

# **GERMAN BGU WORKSHOP ON QUANTUM TECHNOLOGY**

Dec.6, 2018 Dekel Hall, Ben Gurion University

Beer Sheva, Israel

***By invitation only***

## **PROGRAM**

9:15 **Gathering and refreshments**

9:40 **Welcome:** Prof. Dan Blumberg, Vice President of Research and Development, BGU

Prof. Shlomi Arnon, Director, BGU Center for Quantum Science and Technology

10:00 **Prof. Carsten Henkel**, University of Potsdam

Selling randomness? -- What quantum mechanics does not tell us

10:15 **Prof. Ron Folman**, BGU

Atoms: from fundamental science to technology

10:30 **Dr. Andrea Alberti**, University of Bonn

Atom transport at the quantum speed limit

10:45 **Prof. Ibrahim Abdulhalim**, BGU

Exciting localized by extended plasmons as a methodology to obtain higher efficiency quantum sources and detectors

11:00 **Dr. Francesco Intravaia**, Humboldt University, Berlin

Conservative and non-conservative dispersion forces

11:15 **Coffee break**

11:35: **Prof. Shlomi Arnon**, BGU

Quantum key distribution in free space optics

11:50 **Dr. Paulo Santos**, Paul-Drude Institute, Berlin

Dynamic photon control using acoustic fields.

12:05 **Dr. Yehuda Band**

Quantum Rotors: Magnetometry and Accelerometry

12:20: **Prof. Achim Peters**, Humboldt University, Berlin

Mobile atom interferometry and sounding rocket experiments testing robust quantum sensor technology

12:35 **Lunch**

**Collaboration opportunities**

13:40: **Representatives of BGU R&D Authority**

14:10: **Dr. Billy Shapiro**, Helmholtz Association

14:30: **Vera Shifferman**, DAAD

14:50 – 15:20 **Tour of the Atom Chip laboratory of Prof. Ron Folman**

15:20 Coffee break

15:35 **Dr. Avishay Carmi**, BGU

How quantum mechanics solves the barber paradox

15:50 **Robert Joerdens**, Quartig

Languages, meta-programmable Logic, and control infrastructure for quantum Information

16:05 **Prof. Doron Cohen**, BGU:

Metastability of condensates in atomtronic circuits

16:20 **Dr. Tim Schroeder**, Humboldt University

Solid-state spin qubits in nanophotonic Interfaces for quantum information processing.

16:35 **Dr. Or Sattath**

On preparing ground states of gapped Hamiltonians: an efficient quantum Lovász local lemma

16:50 **Dr. Andreas Wicht**, Humboldt University

Micro-integrated diode laser modules for quantum sensor applications in space.

17:05 **Dr. Christian R. Mueller-Hirschhorn**, Max Planck Institute for the Science of Light

TBA

17:15 – 17:45 Group discussion

**Dinner**