



# U-Super

Campinas, May 20 - 24, 2003



## International Workshop on Unconventional Superconductors

### Organizing Committee

Oscar F. de Lima (Co-chair, Unicamp)  
 Yakov Kopelevich (Co-chair, Unicamp)  
 Amir O. Caldeira (Unicamp), Carlos Rettori (Unicamp)  
 Enzo Granato (Inpe), Renato F. Jardim (USP)

### PROGRAM

(All activities will take place at the Conference Room of "Casa do Prof. Visitante", Hotel, Unicamp)

<b>May 20, 2003 (Tuesday) - ARRIVAL</b>			
17:10 - 18:10 h	On-site Registration		
18:10 - 20:00 h	On-site Registration + Welcome Cocktail		
	<b>May 21 (Wed)</b>	<b>May 22 (Thu)</b>	<b>May 23 (Fri)</b>
8:20 - 9:00	<b>Opening at 8:30 h</b>	<b>James S. Brooks (Inv.)</b> Novel aspects of organic superconductors in high magnetic fields	<b>Sebastian Doniach (Inv.)</b> The Bose metal state
9:00 - 9:40	<b>John R. Kirtley (Inv.)</b> Scanning SQUID microscope studies of fluxoid dynamics in superconducting rings	<b>Warren E. Pickett (Inv.)</b> Extreme electron-phonon coupling in boron-based layered superconductors	<b>Zlatko Tesanovic (Inv.)</b> QED <sub>3</sub> Theory of underdoped cuprate superconductors
9:40 - 10:20	<b>Victor M. Yakovenko</b> Fractional ac Josephson effect in p- and d-wave superconductors	<b>Alex Gurevich</b> Anomalous effects of the 2-gap superconductivity in MgB <sub>2</sub>	<b>Sven Larsson</b> Mixed Valence Theory and Superconductivity
10:20 - 10:50	<b>COFFEE BREAK</b>		
10:50 - 11:10	<b>Boris Chesca</b> Phase-sensitive evidence for a predominant d-wave pairing symmetry in electron doped superconductor LaCeCuO	<b>Milind N. Kunchur</b> Hot-Electron Instability and Flux Fragmentation	<b>J. J. Rodriguez-Nuñez</b> Effect of a pseudogap on the superconducting critical temperature and on the superconducting order parameter of the same symmetry
11:10 - 11:30			<b>Christian Kubert</b> Distinguishing Models for the Pseudogap in Cuprate Superconductors by Probing the Spatial Distribution of Impurity States
11:30 - 11:50	<b>Brian M. Andersen</b> Quantum interference between two non-magnetic impurities in a d-wave superconducting or d-density wave state	<b>Oscar F. de Lima</b> Anisotropy in MgB <sub>2</sub>	<b>Eduardo Miranda</b> An RKKY-induced dimerized phase of the Kondo lattice model
11:50 - 12:10	<b>Ismardo Bonalde</b> The Kosztin-Leggett nonlocal effect on the magnetic penetration depth of superconductors with nodes in the gap: first evidence.	<b>Roberto E. Lagos</b> A two band model for MgB <sub>2</sub> superconductivity	<b>Evandro V. L. de Mello</b> Calculations on H <sub>c2</sub> for High-T <sub>c</sub> Superconductors
12:10 - 12:30	<b>Enzo Granato</b> Numerical studies of the resistivity behavior of pi junction granular superconductors	<b>Stefan -L. Drechsler</b> Electronic structure and aspects of unconventional superconductivity in Na <sub>x</sub> CoO <sub>2</sub>	<b>Sergio Moehlecke</b> Local Superconductivity and Ferromagnetism Interplay in Graphite and Graphite-Sulfur Composites
12:30 - 14:00	<b>LUNCH TIME</b>		



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### PROGRAM (contn'd)

(All activities will take place at the Conference Room of "Casa do Prof. Visitante", Hotel, Unicamp)

	May 21 (Wed)	May 22 (Thu)	May 23 (Fri)
14:00 - 14:40	<b>Lia Krusin-Elbaum (Inv.)</b> Phase diagram of cuprate superconductors at ultra-high magnetic fields	<b>Pascoal G. Pagliuso (Inv.)</b> Phase Diagrams of CeMIn <sub>5</sub> (M = Rh, Ir and Co) heavy-fermion superconductors	<b>Valerii Vinokur (Inv.)</b> Field-Induced quantum tunneling of a nanometer-scale superconducting grain between paramagnetic and superconducting states
14:40 - 15:00	<b>Yoshihiko Takano</b> Study of the order parameter at nodal direction using Bi2212 whiskers	<b>Paolo Tripodi</b> Palladium-hydrogen: conventional or non-conventional HTSC ?	<b>Closing Session</b>
15:00 - 15:20			
15:20 - 15:40	<b>Kazumi Maki</b> Gap Symmetry of superconductivity in Borocarbide YNi <sub>2</sub> B <sub>2</sub> C and Skutterudite PrOs <sub>4</sub> Sb <sub>12</sub>	<b>Changqing Jin</b> The structure, conductivity and superconducting-like magnetic property evolution of glassy carbon upon high pressure graphitization	<b>Coffee Break</b>
15:40 - 16:00			
16:00 - 16:30	<b>Coffee Break</b>		Visit to downtown Campinas: Carlos Gomes Statue
16:30 - 17:10	<b>Wilson A. Ortiz</b> Effects of short-range inhomogeneities on the magnetic response of superconductors	<b>Peter Brusov</b> Collective modes and ultrasound attenuation in mixed d <sub>x<sup>2</sup>-y<sup>2</sup></sub> +iαd <sub>xy</sub> state of unconventional superconductors	
17:10 - 17:50	<b>John D. Dow</b> Unconventional High-T <sub>c</sub> Superconductivity	<b>Mucio A. Continentino</b> Influence of spin fluctuation near a superconductor quantum critical point	Cultural Activity: Concert by the Unicamp Orchestra
17:50 - 18:10	<b>Fabio C. Fonseca</b> Superconductivity in magnetic ordered Ru <sub>1-x</sub> Ir <sub>x</sub> Sr <sub>2</sub> GdCu <sub>2</sub> O <sub>8</sub> compounds	<b>José A. Aguiar</b> Growth and structural characterization of CaLaBaCu <sub>3</sub> O <sub>7</sub> single crystals	
18:10 - 18:30	<b>A. Sarkar</b> Interesting aspects from the analysis of resistivity of Li <sup>3+</sup> irradiated Bi-HTSC	<b>Yakov Kopelevich</b> Graphite as a Bose metal	
18:30 - 20:30			Cocktail