

THE 5TH HEINRICH-HERTZ MINERVA WORKSHOP ON HIGH TEMPERATURE SUPERCONDUCTIVITY

Kefar Hamaccabiah, Israel
May 8-10, 2005

Program

Sunday, 08. 05. 2005

9:00 Prof. Guy Deutscher (Tel-Aviv University)

Greetings

Session 1: Anisotropy and tunneling

9:15 Prof. Dr. Rudolf Huebener (Univ. Tuebingen)

"Anisotropic flux flow resistivity in the cuprates: theoretical aspects"

9:45 Dr. Beena Kalisky (Bar-Ilan University)

"Anisotropic flux flow resistivity in YBCO bridges: preliminary experimental data"

10:00 Dr. Matthias Eschrig (Univ. Karlsruhe)

"Single particle excitation spectra in HTCS"

10:30 Break

11:30 Dr. Thomas Dahm (Univ. Tuebingen)

"Vortex shadow effects"

12:00 Roy Beck (Tel-Aviv University)

"Tunneling into vortex states up to 32T"

12:30 Prof. Oded Millo (Jerusalem University)

"Anomalous proximity effects in metal-coated superconducting YBCO films studied by STM"

Session 2: General Interest

15:00 Prof. Assa Auerbach (Technion, Haifa)

"Vortex tunneling rate in tightly paired 2D superconductors"

15:30 Prof. Dr. P. Esquinazi (Univ. Leipzig)

"Some remarks on the thermal transport in anisotropic high temperature superconductors"

16:00 Break

- 16:30 Dr. Yoram Dagan (Univ. Maryland)
"Quantum criticality in the electron-doped cuprates from transport"
- 17:00 Prof. Amit Keren (Technion, Haifa)
"Towards a unified phase diagram for HTSC"
- 17:30 Prof. Emil Polturak (Technion, Haifa)
"Observation of a new mechanism of spontaneous magnetic flux generation in superconductors"

Monday, 09.05.2005

Session 3: Vortex matter

- 9:00 Prof. Eli Zeldov (Weizmann Institute)
"Vortex matter phases in presence of correlated disorder"
- 9:30 Dr. Christian Jooss (Univ. Goettingen)
"Space and time-resolved imaging of flux dynamics at grain boundaries and other defects in HTS"
- 10:00 Dr. Beena Kalisky (Bar-Ilan University)
"Size effect in vortex matter"
- 10:30 Prof. Grzegorz Jung (Ben Gurion University)
Nongaussian vortex motion noise
in the memory of Bonaventura (Ruccio) Savo

11:00 Break

- 11:30 Prof. Baruch Horowitz (Ben-Gurion University)
"Co-existing Bragg and Josephson glasses in flux lattices: implications for decoupling and the second peak"
- 12:00 Dr. Alexander Schwarz (Univ. Hamburg)
"Vortex states in high- T_c superconductors studied by low-temperature magnetic force microscopy"
- 12:30 Prof. Baruch Rozenstein (Bar-Ilan University)
"Fluctuations and disorder effects in vortex matter of high- T_c superconductors"

Session 4: Mostly Andreev – Saint James

15:00 Dr. Boris Chesca (Univ. Tuebingen)

"Phase sensitive experiments with cuprate superconductors based on the Josephson effect and Andreev bound states"

15:30 Guy Leibovitch (Tel-Aviv University)

"a-axis oriented YBCO films"

16:00 Break

16:30 Pavel Aronov (Technion, Haifa)

"Signature of CARE – Crossed Andreev Reflection effect in YBCO/SRO junctions"

17:00 Dr. Abdufarrukh Abdumalikov (Univ. Erlangen-Nuernberg)

"Non-local vortices in ultra-narrow Josephson transmission lines"

17:30 Prof. Roman Mints (Tel-Aviv University)

(B. Biehler, B.-U. Runge, P. Leiderer, Roman Mints)

"On ultra-fast magnetic flux dendrite propagation into thin superconducting films"

Tuesday, 10.05.2005

Session 5: Applications and magnetism

9:00 Dr. R. Wordenweber (Forschungszentrum Juelich)

"Fundamental aspects and novel device concepts of vortex matter in meso- and nanostructured high T_c films and devices"

9:30 Boaz Almog (Tel-Aviv University)

"Characterization of large size YBCO films by magnetic field penetration"

10:00 Dr. Shuki Wolfus (Bar-Ilan University)

"Novel approach to saturated cores fault current limiters"

10:30 Break

- 11:30 Prof. Shimon Reich (Weizmann Institute)**
(S. Reich, G. Leitus, I.R. Popovitz-Biro, M. Schechter)
"Magnetization of superconducting lead grains ranging from 4 to 1000 nanometers"
- 12:00 Prof. Israel Felner (Jerusalem University)**
"Magnetism and Superconductivity in the Ruthenates"
- 12:30 Dr. E. H. Brandt (Max-Planck-Institute Stuttgart)**
"Currents and vortices in superconducting disks and SQUIDs"