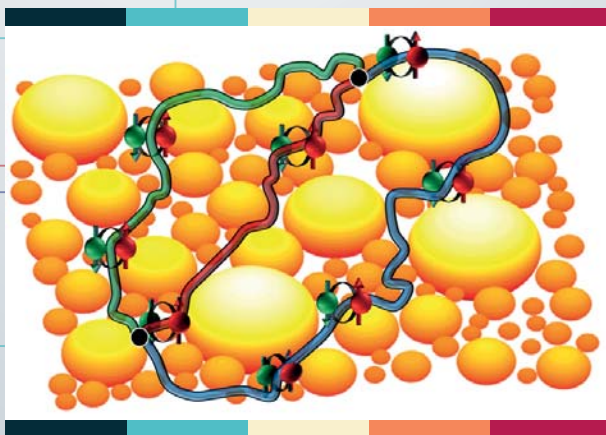


SUPERSTRIPES 2016

**Quantum in Complex Matter:
Superconductivity,
Magnetism, Ferroelectricity**

20th Anniversary Stripes Conferences

June 23-29, 2016 Ischia, Italy



Conference Program

SUPERSTRIPES 2016

**Quantum in Complex Matter:
Superconductivity, Magnetism and Ferroelectricity**

ISCHIA (IT) JUNE, 23-29, 2016

Superstripes 2016 celebrate **20th Anniversary** of the series of International conferences, started with the first Stripes Conference held in Rome in 1996, on collective quantum phenomena in complex heterogeneous matter.

Chairman

Prof. Antonio Bianconi

RICMASS

Rome International Center for Materials Science
Superstripes onlus

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Alessandro Ricci, Desy, D

Jan Zaanen, University of Leiden, NL

SUPERSTRIPES 2016

THURSDAY, JUNE 23th

program

Opening 14:30

1
session

Coffee break 16:10

2
session

Welcome party 19:00

THURSDAY, JUNE 23th, 2016

sala **PHITECUSA**

1
session

Chairmen: **E. de Mello, W. Bao**

14:30 Opening

14:55 20th Anniversary

15:20 **A. Menushenkov:** *The europium valence state in EuCo_2As_2 at external and chemical pressure*

15:45 **L. Radzihovsky:** *Disorder-driven quantum phase transition and transport in Dirac semimetals and semiconductors*

sala **PHITECUSA**

2
session

Chairmen: **R. Puzniak, A. Menushenkov**

16:35 **K. Prassides:** *Optimized Unconventional Superconductivity in Fullerides*

17:00 **S. D. Conradson:** *Loss of the Mott Gap and Formation of a Superthermal Metal in the Coherent Polaronic Quantum Phase of O- and Photo-Doped $\text{UO}_{2(+x)}$*

17:25 **H. Keller:** *Isotope and pressure effects in cuprate high-temperature superconductors - recent results*

17:50 **A. X. Gray:** *Controlling electronic interactions and phase separation in VO_2 via strain, temperature and ultrafast electric fields*

18:15 **V. Vinokour:** *PT-symmetry mechanism of out-of-equilibrium phase transitions in superconducting and magnetic systems*

SUPERSTRIPES 2016

FRIDAY, JUNE 24th

program

3
session

Coffee break 11:05

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session

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session

10
session

13
session

Lunch 12:50

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session

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session

11
session

14
session

Coffee break 16:10

6
session

9
session

12
session

15
session

FRIDAY, JUNE 24th, 2016

sala **PHITECUSA** Plenary Session

3
session

Chairmen: **D. Van der Marel, V. Vinokur**

- 9:00** S. Borisenko: *Direct Observation of Spin–Orbit Coupling in Iron-Based Superconductors*
- 9:25** A. Moreo: *Multiorbital Hamiltonians for non-BCS superconductors*
- 9:50** S. Ovchinnikov: *Pressure effect on electronic structure, exchange interaction, and critical temperature of hole-doped cuprates*
- 10:15** P. Phillips: *Anomalous Dimensions and Unparticles in the Cuprate Superconductors*
- 10:40** H. Kontani: *Origins of the nematicity and superconductivity in FeSe and other Fe- based superconductors*

FRIDAY, JUNE 24th, 2016

sala **PHITECUSA**

4

session

Chairmen: **D. Neilson, H. Kontani**

11:35

G. Teytelbaum: *Inhomogeneous state of the Mn doped topological insulator Bi_2Te_3*

12:00

Y. Anahory: *Superparamagnetism at oxide interfaces revealed by scanning SQUID- on-tip microscopy*

12:25

E. Babaev: *Metallic Superfluids and Superconducting Superfluids in "metallic hydrogen"- type systems*

sala **PRIMAVERA**

7

session

Chairmen: **S. D. Conradson, K. Prassides**

11:35

J. Geck: *Orbital symmetry of charge density wave order and nematicity in $(\text{La},\text{M})_2\text{CuO}_4$*

12:00

H. M. Ronnow: *Effective Hubbard Model of Spin Waves in Cuprates*

12:25

T. Bauch: *Macroscopic Quantum Tunneling in a Topological Josephson Junction*

FRIDAY, JUNE 24th, 2016

sala **NITRODI AB**

10
session

Chairmen: **T. Mertelj, L. Perfetti**

11:35

D. Mihailovic: *Switching between hidden states of electronic matter under non- equilibrium conditions*

12:00

U. Bovensiepen: *Coupling of electronic excitations to boson modes in complex materials analyzed by femtosecond tr-ARPES*

12:25

M. Eckstein: *Nonthermal ultra-fast dynamics in excitonic condensates*

sala **NITRODI CD**

13
session

Chairmen: **A. Ricci, X. Qiu**

11:35

A. C. Komarek: *Observation of multiferroicity in transition metal compounds with complex anionic lattice or complex magnetic structure*

12:00

W. H. Li: *Complex magnetic incommensurability in type-II multiferroic Co_3TeO_6*

12:25

J. Cwik: *High Field Dependence of the Magnetocaloric Effect in Laves Phase Compounds*

FRIDAY, JUNE 24th, 2016

sala **PHITECUSA**

5

session

Chairmen: **G. Teytelbaum, E. Babaev**

14:30

E. de Mello: *Superconducting and pseudogap energy scales of cuprates intertwined by charge ordering*

14:55

T. Perring: *Spin excitations used to probe the nature of the magnetically ordered ground state of the CE-type phase of charge ordered manganites*

15:20

S. Wirth: *Structural and magnetic properties and phase transitions in the iron chalcogenides*

15:45

D. Neilson: *Novel Strongly-Correlated Ground States and Enhanced Multiband Electron-Hole Superfluidity in Graphene Structures*

sala **PRIMAVERA**

8

session

Chairmen: **H. M. Ronnow, H. Keller**

14:30

Nimrod Bachar: *Competition between enhanced Cooper pairing and suppressed phase coherence in coupled aluminum nanograins*

14:55

D. Le Boeuf: *Sound velocity study of charge order across the phase diagram of YBCO*

15:20

M. Oda: *STM/STS studies for out-of-plane disorder effects on the charge order and pseudogap in $\text{Bi}_2\text{Sr}_{1.7}\text{R}_{0.3}\text{CuO}_{6+\delta}$ ($\text{R} = \text{La}$ and Eu)*

15:45

E. Liarokapis: *Local lattice distortions in $\text{NdFeAsO}_{1-x}\text{F}_x$ pnictide*

FRIDAY, JUNE 24th, 2016

sala **NITRODI AB**

11
session

Chairmen: **A. Vargunin, D. Popovic**

- 14:30** J. Freericks: *Pump/probe photoemission in charge-density-wave insulators*
- 15:55** S. Ishihara: *Ultrafast Optical Control of Correlated Electron System with Multi-degrees of Freedom*
- 15:20** J. Lorenzana: *Using Raman in real time to manipulation electronic states with light*
- 15:45** A. M. Garcia-Garcia: *Global critical temperature in disordered superconductors with weak multifractality*

sala **NITRODI CD**

14
session

Chairmen: **A. Komarek, W. H. Li**

- 14:30** N. Markovic: *Designing quantum matter with superconducting nanowires*
- 14:55** A. D. Zaikin: *Shot noise in Quantum Phase Slip Wires vibrations*
- 15:20** P. Szabo: *STM studies of the superconductor-insulator transition in MoC ultrathin films*
- 15:45** A. S. Moskvina: *Charge order to superfluid transition for 2D hardcore bosons and emergent domain structures*

FRIDAY, JUNE 24th, 2016

sala **PHITECUSA**

6
session

Chairmen: **Y. Anahory, T. Perring**

- 16:35** V. Ksenofontov: *Role of local and itinerant magnetism in Fe-based superconductors*
- 17:00** H. Luetkens: *Magnetism in Fe-based Superconductors - The Various Ways to Coexist*
- 17:25** J. Mustre de Leon: *Resonant X-ray Inelastic Scattering and nanoscale inhomogeneity in $\text{FeSe}_{1-x}\text{Te}_x$*
- 17:50** S. Sanna: *Why is Manganese a poison for superconductivity in $\text{LaFeAsO}_{0.89}\text{F}_{0.11}$?*
- 18:15** J. Pellicciari: *Giant effect of isovalent doping on magnetism in $\text{BaFe}_2(\text{As}_{1-x}\text{P}_x)_2$*

sala **PRIMAVERA**

9
session

Chairmen: **S. V. Borisenko, M. Oda**

- 16:35** A. Baron: *Extreme broadening of the bond-stretching phonon in $\text{YBaCuO}_{7-\delta}$ below T_c using a new X-ray spectrometer*
- 17:00** M. Eremin: *Temperature dependence of penetration depth in presence of momentum-dependent CDW and superconducting order parameters*
- 17:25** K. Efetov: *Charge and current modulations in a spin-fermion model with overlapping hotspots*
- 17:50** T. Tohyama: *Enhanced charge excitations in electron-doped cuprates by resonant inelastic X-ray scattering*
- 18:15** I. Kanazawa: *Quantized Massive Gauge Fields and Hole-Induced Spin Glass Mechanism in Underdoped Cuprates*

FRIDAY, JUNE 24th, 2016

sala **NITRODI AB**

12
session

Chairmen: **M. Eckstein, J. Lorenzana**

- 16:35** I. Madan: *Ultrafast control of superconducting phase slips*
- 17:00** T. Mertelj: *All-optical femtosecond relaxation dynamics in iron based pnictides*
- 17:25** L. Stojchevska: *Ultrafast relaxation dynamics study in iron-based pnictides, cuprates and charge-density waves*
- 17:50** L. Perfetti: *High temperature superconductors far from equilibrium conditions*
- 18:15** S. Tsuchiya: *Quasiparticle dynamics in the organic superconductors investigated with polarized femtosecond spectroscopy*

sala **NITRODI CD**

15
session

Chairmen: **P. Szabo, A. Moskvin**

- 16:35** X. Qiu: *Optical Study of the AFM state in electron doped CaNdFeAs*
- 17:00** D. D. Khalyavin: *Symmetry of C4 magnetic phase in hole-doped 122 iron based superconductors*
- 17:25** P. Manuel: *Antisymmetric exchange interactions tuning of the magnetic properties of La-substituted $\text{BiFe}_{0.5}\text{Sc}_{0.5}\text{O}_3$*
- 17:50** R. D. Johnson: *Modulated spin helicity stabilized by incommensurate orbital density waves in a quadruple perovskite manganite*
- 18:15** T. Watanabe: *Pseudogap phase diagram in cuprates studied by high field interlayer magnetotransport of overdoped Bi-2212*

SUPERSTRIPES 2016

SATURDAY, JUNE 25th

program

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Coffee break 11:05

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Coffee break 16:10

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SATURDAY, JUNE 25th, 2016

sala **PHITECUSA**

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session

Chairmen: **E. Liarokapis, C. Renner**

- 9:00** A. Fujimori: *Competing orders/fluctuations in high-temperature superconductors revealed by ARPES*
- 9:25** D. B. Tanner: *Infrared measurements of the superfluid and normal-fluid densities in the cuprate superconductors*
- 9:50** B. Buechner: *Polarons and orbitals in Fe based superconductors*
- 10:15** G. Strinati: *Systematic investigation of the effects of disorder at the lowest order throughout the BCS-BEC crossover*
- 10:40** Y. Uemura: *Phase separation, first order transition and precursor states in unconventional superconductors, Mott insulators and Skyrmion systems – analogy with 3-d and 2-d superfluid He*

SATURDAY, JUNE 25th, 2016

sala **PHITECUSA**

17
session

Chairmen: **G. Seibold, A. Brinkman**

11:35

C. Renner: *Ubiquitous stripe charge order in low dimensional superconductors observed by scanning tunneling microscopy*

12:00

D. Reznik: *Finite wavevector nematic fluctuations in Fe-based Superconductors*

12:25

C. G. Fatuzzo: *Synchrotron Spectroscopic Experiments on Ruthenates*

sala **PRIMAVERA**

20
session

Chairmen: **A. Fujimori, T. Bauch**

11:35

M. Shi: *Camelback-shaped band reconciles heavy-electron behavior with weak electronic Coulomb correlations in superconducting $TiNi_2Se_2$*

12:00

H. Takahashi: *Pressure-induced superconductivity in iron-based spin-ladder compound $BaFe_2S_3$*

12:25

Y. Kubozono: *Superconductivity in two-dimensional layered materials through electron-doping by metal-intercalation and electrostatic technique*

SATURDAY, JUNE 25th, 2016

sala **NITRODI AB**

23
session

Chairmen: **S. Ishihara, A. Baron**

11:35

N. Kirova: *Electronic ferroelectricity in carbon based materials*

12:00

V. Yukalov: *Nanoscale phase separation in ferroelectric materials*

12:25

D. Gajda: *The influence of 1 GPa isostatic pressure on J_c , B_{irr} , B_{c2} and T_c in MgB_2 wires and iron-based superconducting materials*

SATURDAY, JUNE 25th, 2016

sala **PHITECUSA**

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session

Chairmen: **D. A. Zocco, D. Reznik**

14:30

F. Balakirev: *High Magnetic Field Studies of Novel Superconductors*

14:55

G. Seibold: *Intrinsic Spin-Hall Effect in Systems with Striped Spin-Orbit Coupling*

15:20

B. Fine: *Fermi-surface in the presence of magnetic-vortex checkerboard*

15:45

A. Brinkman: *Topological superconductivity: from materials to topotronics*

sala **PRIMAVERA**

21
session

Chairmen: **A. Perali, D. B. Tanner**

14:30

M. Capone: *Why some iron-based compounds are more correlated than others?*

14:55

L. Degiorgi: *Origin of the resistive anisotropy in the electronic nematic phase of BaFe_2As_2 revealed by optical spectroscopy*

15:20

C. Honerkamp: *Renormalization group study of nematic order in iron superconductors*

15:45

S. Katrych: *Single Crystals of Superconducting $\text{SmFeAsO}_{1-x}\text{H}_x$: Structure and Properties*

SATURDAY, JUNE 25th, 2016

sala **NITRODI AB**

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session

Chairmen: **N. Kirova, D. Gajda**

14:30 **J. Purans:** *Anharmonicity and EXAFS studies beyond the quasi-harmonic approximation*

14:55 **S. Billinge:** *Magnetic pair distribution function (mPDF) analysis of short-range magnetism in strongly correlated materials*

15:20 **M. Dean:** *Orbital polarization driven by anisotropic hybridization in a nickelate heterostructure determined by resonant inelastic X-ray scattering*

15:45 **E. Bozin:** *Local structural aspects of metal-metal transition in IrTe₂*

SATURDAY, JUNE 25th, 2016

sala **PHITECUSA**

19
session

Chairmen: **F. Balakirev, B. Fine**

- 16:35** D. A. Zocco: *Lattice dynamical properties of superconducting $SrPt_3P$ studied via inelastic X-ray scattering and density functional perturbation theory*
- 17:00** A. G. Green: *Fermionic Quantum Order-by-Disorder and the Fluctuation-Induced Formation of Novel Phases at Quantum Criticality*
- 17:25** P. G. Freeman: *Charge Ordered Structure of $La_{2-x}Sr_xCoO_4$*
- 17:50** N.-L. Wang: *Optical spectroscopy and pump-probe studies on charge density wave orders in $LaAgSb_2$*
- 18:15** A. Mackenzie: *Delafossite metals: ultra high conductivity on two-dimensional triangular lattices*

sala **PRIMAVERA**

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session

Chairmen: **M. Capone, H. Takahashi**

- 16:35** B. Andersen: *Quantitative description of disorder effects in iron-based superconductors: Correlated RKKY-exchange, impurity clusters and more*
- 17:00** M. Gastiasoro: *Nature, origin and detection of double-Q phases in Fe-pnictides*
- 17:25** D. Efremov: *Interplay of charge and spin degrees of freedom in pnictides and dichalcogenides*
- 17:50** M. Korshunov: *Cluster perturbation approach to iron-based superconductors*
- 18:15** S. Y. Wu: *Holography without translational invariance*

SATURDAY, JUNE 25th, 2016

sala **NITRODI AB**

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session

Chairmen: **U. Bovensiepen, E. Bozin**

- 16:35** J. Fink: *Influence of Lifshitz transitions and correlation effects on the scattering rates and the effective mass of the charge carriers in ferropnictides and ferrochalcogenides*
- 17:00** D. Argyriou: *Solitonic lattice and Yukawa forces in the rare earth orthoferrite $TbFeO_3$*
- 17:25** A. Glatz: *Reentrance of superconductivity in parallel fields*
- 17:50** N. Harrison: *Towards a complete Fermi surface in underdoped high T_c superconductors*
- 18:15** H.-H. Wen

SUPERSTRIPES 2016

SUNDAY, JUNE 26th

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SUNDAY, JUNE 26th, 2016

sala **PHITECUSA**

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session

Chairmen: **S. Billinge, S. Tajima**

- 9:00** T. Egami: *Quantum effect on atomic dynamics in superfluid ^4He*
- 9:25** S. Tajima: *Variety of Fermi surface nesting and the pairing mechanism beyond it in iron-based superconductors*
- 9:50** S. H. Pan: *Cooper Pairing and Phase Coherence in Iron-based Superconductor $\text{Fe}_{1+x}(\text{Te},\text{Se})$*
- 10:15** V. Pudalov: *Probing Energy Scale in the Interacting 2D Electron System by Transport and Thermodynamic Measurements*
- 10:40** A. Perali: *Lifshitz transitions and BCS-BEC crossover in multigap superconductors as a root for room temperature superconductivity*

SUNDAY, JUNE 26th, 2016

sala **PHITECUSA**

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session

Chairmen: **K. I. Wysokinski, V. Yukalov**

11:35

T. A. Maier: *Pairing in a dry Fermi sea*

12:00

A. Linscheid: *Sign changing pairing via spin-fluctuations of incipient bands close to the Fermi level*

12:25

R. Micnas: *Boson-Fermion resonant model for nonconventional superfluids*

sala **PRIMAVERA**

30
session

Chairmen: **J. Fink, L. Degiorgi**

11:35

J. Haase: *New Perspective on the Cuprate Phase Diagram and the charge distribution in the copper-oxygen plane*

12:00

K. Machida: *Multiband superconductors with strong Pauli paramagnetic effect*

12:25

A. Shengelaya: *Suppression of stripe order by nonmagnetic impurities in cuprates*

SUNDAY, JUNE 26th, 2016

sala **NITRODI AB**

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session

Chairmen: **J. Mustre de Leon, A. X. Gray**

11:35

D. Dessau: *Electron Self-energies in Cuprate Superconductors: Their Role in Setting T_c and Other Properties*

12:00

M. Iavarone: *Scanning Tunneling Microscopy and Spectroscopy of FeSe single crystals*

12:25

S. Feng: *Charge order driven by Fermi-arc instability and its connection with pseudogap in cuprate superconductors*

SUNDAY, JUNE 26th, 2016

sala **PHITECUSA**

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session

Chairmen: **Y. Uemura, D. K. Sunko**

14:30

M. M. Doria: *Kinetic origin of the Rashba interaction and of the Dirac cone from the Zero Helicity States*

14:55

L. Salasnich: *Vortex-Antivortex unbinding in the 2D BCS-BEC crossover*

15:20

M. De Llano: *A Generalized BEC Theory for Any Coupling*

15:45

G. Pupillo: *Cluster glass and superglass phases with cold atoms and 1.5 superconductors*

sala **PRIMAVERA**

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session

Chairmen: **J. Haase, K. Machida**

14:30

S. Brazovskii: *Recent identifications of microscopic solitons in quasi 1d electronic systems and generalisations to higher dimensions*

14:55

R. Hackl: *Fluctuations and Superconductivity in Fe-based Systems*

15:20

D. Van der Marel: *Optical signatures of pair formation*

15:45

A. Bill: *Pair Correlations in Superconducting-Magnetic Hybrid Systems*

SUNDAY, JUNE 26th, 2016

sala **NITRODI AB**

34
session

Chairmen: **D. Dessau, M. Iavarone**

14:30

J. Nissinen: *Two-dimensional quantum liquid crystals*

14:55

T. Cren: *Long range coherent magnetic bound states in superconductors*

15:20

N. Fujiwara: *NMR study on AF-SC-AF transition at 3.0 GPa in $\text{LaFeAsO}_{1-x}\text{H}_x$*

15:45

I. H. Inoue: *Negative charge-compressibility at the channel of SrTiO_3 field-effect transistor*

SUNDAY, JUNE 26th, 2016

sala **PHITECUSA**

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session

Chairmen: **M. De Llano, R. Arita**

16:35 T. Örd: *Modification of spatial length-scales near the surface of a two-gap superconductor*

17:00 T. Kuzmicheva: *Anisotropic superconducting gaps in optimally doped $Ba_{1-x}K_xFe_2As_2$ and $BaFe_{2-x}Ni_xAs_2$ pnictides*

17:25 M. Tortello: *Nanoscale Characterization of the Thermal Conductivity of Supported Graphite Nanoplates, Graphene and Few-layer Graphene by Scanning Thermal Microscopy*

17:50 A. Vargunin: *Electric-field delocalization in multiband superconductors*

18:15 C. Mazzoli: *New evidences for in-plane entanglement of CDW in YBCO*

sala **PRIMAVERA**

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session

Chairmen: **T. A. Maier, A. Doria**

16:35 F. Hardy: *Complex Phase Diagram of $Ba_{1-x}Na_xFe_2As_2$: A Multitude of Phases Striving for the Electronic Entropy*

17:00 D. Manske: *Higgs Spectroscopy of Superconductors in non-equilibrium*

17:25 D. K. Sunko: *Fundamental building blocks of strongly correlated wave functions*

17:50 S. Streltsov: *Covalent bonds against magnetism in transition metal compounds*

18:15 Spalek

SUNDAY, JUNE 26th, 2016

sala **NITRODI AB**

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session

Chairmen: **T. Cren, I. H. Inoue**

- 16:35** **T. Adachi:** *Muon spin relaxation and transport studies in the electron-doped high-T_c T'-superconductors revealing the novel electronic state*
- 17:00** **T. Yanagisawa:** *Fluctuations and Nambu-Goldstone-Higgs Modes in Multi-Condensate superconductors*
- 17:25** **T. Lemberger:** *Quantum and Thermal Fluctuations in Strongly Underdoped Cuprates near the Super-to-Insulator Critical Point*
- 17:50** **D. Shen:** *Manipulating the electronic structure and magnetism of spin-orbit Mott insulator by tailoring superlattices*
- 18:15** **Y.-A. Soh:** *Magnetic Force Microscopy of spin reorientation of iron tin*

SUPERSTRIPES 2016

MONDAY, JUNE 27th

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MONDAY, JUNE 27th, 2016

sala **PHITECUSA**

36
session

Chairmen: **D. Mihailovic, G. Strinati**

- 9:00** J. M. Tranquada: *Intertwined Superconductivity and Antiferromagnetism in Cuprates*
- 9:25** L. H. Greene: *Topological surface states interacting with bulk spin excitons in the Kondo insulator SmB_6 as revealed by planar tunneling spectroscopy*
- 9:50** G. Aeppli: *Statics and dynamics of crumpled graphene*
- 10:15** T. Devereaux: *Induction & Dynamics of New States of Matter in 2D Materials*
- 10:40** J. Annett: *Time reversal symmetry breaking in multiband superconductors*

MONDAY, JUNE 27th, 2016

sala **PHITECUSA**

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session

Chairmen: **T. Devereaux, A. M. Oleś**

11:35 D. I. Khomskii: *Novel effects in orbital physics*

12:00 Mesaros: *Commensurate features of cuprate charge density modulations*

12:25 I. Maggio-Aprile: *New twist on the vortex-core tunneling spectroscopy in $YBa_2Cu_3O_{7-\delta}$*

sala **PRIMAVERA**

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session

Chairmen: **G. Pupillo, Spalek**

11:35 M. Continentino: *First order quantum phase transitions*

12:00 V. Dobrosavljevic: *Bad metal behavior and Mott quantum criticality*

12:25 A. Lichtenstein: *Plaquette Valence Bond Theory of Cuprate HTSC*

MONDAY, JUNE 27th, 2016

sala **NITRODI AB**

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session

Chairmen: **D. Shen, M. Tortello**

11:35

P. Samuely: *Interplay between superconductivity and charge density waves in Cu_xTiSe_2*

12:00

D. Massarotti: *Macroscopic quantum phenomena in spin filter ferromagnetic Josephson junction*

12:25

F. Miletto Granozio: *Non-volatile electrical and optical resistive switching in 2D electron gases at oxide heterostructures*

MONDAY, JUNE 27th, 2016

sala **PHITECUSA**

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session

Chairmen: **I. Maggio-Aprile, Mesaros**

- 14:30** A. Ricci: *Complexity and dynamics of functional materials*
- 14:55** D. Popovic: *Avalanches and hysteresis at the structural transition in stripe-ordered $\text{La}_{1.48}\text{Nd}_{0.4}\text{Sr}_{0.12}\text{CuO}_4$*
- 15:20** A. Moewes: *Adjacent Fe – vacancy interactions s the Origin of room temperature Ferromagnetism in $(\text{In}_{1-x}\text{Fe}_x)_2\text{O}_3$*
- 15:45** P. Orth: *Frustrated spin polarons and percolation in the electrostatically and chemically doped complex oxide LaCoO_3*

sala **PRIMAVERA**

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session

Chairmen: **R. Hackl, A. Shengelaya**

- 14:30** N. Barisic: *Scattering rate and carrier density throughout the phase diagram of the cuprates*
- 14:55** F. Kruger: *Fluctuation-driven helical magnetic order near criticality*
- 15:20** Y. Tokunaga: *Above-room-temperature formation of the magnetic skyrmion in β -Mn-type chiral magnets*
- 15:45** V. Kataev: *Possible magnetic field induced hidden order in the low-dimensional quantum magnet LiCuSbO_4*

MONDAY, JUNE 27th, 2016

sala **NITRODI AB**

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session

Chairmen: **A. M. Garcia-Garcia, T. Kuzmicheva**

14:30

P. De Padova: $\sqrt{3}\times\sqrt{3}$ -Multilayer Silicene/Ag(111) or $\sqrt{3}\times\sqrt{3}$ -Ag/Si(111)7×7?

14:55

S. He: *Electronic Structure and Superconductivity of FeSe /SrTiO₃ Films and Related FeSe-Based Bulk Superconductors*

15:20

D. Stornaiuolo: *Tunable magnetism and superconductivity in an oxide heterostructure*

15:45

W.-D. Schneider: *Electron transport in thin oxide films: From phonon-polariton excitations to changes in the quantum structure of oxide-supported Gold nanoparticles*

MONDAY, JUNE 27th, 2016

sala **PHITECUSA**

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session

Chairmen: **S. Sanna, A. Moewes**

16:35

D. Pelc: *Superconducting percolation in the cuprates*

17:00

B. Spivak: *Macroscopic character of composite high temperature superconducting wires*

17:25

N. Zhigadlo: *Exploring multi-component superconducting compounds by high pressure method and combinatorial solid state chemistry*

17:50

S. Hennel: *Nonlocal Polarization Feedback in a Fractional Quantum Hall Ferromagnet*

18:15

Schopol

sala **PRIMAVERA**

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session

Chairmen: **N. Barisic, V. Kataev**

16:35

Z. Huang: *Fractional Flux Plateau in Magnetization Curve of Multiband Superconductor Loop*

17:00

M. V. Kartsovnik: *BETS-based organic conductors as archetypical antiferro- magnetic/superconducting nanostructures*

17:25

T. Terashima: *FeSe under high pressure: phase diagram and electronic structure*

17:50

W. Tabis: *Change of carrier density at the pseudogap critical point of a cuprate superconductor*

18:15

G. M. Vanacore: *Direct-space and real-time observation of quantum phenomena in plasmonic nanostructures*

MONDAY, JUNE 27th, 2016

sala **NITRODI AB**

45
session

Chairmen: **D. Orgad, W.-D. Schneider**

16:35

P. Simon: *New platforms for topological superconductivity: from Shiba to Majorana bound states*

17:00

S. I. Mukhin: *Gorkov's equations in the instantonic "crystal" state*

17:25

M. Berciu: *One-band vs. three-band models for weakly doped cuprates*

17:50

V. Grinenko: *Upper critical fields near the spin density wave transition of $\text{BaFe}_2(\text{As}_{1-x}\text{P}_x)_2$*

18:15

Prellier

SUPERSTRIPES 2016

TUESDAY, JUNE 28th

program

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session

Coffee break 11:05

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session

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session

53
session

Lunch 12:50

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session

51
session

54
session

Coffee break 16:10

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session

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session

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session

Social dinner 20:00

TUESDAY, JUNE 28th, 2016

sala **PHITECUSA**

46
session

Chairmen: **G. Aeppli, S. H. Pan**

- 9:00** M. Eremets: *High temperature superconductivity in hydrogen-rich materials*
- 9:25** A. F. Goncharov: *Hydrogen sulfide at high pressure: change in stoichiometry*
- 9:50** K. Shimizu: *200-K superconductivity in compressed hydrogen sulfide systems*
- 10:15** R. Arita: *Fully non-empirical study on superconductivity in sulfur hydrides under high pressures*
- 10:40** A. Bianconi: *Multi-condensates in BCS and BEC-BCS crossover regime near Lifshitz transitions in H₃S as in all high T_c superconductors*

TUESDAY, JUNE 28th, 2016

sala **PHITECUSA**

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session

Chairmen: **R. Micnas, S. I. Mukhin**

- 11:35** A. Bussmann-Holder: *Structure and composition of the 200 K-superconducting phase of H_2S under ultrahigh pressure: the perovskite $(SH)(H_3S^+)$*
- 12:00** F. Marsiglio: *Superconductivity in H_2S and in other superconductors; many band or band of many?*
- 12:25** G.-Q. Zheng: *Electronic Orbital Order and Spin Nematicity in Iron-Pnictide High-Temperature Superconductors as Revealed by NMR*

sala **PRIMAVERA**

50
session

Chairmen: **D.I. Khomskii, J. Annett**

- 11:35** A. M. Oleś: *Exotic spin-orbital physics in hybrid d^4-d^3 and d^4-d^2 oxides*
- 12:00** I. Felner: *Superconductivity and unusual magnetic features in amorphous carbon and in other unrelated materials*
- 12:25** I. Eremin: *Spin-orbit coupling and spin excitations in Sr_2RuO_4 and iron-based superconductors*

TUESDAY, JUNE 28th, 2016

sala **NITRODI AB**

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session

Chairmen: **P. Samuely, K. Kapcia**

- 11:35** R. A. Kaindl: *Stripes, phonons, and electronic dynamics: new views on ultrafast time scales*
- 12:00** K. Nakagawa: *Fluctuating superconductivity in the strongly correlated organic superconductors in "κ" -(BEDT-TTF)₂X (X = Cu[N(CN)₂]Br, Cu(NCS)₂) studied by polarized femtosecond spectroscopy*
- 12:25** B. Joseph: *Temperature dependent structural modulation in Ca_{0.82}La_{0.18}FeAs₂ pnictide superconductors*

TUESDAY, JUNE 28th, 2016

sala **PHITECUSA**

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session

Chairmen: **F. Marsiglio, G.-Q. Zheng**

14:30

S. Caprara: *Dynamical charge density waves rule the phase diagram of cuprates*

14:55

H. Iwasawa: *Development of VUV-laser-based ARPES system for higher spatial resolution and its application to Fermiology on high-T_c cuprates*

15:20

A. Kanigel: *ARPES measurements of Bi2212 thin-films in the presence of electrical current*

15:45

R. Akashi: *Emergent Magnéli-type crystal phases and their mixture in pressurized sulfur hydride*

sala **PRIMAVERA**

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session

Chairmen: **L. Salasnich, V. Dobrosavljevic**

14:30

D. Baeriswyl: *Variational results for the two-dimensional repulsive Hubbard model: The refined Gutzwiller ansatz*

14:55

B. Barbiellini-Amidei: *X-ray studies of complex materials for energy applications*

15:20

K. Quader: *Zero and Finite-T Responses of 2D Dipolar Bosons at Non-zero Tilt Angles*

15:45

Sudbo

TUESDAY, JUNE 28th, 2016

sala **NITRODI AB**

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session

Chairmen: **A. Bill, F. Miletto Granozio**

14:30

W. Bao: *Orbital ordering as the unifying mechanism for both the structural and antiferromagnetic transitions in the Fe-based superconductors*

14:55

A. Keren: *Opening a diagonal gap by a dynamic spin density wave in lightly doped $\text{La}_{2-x}\text{Sr}_x\text{CuO}_4$*

15:20

T. Baturina: *Finite-temperature localized state in superconducting films*

15:45

A. Mironov: *Effect of disorder on the vortex Mott transition in array of superconducting islands*

TUESDAY, JUNE 28th, 2016

sala **PHITECUSA**

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session

Chairmen: **S. Caprara, H. Iwasawa**

16:35

J. Bonca: *Relaxation and thermalization in many-body systems coupled to different bosonic degrees of freedom*

17:00

P. Bourges: *Q=0 Magnetic order in the pseudogap state of cuprates superconductors*

17:25

D. Orgad: *Long-range order and pinning of charge-density waves in competition with superconductivity*

17:50

W. Brzezicki: *Charge - orbital order and topological effects in presence of zig-zag magnetic textures in 4d – 3d hybrid oxides*

sala **PRIMAVERA**

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session

Chairmen: **M. Eremin, M. Continentino**

16:35

E. Bothschafter: *Time-resolved switching of magnetization in a multiferroic*

17:00

P. Turner: *A new approach to the growth of materials leading to macroscopic quantum coherence and high temperature superconductivity*

17:25

E. Shneyder: *Effects of electron-phonon interaction in strongly correlated systems*

17:50

F. Kusmartsev: *A spider web in superconductivity of electron-doped cuprates*

TUESDAY, JUNE 28th, 2016

sala **NITRODI AB**

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session

Chairmen: **W. Tabis, G. M. Vanacore**

- 16:35** L. Ponomarenko: *Hydrodynamic transport in high mobility graphene*
- 17:00** S. Zhou: *2D B-C-O alloy: a promising electronic material*
- 17:25** A. Tagliacozzo: *Incipient Berezinskii Kosterlitz and Thouless transition in two-dimensional coplanar Josephson junctions*
- 17:50** G. Deutscher - Nimrod Bachar: *MuSR detection of free spins in granular Al films near the Metal to Insulator transition*

SUPERSTRIPES 2016

WEDNESDAY, JUNE 29th

program

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session

Coffee break 11:05

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session

Closing Session

WEDNESDAY, JUNE 29th, 2016

sala **PHITECUSA**

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session

Chairmen: **A. Bussmann-Holder, T. Egami**

- 9:00** R. Puzniak: *Phase separation in single crystals of iron-based superconductors*
- 9:25** L. Balicas: *Interplanar coupling-dependent magnetoresistivity in high-purity layered metals*
- 9:50** O. P. Sushkov: *The amplitude and origin of charge density wave in YBCO*
- 10:15** K. I. Wysokinski: *Three-terminal system as a spin current source and heat to electricity converter*
- 10:40** K. Kapcia: *Various metallic and insulating phases and their phase separations in charge ordered systems*

sala **PHITECUSA**

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session

- 11:35** A. Lanzara: *Mapping the spin-orbital texture of topological insulators in the energy, momentum spin and time domains*
- 12:00** **Fibonacci Prize**
- 12:25** **Closing Session**

Poster sessions

Nimrod Bachar: *Detailed optical spectroscopy of the hybridization gap and the hidden order transition in high quality URu₂Si₂ single crystals*

I. Chávez: *BCS-Bose Crossover Extended with Hole Cooper Pairs*

M. M. Dolgirev

M. M. Doria: *Onset of two-band superconductivity in superconducting-insulating superconducting tri-layer systems*

Y. Hu

T. Jarlborg: *Charge transfers and band dispersions in magnetic Nd_{2-x}Ce_xCuO₄*

N. Kristoffel: *The interplay of long range interactions and electron density distributions in polar and strongly correlated materials*

I. Madan: *Ultrafast control of superconducting phase slips*

M. Moroni: *Effect of proton irradiation on the low-energy excitations of Ba(Fe_{1-x}Rh_x)₂As₂ superconductors*

S. Nishiyama: *Syntheses and characterization of superconducting metal-doped LaOBiS₂*

Valentinis

A. Zvezdin: *Magnetic topological defects in multiferroics*

