

ERICE-SICILY: 25 July - 31 July 2014



SUPERSTRIPES 2014

PROGRAM

DAY 1, JULY 26TH, SATURDAY AM

8: 20-10: 30 **S1** (S. DOMENICO LECTURE HALL)

CHAIRMEN: UEMURA, BAGGIO SAITOVICH

- 8: 30. D. van der Marel: Fermi liquid behaviour in strongly correlated metals
9: 00. Andrea Damascelli ARPES of cuprates
9: 30. A. Bussmann-Holder: Unconventional strong spin-lattice coupling at high temperatures in almost multiferroic EuTiO₃
10: 00 G. B. Teitel'baum: Evolution of the energy spectrum of underdoped cuprates in the pseudogap phase

10: 30-11.00 Coffee Break

10: 30-11.00 POSTER SESSION

11: 00-13: 00 **S2** (S. DOMENICO LECTURE HALL)

CHAIRMEN: VAN DER MAREL, DAMASCELLI

- 11: 00 M. Hücker: Competing charge, spin, and superconducting orders in underdoped YBa₂Cu₃O_{6+y}
11: 30 D. G. Hawthorn: Investigation of charge density wave order in La_{2-x}Ba_xCuO₄ and YBa₂Cu₃O_{6+x} using resonant soft x-ray scattering
12: 00 F. Kusmartsev: Dipolar clusters and ferroelectricity in high temperature superconductors
12: 30 D. Sunko: Coulomb effects of Sr doping on the Fermi surface of LSCO

13: 00-14.45 Lunch Break

Day 1, JULY 26TH, SATURDAY PM - Parallel Sessions

14: 45-16: 50 **S3** (S. DOMENICO LECTURE HALL)

CHAIRMEN: HÜCKER, DAMASCELLI

- 14: 45 N. Barišić: Arcs and pockets in the underdoped cuprate superconductors
15: 10 I. Maggio-Aprile: Numerical modeling of tunneling conductance spectroscopic maps in high T_c cuprate superconductors
15: 35 M. Shi: Rotation symmetry breaking in La_{2-x}Sr_xCuO₄ revealed by ARPES
16: 00 A. Ricci: SDW-CDW nanoscale phase separation and complex dynamics in La_{1.72}Sr_{0.28}NiO₄
16: 25 Yuyu Wang: STM studies of the electronic structure evolution of lightly doped insulating cuprates

14: 45-16: 50 **S4** ('RICHARD P. FEYNMAN' LECTURE HALL)

CHAIRMEN: KUSMARTSEV, TEYTELBAUM

- 14: 45 K. I. Wysokiński: Local properties of impure superconductors
15: 10 L. Lorenzana: Tuning order-by-disorder multiferroicity in CuO by doping
15: 35 A. Lappas: Spin-driven Ferroelectricity in Two-dimensional Manganites
16: 00 P. Zubko: Nanodomains in Artificially Layered Ferroelectrics
16: 25 Wei Ku: The superconducting dome in the cuprates from the strong binding description

16: 50-17.30 Coffee Break

16: 50-17.30 POSTER SESSION

17: 30-19: 30 **S5** (S. DOMENICO LECTURE HALL)

CHAIRMEN: RICCI, MAGGIO-APRILE

- 17: 30 Y. Anahory: SQUID-on-tip with two axis magnetic field sensitivity for study of nanoscale superconductivity and magnetism
17: 55 A. Keren: A magnetic analogue to the isotope effect demonstrated by Raman and ARPES in the (CaLa)(BaLa) Cu O_y cuprate
18: 20 S. Ishihara: Ultrafast Photoinduced Electron Dynamics in Correlated Cuprate Systems
18: 45 I. Madan.: Dynamics of broken symmetry in cuprate superconductors

17: 30-19: 30 **S6** ('RICHARD P. FEYNMAN' LECTURE HALL)

CHAIRMEN: LAPPAS, KU

- 17: 30 V. Cataudella: Boson-mediated effects following ultrafast pumping of strongly correlated materials: thermal and non-thermal response
17: 55 D. Popovic: Magnetic-field-tuned superconductor-insulator transition in underdoped La_{2-x}Sr_xCuO₄
18: 20 H. Maebashi: Generic Features of an Electron Injected into the Luttinger Liquid
18: 45 V. M. Krasnov: Hunting down pairing bosons in a cuprate high temperature superconductors
19: 10 K. Kapcia: Superconductivity, magnetism, charge orderings, and phase separation in a lattice model of superconductor with short coherence length

DAY 2, JULY 27TH, SUNDAY AM

8: 20-10: 30 **S7**

(S. DOMENICO LECTURE HALL)

CHAIRMEN: BILLINGE, DE MELLO

- 8: 30. D. Pavuna: On Strain, Doping and Ionic Liquid Gating Field Effect Studies in High-Tc and Novel Correlated Electron Materials
9: 00. A. V. Boris: Fano Resonances in Geometrically Frustrated Hyperkagome Iridates
9: 30. A. Bianconi: Multiscale phase separation revealed by scanning nano x-ray diffraction: Five essential ingredients for materials design of high temperature superconductors
10: 00 C. Hicks

10: 30-11.00 Coffee Break

10: 30-11.00 POSTER SESSION

11: 00-13: 00 **S8**

(S. DOMENICO LECTURE HALL)

CHAIRMEN: BENEDEK, PURANS

- 11: 00 J. F. Scott: New Stripe-Domain Phenomena in Nano-Ferroelectrics
11: 30 W. Prellier: High-throughput synthesis of oxide thin films
12: 00 Kimura T. Investigation of helix-chirality due to spin and quadrupole orientations in magnetoelectrics by resonant x-ray diffraction
12: 30 C. Panagopoulos: Ferroelectricity and Magnetoelectric Coupling in Cuprates and Related Striped Perovskites

13: 00-14.45 Lunch Break

Day 2, JULY 27TH, SUNDAY PM - Parallel Sessions

14: 45-16: 50 **S9**

(S. DOMENICO LECTURE HALL)

CHAIRMEN: CATAUDELLA, SUNKO

- 14: 45 E. V. L. De Mello: Model of the inhomogeneous magnetic response of cuprate superconductors above T_c
15: 10 M. Saarela: Bound clusters and pseudogap transitions in layered high Tc superconductors
15: 35 T. Jarlborg: Electronic structure and properties of superconducting materials
16: 00 O. P. Sushkov: Dynamics of fermions in a vicinity of a magnetic quantum critical point
16: 25 J. E. Sonier: Universal inhomogeneous magnetic response in hole-doped cuprates above T_c

14: 45-16: 50 **S10**

(‘RICHARD P. FEYNMAN’ LECTURE HALL)

CHAIRMEN: PRELLIER, PANAGOPOULOS

- 14: 45 N. Momono: The influence of impurity on the superconducting gap and the pseudogap of $\text{Bi}_2\text{Sr}_2\text{CaCu}_{2-x}\text{Fe}_x\text{O}_{8+y}$ and $\text{Bi}_2\text{Sr}_{2-x}\text{Eu}_x\text{CuO}_{6+y}$
15: 10 S. M. Souliou: High pressure Raman study of underdoped cuprates
15: 35 S. Takahashi: High- pressure studies for iron-based spin-ladder compound BaFe_2S_3
16: 00 H. Wakimoto: Overall magnetic excitation in overdoped $\text{La}_{2-x}\text{Sr}_x\text{CuO}_4$ studied by neutron and x-ray
16:25 B. J. Ramshaw: Quantum Oscillations in the underdoped cuprates

16: 50-17.30 Coffee Break

16: 50-17.30 POSTER SESSION

17: 30-19: 30 **S11**

(S. DOMENICO LECTURE HALL)

CHAIRMEN: BARISIC, HAWTHORN

- 17: 30 D. Louca: Lattice instability and superconductivity in $\text{LaO}_{1-x}\text{F}_x\text{BiS}_2$
17: 55 S. Saxena: Emergent Phenomena near Molten Spin and Charge Ordered States
18: 20 A. Shengelaya: Pressure and disorder effects on the static stripe phase in cuprates
18: 45 C.G. Fatuzzo: Disentanglement of pseudogap and charge stripe order in Nd-LSCO
19: 10 T. Adachi: Novel coexistence of superconductivity with short-range magnetic order in high-Tc T'-cuprates observed by muon spin relaxatio

17: 30-19: 30 **S12**

(‘RICHARD P. FEYNMAN’ LECTURE HALL)

CHAIRMEN: PARK, VINOKOUR

- 17: 30 V. Bouchiat: Collapse of superconductivity in Graphene decorated by diluted triangular arrays of superconducting dots
17: 55 M. Fogelström: Exploring the superconducting state of small unconventional superconducting islands
18: 20 N. Poccia: N. Poccia: Network of magnetism and structure in LaMnO_3 films
18: 45 I. H. Inoue: Inhomogeneous Current Distribution at Oxide interface
19: 10 B. Shi: Phase separation in complex oxides: RTiO_3

DAY 3, JULY 28TH, MONDAY AM

8: 20-10: 30 **S13**

(S. DOMENICO LECTURE HALL)

CHAIRMEN: PAVUNA, SCOTT

8: 30. L. Greene

9: 00. S. J. L. Billinge: Search for hidden broken local symmetry states in correlated electron systems

9: 30. S. Conradson: Possible Bose-Einstein-Hubbard Condensate-Type Behaviour Via a Novel Mechanism in the f
Electron Mott Insulator $\text{UO}_2(+x)$

10: 00 J. M. Gregg: Understanding and Manipulating Domain Configurations in Ferroelectrics

16: 50-17.30 *Coffee Break*

10: 30-11.00 POSTER SESSION

11: 00-13: 00 **S14**

(S. DOMENICO LECTURE HALL)

CHAIRMEN: GREENE, CONRADSON

11: 00 Y. J. Uemura: Multi-probe characterization of coexisting antiferromagnetic and superconducting orders in
 $\text{Ba}(\text{Fe},\text{Ni})_2\text{As}_2$ near the phase boundary

11: 30 E. Baggio Saitovitch: Coexistence of Magnetism and Superconductivity in Iron Pnictide Single Crystals Studied by
Local Probe Techniques

12: 00 L. Degiorgi: Hysteretic behavior in the optical response of the underdoped Fe-arsenide $\text{Ba}(\text{Fe}_{1-x}\text{Co}_x)_2\text{As}_2$ in the
electronic nematic phase

12: 30 J. Purans: Beyond quasiharmonic approximation: local structure of materials with negative thermal expansion

---13: 00

13: 00-14.45 *Lunch Break*

EXCURSION

DAY 4, JULY 29TH, TUESDAY AM

8: 20-10: 30 S15 (S. DOMENICO LECTURE HALL)

CHAIRMAN: VALLES, POCCIA

- 8: 30. V. Vinokour : Aharonov-Bohm oscillations in proximity nanowires
9: 00. Baturina T. I.: Dynamic Vortex Mott Transition in a Proximity Array of Superconducting Islands
9: 30. Y. W. Park: The zero magneto resistance of low dimensional nanostructures at high electric field: polyacetylene nanofibers and MoS₂
10: 00 G. Deutscher: Co-existence of Magnetism and Superconductivity in Granular Aluminum Films

10: 30-11.00 Coffee Break

10: 30-11.00 POSTER SESSION

11: 00-13: 00 S16 (S. DOMENICO LECTURE HALL)

CHAIRMAN: DE PADOVA, KUBO

- 11: 00 M. Ezawa
11: 30 A. Fleurence: Spontaneous formation of silicene on ZrB₂(0001) buffer layers
12: 00 G. Le Lay Silicene and Germanene: possible two-dimensional elemental high T_c superconductors
12: 30 J.J. Zhao: Initial growth behavior, substrate interaction, and defect effects of silicene

13: 00-14.45 Lunch Break

Day 4, JULY 29TH, TUESDAY PM - Parallel Sessions

14: 45-16: 50 S17 (S. DOMENICO LECTURE HALL)

CHAIRMAN: HAWTHORN, SHI M.

- 14: 45 E. Liarokapis
15: 10 J. Mustre de Leon: Polaronic excitations and anomalous Isotopic Effects in the Pseudogap Region
15: 35 N.D. Zhigadlo: Overview of contemporary superconductors grown under high pressure
16: 00 A. Krzton-Maziopa: Microstructure - property relations in intercalated iron chalcogenide superconductors
16: 25 J. Geck: Charge density wave order in 1T-TaS₂ and its relation to superconductivity

14: 45-16: 50 S18 ('RICHARD P. FEYNMAN' LECTURE HALL)

CHAIRMAN: DEUTSCHER, BATURINA

- 14: 45 J. M. Valles: Investigations of a Bose Insulator Phase in Amorphous Nano-honeycomb Films
15: 10 T. Bauch: High critical Temperature Superconductor (HTS) nano-devices and hybrid structures: Quantum tools for probing the nature of HTSs and the detection of Majorana bound states
15: 35 A. R. Bermudez: Size effects in superconducting thin films coupled to a substrate
16: 00 A.P. Petrović: Ferromagnetism-induced vortices and a long-range electronic reconstruction at the LaAlO₃/SrTiO₃ interface
16: 25 A. Yu Mironov: Magnetic field induced superinsulating state in superconducting NbTiN films

16: 50-17.30 Coffee Break

16: 50-17.30 POSTER SESSION

17: 30-19: 30 S19 (S. DOMENICO LECTURE HALL)

CHAIRMAN: LIAROKAPIS, ZHIGADLO

- 17: 30 Ch. Renner: Chiral and Stripe Charge Order in Cu_xTiSe₂ Probed by STM/STS
17: 55 G. Khaliullin: Spin-orbital physics in correlated oxides
18: 20 D. Innocenti
18: 45 C. Aruta: The role of the interfaces in CaCuO₂ based heterostructure
19: 10 A. O. Sboychakov: Electronic spectrum of twisted bilayer graphene

17: 30-19: 30 S20 ('RICHARD P. FEYNMAN' LECTURE HALL)

CHAIRMAN: SAARELA JARLBORG

- 17: 30 S. I. Mukhin: Euclidean action of superconductor with "hidden order"
17: 55 M. D. Croitoru: Peculiarities of the orbital effect in the FFLO state in quasi-1D superconductors
18: 20 B. M. Andersen: Nematic impurity states, transport anisotropy, and neutron resonances in Fe-based superconductors
18: 45 M. Gastiasoro: Enhancing magnetic stripe order in iron pnictides by RKKY interactions

DAY 5, JULY 30TH, WEDNESDAY AM

8: 20-10: 30 **S21** (S. DOMENICO LECTURE HALL)

CHAIRMEN: FRILLI, FINKELSTEIN

8: 30. P. B. Littlewood

9: 00. J. Zaanen: Holography and the strange metals of condensed matter physics

9: 30. E. W. Carlson: Decoding Spatial Complexity in Strongly Correlated Electronic Systems

10: 00 A.L. Rakhmanov e: Antiferromagnetic states and phase separation in AA-stacked graphene bilayers

10: 30-11.00 Coffee Break

10: 30-11.00 POSTER SESSION

11: 00-13: 00 **S22** (S. DOMENICO LECTURE HALL)

CHAIRMEN: LITTLEWOOD, CARLSON

11: 00 B. Büchner

11: 30 V. Ksenofontov: Antiferromagnetic spin fluctuations in superconducting LiNH₂-intercalated FeSe

12: 00 R.Puzniak: Anisotropy of Superconducting State Properties in Iron-Based Compounds and Related High-T_c Superconductors

12: 30 C. S. Ting: Evolution of the Fermi Surface Topology in Doped 122 Iron Pnictide

13: 00-14.45 Lunch Break

Day 5, JULY 30TH, WEDNESDAY PM

14: 45-16: 50 **S23** (S. DOMENICO LECTURE HALL)

CHAIRMEN: LE LAY, EZAWA

14: 45 P. De Padova: Dirac Fermions in Multilayer Silicene and its stability in air

15: 10 O. Kubo

15: 35 E. Scalise: Size Theoretical study of 2D silicon nano-lattices

16: 00 A. Finkelstein : Disorder scattering in cuprate superconductors

16: 25 M. Grilli: Metal-to-superconductor transition, mesoscopic disorder and intrinsic charge instability in oxide heterostructures

16: 50-17.30 Coffee Break

17: 30-18: 20 **S24** (S. DOMENICO LECTURE HALL)

CHAIRMEN: BÜCHNER, SCALISE

17: 30 S. Brazovskii: Evolution of a complex electronic system to an ordered hidden state: optical quench in TaS₂ – theory versus experiment

17: 55 N. Kirova: Multi-vortex dynamics in charge density waves

CLOSING: BIANCONI