached to hard probes
36	**Chaniel Gilad**	#09-1	Microdrilling of polymer films.
37	**Madi Asaf**	#09-1	Immune Holography: System-Level Analysis of Immunological States
38	**Oppenheimer Naomi**	#09-1	Correlated diffusion of membrane proteins and their effect on membrane viscosity
39	**Shamir Maoz**	#09-1	Fast readouts mechanisms in the Central Nervous System: The temporal-Winner-Take-All

40	**Shusterman Olga**	#09-1	Two-Photon Polymerization of Polydiacetylene
41	**Tamam Lilach**	#09-1	X ray studies of Langmuir films of Chiral Molecules on Liquid Mercury
42	**Biton Yaacov**	#10-1	New mechanisms of spiral-pair-source creation in excitable media
43	**Grinberg Oni Adar**	#10-1	Monytoring cryotherapy with interventional MRI - feasibility studies of umbilical cord
44	**Salman Ahmad**	#10-1	Study of early spectral changes in cellular malignant transformation using FTIR-microspectroscopy
45	**Zwielly Amir**	#10-1	Advanced Statistical Techniques Applied to FTIR spectra of human Colon Cancer and Polyps
46	**Dekel Gali**	#11-1	Non-Linear Dynamics of BEC Macroscopic tunneling.
47	**Nixon Micha**	#11-1	Enhancing Synchronization of Chaotic Fiber Lasers