Program

9:00-9:30  Registration

Session I Chair: Alina Karabchevsky

9:30-9:35  Welcome: Prof. Angel Porgador, Deputy Vice-President and Dean for R&D
9:35-9:40  Welcome: Prof. Avi Levy, Dean, Faculty of Engineering
9:45-9:50  Welcome: Prof. Michal Shapira, Dean, Faculty of Natural Sciences
9:50-9:55  Director’s welcome: Shlomi Arnon
9:55-10:35  Guest speaker  
  Keynote speaker: Joseph Zyss, Paris Saclay University and CNRS-Weizmann Joint Lab
  Microbilliard lasers, a classical analog to quantum systems

10:35-10:45  Omri Lesser, Eran Sagi and Yuval Oreg, WIS
  Universal phase diagram of topological superconductors subjected to magnetic flux

10:45-10:55  Noa Feldman, Moshe Goldstein, TAU
  Dynamics of Charge-Resolved Entanglement after a Local Quench

10:55-11:05  Yin Ruoyu, BIU
  Large fluctuations of the first detected quantum return time

11:05-11:15  Angeleene S. Ang, Yonathan Japha, Mark Keil, David Groswasser, Alexander S. Shalin, Alina Karabchevsky
  Tailored optical potentials for Cs atoms above waveguides with focusing dielectric nano-antenna

11:15-11:30  Dror Liran, Itamar Rosenberg, Timothy Chou, Kenneth West, Loren Pfeiffer, and Ronen Rapaport, HUJI
  Guided Dipolar Exciton Polaritons

Coffee break

Session II Chair: Moshe Schechter

11:45-12:15  Guest speaker  
  Keynote speaker: Avi Peer, Bar Ilan University
  Ultra-broadband quantum optical measurement: harnessing the optical bandwidth resource to quantum information applications

12:15-12:25  Bar Y. Peled, Amit Te’eni, Eliahu Cohen, Avishy Carmi, BGU
  Multiplicative Bell Inequalities

12:25-12:35  Aviram Uri, Youngwook Kim, Kousik Bagani, Cyprian K. Lewandowski, Sameer Grover, Nadav Auerbach, Ella O. Lachman, Yuri Myasoedov, Takashi Taniguchi, Kenji Watanabe, Jurgen Smet, and Eli Zeldov, WIS
  Nanoscale imaging of equilibrium quantum Hall edge currents in graphene

  Mapping the twist angle and unconventional Landau levels in magic angle
graphene

Nirel Bernstein, Bharat Grover, Binoy Hazra, Tianping Ma, Jae-Chun Jeon, James Taylor, Jibo Zhang, Anastasios Markou, Claudia Felser, Stuart Parkin and Amir Capua, HUJI

Large spin Hall effect in sputtered thin films of non-collinear Mn3Sn antiferromagnet

Mohammad Sulieman, Yachin Ivry, TECHNION

Flexible, foldable, transferrable superconducting and quantum devices

Amit Behera, Or Sattath, BGU

Almost public quantum coins

13:25-14:00 - Lunch

Lunch break and poster session

Session III Chair: Dganit Meidan

14:00-14:30 – Guest speaker

Keynote speaker: Alex Retzker, Hebrew University of Jerusalem

Overcoming resolution limits with quantum sensing

Sayak Ray, Doron Cohen, Amichay Vardi, BGU

Chaos induced breakdown of Bose-Hubbard modeling

Dan Klein, Karen Michaeli, WIS

Spin filtering in chiral organic molecules – the role of electron-phonon interactions


Long-Range Spin-Dependent Conduction in Bioinspired Organometallic Crystals

Or Dobkowski, Yair Margalit, Zhifan Zhou, Omer Amit, Yonathan Japha, Daniel Rohrlich, Samuel Moukouri, and Ron Folman, BGU

Realization of a complete Stern-Gerlach interferometer

A. Marguerite, J. Birkbeck, A. Aharon-Steinberg, D. Halbertal, K. Bagani1, I. Marcus, Y. Myasoedov, A. K. Geim, D. J. Perello, and E. Zeldov, WIS

Imaging the work, dissipation and topological protection in the quantum Hall state

Coffee break

Session IV Chair: Avishy Carmi

15:45-15:55

Dor Bitan, Shlomi Dolev, BGU

Randomly Rotate Qubits Compute and Reverse --- IT-Secure Non-Interactive Fully-Compact Homomorphic Quantum Computations over Classical Data Using Random Bases

Yahel Horowicz, Or Katz, Oren Raz, Ofer Firstenberg, WIS

Non-equilibrium phase transition of alkali vapor

Ohad Lib, Giora Hasson, Yaron Bromberg, HUJI

Generating entangled photons with tailored correlations for real-time quantum wavefront shaping

Srinivas Pachava, B. Srinivasan, BGU and IIT Madras
Modal decomposition of Laguerre Gaussian beams with different radial orders using optical correlation technique

16:25-16:55  **Keynote speaker: Ron Folman**, Ben Gurion University

*Quantum technology at the atom chip group*

16:55-17:00  **Popular vote slips collected**

17:10 – 17:15  **Awards for best talk and poster, and popular vote.**

**Committee:** Chair: Joseph Zyss – ENS Cachan, CNRS, Weizmann

Alex Retzker - HUJI
Avi Peer – Bar Ilan
Avishy Carmi - BGU

**POSTERS:**

Arthur Marguerite, John Birkbeck, Ami Aharon-Steinberg, Dorri Halbertal, Kousik Bagani, Ido Marcus, Yuri Myasoedov, Andre K. Geim, David J. Perello, Eli Zeldov, WIS

*Imaging work and dissipation in the quantum Hall effect in graphene.*


*T 3-Stern-Gerlach Matter-Wave Interferometer*

David Groswasser, Yosef Bivas, Henry Realpe, Menachem Givon, Filippo Levi, Ron Folman, BGU

*An optical frequency atomic clock: the most accurate machine ever built*


*Mapping the twist angle and unconventional Landau levels in magic angle grapheme*

Yahel Horowicz, Or Katz, Oren Raz, Ofer Firstenberg, WIS

*Non-equilibrium phase transition of alkali vapor*

Dan Klein, Karen Michaeli, WIS

*Spin filtering in chiral organic molecules – the role of electron-phonon interactions*

Omri Lesser, Eran Sagi and Yuval Oreg, WIS

*Universal phase diagram of topological superconductors subjected to magnetic flux*

Ohad Lib, Yaron Bromberg, HUJI

*Spatially entangled Airy photons*

Yoad Michael, Leon Bello, Michael Rosenbluh, Avi Pe'er, BIU

*Squeezing-enhanced Raman spectroscopy*

Yechezkel Schlussel, Till Lenz, Dominik Rohner, Yaniv Bar-Haim, Lykourgos Bougas, David Groswasser, Michael Kieschnick, Evgeny Rozenberg, Lucas Thiel, Amir Waxman, Jan Meijer, Patrick Maletinsky, Dmitry Budker, Ron Folman, BGU

*Widefield imaging of superconducting vortices with electron spins in diamond*

Mohammad Sulieman, Yachin Ivry, TECHNION
Flexible, foldable, transferrable superconducting and quantum devices

Aviram Uri, Youngwook Kim, Kousik Bagani, Cyprian K. Lewandowski, Sameer Grover, Nadav Auerbach, Ella O. Lachman, Yuri Myasoedov, Takashi Taniguchi, Kenji Watanabe, Jurgen Smet, and Eli Zeldov, WIS

Nanoscale imaging of equilibrium quantum Hall edge currents in grapheme

Yiming Pan, Bin Zhang, Ido Kaminer, and Avraham Gover, TAU, Technion and WIS

Quantum Shaping of Free-Electron Wavefunction and its Transition from DLA to PINEM

Zhaopin Chen, Yongyao Li, Nikolaos. P. Proukakis and Boris. A. Malomed, TAU

Immiscible and miscible states in binary condensates in the ring geometry

Srinivas Pachava, B. Srinivasan, BGU and IIT Madras

Modal decomposition of Laguerre Gaussian beams with different radial orders using optical correlation technique

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