



The Third Conference for Young Researchers in Quantum Science and Technology

Program

ZOOM

Session I Chair: Avishy Carmi (BGU) *	
9:30-9:35	Welcome: Prof. Raz Jelinek, Vice President and Dean for R&D
9:35-9:40	Director's welcome: Shlomi Arnon
9:40-9:55	Quantum science and technology at BGU: Ron Folman
9:55-10:25	Keynote speaker: Eli Arbel - Manager, Quantum Computing, IBM Research – Haifa <i>Challenges in building quantum systems and services</i>
10:25-10:35	Gopi Nath Daptary, BIU <i>Superconducting Dirac point in proximitized graphene</i> Adviser: Aviad Frydman
10:35-10:45	Omer Feldman, BGU <i>Using atoms to sense rotation</i> Adviser: Ron Folman
10:45-10:55	Avia Noah, HUJI <i>Hidden spin-texture at topological domain walls drive exchange bias in a Weyl semimetal</i> Adviser: Yonathan Anahory
10:55-11:05	Gary Rozenman, TAU <i>Experimental Observations of Bohm Trajectories and Quantum Potentials in Surface Gravity Water Waves</i> Adviser :Ady Arie
11:05-11:15	Asaf Diringer, Technion <i>Implementing fast control for bosonic encoded quantum computation with superconducting qubits</i> Adviser: Shay Hacohen-Gourgy
11:15-11:30	Gavriel Fleurov, WIS <i>Observation of nonlinear spin dynamics and squeezing in a BEC using dynamic decoupling</i> Advisers: Roez Ozeri and Nir Davidson
11:30 – 11:45 - Coffee break	
Session II Chair: Eliahu Cohen (BIU)	
11:45-12:15	Keynote speaker: Tal Mor – Technion <i>Quantum cryptography - is this the optimal solution for the quantum-cyber era?</i>
12:15-12:25	Ohad Lib, HUJI <i>Observation of Thermal Biphotons</i> Adviser: Yaron Bromberg
12:25-12:35	Or Dobkowski, BGU <i>Probing quantum gravity with a Stern-Gerlach interferometer</i> Adviser: Ron Folman
12:35-12:45	Eliya Blumenthal, Technion

	<i>Demonstration of an entangling gate between non-interacting qubits using the quantum Zeno effect</i> Adviser: Shay Hacoheh-Gourgy
12:45-12:55	Amir Burshtein, TAU <i>Instanton-induced inelastic scattering of a single-photon in a superconducting circuit</i> Adviser: Moshe Goldstein
12:55-13:05	Ismael Lucas de Paiva, BIU <i>Energy measurements with quantum clocks</i> Adviser: Eliahu Cohen
13:05-13:15	Subhajit Sarkar, BGU <i>Signature of time crystallinity in transport experiments through a quantum dot array</i> Advisers: Yonatan Sivan, Yoni Dubi
13:25-14:00 - Lunch	Lunch break
Session III Chair: Haggai Landa (IBM)	
14:00-14:30	Keynote speaker: Yoni Dubi – BGU <i>Do plants use quantum mechanics?</i>
14:30-14:40	Tom Rivlin, WIS <i>Rethinking quantum tunneling times</i> Adviser: Eli Pollak
14:40-14:50	Dekel Merom, Technion <i>SPAM error mitigation for tomography algorithms</i> Adviser: Haggai Landa
14:50-15:00	Samuel Goldstein, HUJI <i>Microstrip Kinetic Inductance Travelling Wave Amplifier</i> Adviser: Nadav Katz
15:00-15:10	Noa Feldman, TAU <i>Efficient estimation of entanglement on tensor network states without full reconstruction of the density matrix</i> Adviser: Moshe Goldstein
15:10-15:20	Mahesh N. Jayakody, BIU <i>Exponentiation of some algebraic functions using Quantum walks</i> Adviser: Eliahu Cohen
15:20-15:30	Uriel Shinar, BGU <i>An Elementary Construction of Tokenized Private Digital Signatures</i> Adviser: Or Sattath
15:30-15:45	Matan Lotem, TAU <i>Chiral Numerical Renormalization Group for Quantum Impurities Coupled to Topological Edge Modes</i> Adviser: Moshe Goldstein
15:45-16:00 - Coffee break	
Session IV Chair: Avi Niv (BGU)	
16:00-16:10	Mor Roses, BIU <i>Simulating long-range hopping with periodically-driven superconducting qubits</i> Adviser: Emanuel Dalla Torre, Haggai Landa
16:10-16:20	Yehoshua Winsten, BGU <i>Quasistatic transfer protocols for atomtronic superfluid circuits</i>

	Adviser: Doron Cohen
16:20-16:30	Shachar Fraenkel, TAU <i>Entanglement Measures in a Nonequilibrium Steady State: Exact Results in One Dimension</i> Adviser: Moshe Goldstein
16:30-16:40	Yossi Rosenzweig, BGU <i>Searching for Dark-Matter with Atoms</i> Advisers: Shlomi Arnon and Ron Folman
16:40 – 16:50	Zohar Schwartzman-Nowik, HUJI <i>Uncertainty as a possible indicator for quantum computation advantage</i> Advisers: Dorit Aharonov, Eliahu Cohen
16:50-17:00	Alon Beck, TAU <i>Disorder in dissipation-induced topological states: Evidence for novel localization transition</i> Adviser: Moshe Goldstein
17:00-17:20	Keynote speaker: Nissim Ofek - Quantum Machines <i>Quantum Control Intermediate Language</i>
	Popular vote slips collected
17:20 – 17:30	Awards for best talk and poster, and popular vote. Ilana Bar, Ben Gurion University (Committee chair)

*BGU: Ben Gurion University of the Negev

BIU: Bar Ilan University

HUJI: Hebrew University of Jerusalem

TAU: Tel Aviv University

WIS: Weizmann Institute of Science