NGSCES 2016 PROGRAM

Venue: Adriatico GH – Kastler Hall

Sunday September 25

17:00-18:00	*Registration*
18:00-20:00	*Welcome reception*

Monday September 26

08:00-08:30: Registration
08:30-09:00 A. Franciosi: Welcome

Non-equilibrium superconductivity (S.Wall)

09:00-09:30	***Stephen Clark***	*Controlling matter with light – an introduction*
09:30-10:00	***Matteo Mitrano***	*Possible light-induced superconductivity in K_3C_{60} at high temperatures*
10:00-10:20	***Minjae Kim***	*Enhancing superconductivity of A_3C_{60} fullerides by asymmetric perturbation*

10:20-10:30 Coffee break

Non-equilibrium and correlations (L.Fanfarillo)

10:30-11:00	***Stephen Clark***	*Enhanced super-exchange pairing in a periodically driven Hubbard model*
11:00-11:20	***Federico Cilento***	*Time-resolved XUV photoemission:a new clue for understanding the ultrafast dynamics in copper oxides*
11:20-11:40	***Denis Golez***	*Manipulation of band gap upon photoexcitation of an excitonic insulator*
11:40-12:00	***Giacomo Mazza***	*Field-driven mott gap collapse and resistive switch in correlated insulators*

12:00-14:00 Lunch break

Non-equilibrium dynamics & time domain spectroscopy I (S.Clark)

14:00-14:30	***Lev Vidmar***	*Thermalization of electron-boson systems described by a pure state*
14:30-15:00	***John Goold***	*Simulations of high temperature transport in a disordered interacting spin system*
15:00-15:20	***Arunangshu Debnath***	*Quantum field spectroscopy of cold atoms in photonic crystal waveguides*
15:20-15:40	***Francesco Randi***	*Bypassing the energy-time uncertainty in time-resolved photoemission*

15:40-16:00 Coffee break

Charge and spin order (K.Wohlfeld)

16:00-16:30	***Matthieu LeTacon***	*Charge Order in the Cuprates: Crystals, films and heterostructures – a Review*
16:30-16:50	***Ekaterina Plotnikova***	*Theoretical calculation of photoemission spectra for Ir-based perovskites*
16:50-17.10	***Lewin Boehnke***	*Consistent self-consistent merging of GW and EDMFT: Tiers of approximations*

Tuesday September 27

Strong correlation from micro to macro I (M.LeTacon)

09:00-09:30	Suchitra Sebastian	Exploring Materials Universes
09:30-09:50	Lorenzo Fratino	An organizing principle for 2D strongly correlated superconductivity
09:50-10:10	Andreas Hausoel	Local magnetic moments in iron and nickel: Electronic correlation, van-Hove singularities and Earth's core pressure

10:10-10:30 Coffee break

Strong correlation from micro to macro II (G.Mazza)

10:30-11:00	Paola di Pietro	Optical properties of nickelate heterostructures
11:00-11:30	Yusuke Nomura	Exotic high-Tc s-wave superconductivity in alkali-doped fullerides
11:30-12:00	Suchitra Sebastian	Unconventional quantum oscillations in the Kondo insulator SmB6

12:00-14:00 Lunch break

Non-equilibrium dynamics & time domain spectroscopy II (S.Sebastian)

14:00-14:30	Simon Wall	The role of phonons in the ultrafast insulator metal transition in VO2
14:30-14:50	Lorenzo Privitera	On the adiabatic preparation of a Floquet-Chern insulator
14:50-15:10	Sharareh Sayyad	Non-equilibrium electron dynamics near Mott transition
15:10-15:30	Andrea Sterzi	Time resolved ARPES on n-doped and p-doped Topological Insulators

15:30-16:00 Coffee break

Theoretical Advances in strongly correlated systems I (A.Debnath)

16:00-16:20	Ciro Taranto	From infinite to two dimensions through the functional RG
16:20-16:40	Rainer Härtle	Impurity problems away from equilibrium: A hierarchical quantum master equation approach
16:40-17:00	Evgeny Kozik	Unbiased ground-state phase diagram of the two-dimensional fermionic Hubbard model in the emergent BCS regime

17:00-17:30 Coffee break

Posters

17:30-18:00	Poster flash session and discussion
18:00-20:00	**Poster session**

Wednesday September 28

Quantum magnetism I *(H.-J.Grafe)*

09:00-09:30	Tom Fennell	*Spin ices and spin liquids*
09:30-10:00	Oleg Janson	*Spin model of volborthite $Cu_3V_2O_7(OH)_2 \cdot 2H_2O$ revisited: coupled trimers instead of zigzag chains*
10:00-10:20	**Natalija van Well**	*Magnetic order in the anisotropic triangular material $Cs_2CuCl_{4-x}Br_x$*
10:20-10:40	**Sebastian Witt**	Improvement of crystal growth of MnSi and YbRh2Si2 by accelerated crucible rotation technique

10:40-11:00 ***Coffee break***

Quantum magnetism II *(O.Janson)*

11:00-11:30	*Tom Fennell*	*Spin correlations and magnetoelastic excitations in $Tb_2Ti_2O_7$*
11:30-11:50	***Martin Claassen***	*Dynamical Time-Reversal Symmetry Breaking and Photo-Induced Chiral Spin Liquid in a Mott Insulator*
11:50-12:10	***Ghassen Yahia***	Ab initio study of R3+ embedded fragment in RMn2O5 multiferroic compounds

12:10-14:00 ***Lunch break***

14:00-17:00	***Elettra visit***
17:00-19:00	***Transfer to Trieste and aperitif***
20:00	***Social dinner:*** *Savoy Restaurant, Riva del Mandracchio 4*
22:30	***Transfer to Adriatico Guesthouse***

Thursday September 29

Correlation and topology I (R.Zitko)

09:00-09:30	Cedric Weber	Many body effects in transition metal molecular systems
09:30-09:50	Marcin Wysokinski	Many-body breakdown of the indirect gap in topological Kondo insulators
09:50-10:10	Pramod Kumar	Interaction-Induced Topological and Magnetic Phases in the Hofstadter-Hubbard Model
10:10-10:30	Wojiech Brzezicki	Charge - orbital order and topological effects in presence of zig-zag magnetic textures in 4d – 3d hybrid oxides

10:30-11:00 Coffee break

Correlation and topology II (P.Di Pietro)

11:00-11:30	Cedric Weber	Many body effects in transition metal molecular systems
11:30-11:50	Giulia Manzoni	Understanding the Transport Properties and the Topological Character of $ZrTe_5$
11:50-12:10	Chris O'Neill	Pressure Induced Topological Phase in SnTe.

12:10-14:00 Lunch break

Spin-orbit coupling and correlation (C.Weber)

14:00-14:30	Marco Moretti Sala	Magnetic and orbital excitations studied by x-rays
14:30-14:50	Alen Horvat	Spin-orbit coupling in multi-orbital impurity models and its relevance for transition metal-oxides
14:50-15:10	Krzysztof Wohlfeld	Excitons and holes in spin-orbit coupled systems
15:10-15:30	Valentina Brosco	Unconventional transport in two-dimensional materials with strong Rashba spin-orbit coupling
15:30-15:50	Estelina da Silva	Modelling Approaches to Characterise Ferroelectric Rashba Materials: a Case Study of the Prototypical GeTe

15:50-16:00 Coffee break

Quantum magnetism III. (T.Fennell)

16:00-16:30	Hans-Joachim Grafe	Impurity effects in S=1/2 Heisenberg spin chains as probed by nuclear magnetic resonance
16:30-16:50	Ilia Sivkov	Even-odd effects and entanglement-related properties of information propagation in 3/2-spin chains
16:50-17:10	Angelo Valli	Interplay between charge and spin degrees of freedom in the magnetic state of hole-doped graphene nanoflakes

Friday September 30

Theoretical advances in strongly correlated systems II (V.Brosco)

09:00-09:20	**Sumanta Bhandary**	Charge self-consistency in DFT+DMFT with maximally localised Wannier functions: k-space reoccupation and orbital order
09:20-09:40	**Anna Galler**	Towards an ab-initio treatment of nonlocal electronic correlations with dynamical vertex approximation
09:40-10:00	**Fedor Simkovic**	Evidence for phase separation in the fermionic Hubbard model

10:10-10:30 Coffee break

Superconductivity in the iron age (Y.Nomura)

10:30-11:00	**Laura Fanfarillo**	Orbital Selectivity and Hund's Physics in Iron-Based Superconductors
11:00-11:20	**Ramos Alvarez**	Unconventional effects in the iron based superconductor $BaFe_2(As_{1-x}P_x)_2$, as probed by thermal superconducting fluctuations around T_c
11:20-11:40	**Alireza Akbari**	Quasiparticle scattering interference in parent compounds of iron-based Superconductors

11:40-12:00 Closing remarks

12:00-14:00 Lunch

Invited Speakers

Stephen Clark *(Oxford University)*
Lev Vidmar *(Pennsylvania State University)*
Simon Wall *(ICFO, Barcelona)*
John Goold *(ICTP, Trieste)*
Matteo Mitrano *(CFEL, Hamburg)*
Suchitra Sebastian *(Cavendish Lab. Cambridge)*
Marco Moretti Sala *(ESRF, Grenoble)*
Paola di Pietro *(Elettra, Trieste)*
Cedric Weber *(King's college London)*
Yusuke Nomura *(Ecole Polytechnique)*
Mathieu Le Tacon *(Max plank Stuttgart)*
Laura Fanfarillo *(CNR-IOM, Trieste)*
Tom Fennell *(Paul Scherrer Institut, Switzerland)*
Oleg Janson *(IFP TU, Wien)*
Hans-Joachim Grafe *(IWF, Dresden)*

Organizing committee:

Adriano Amaricci
(Scuola Internazionale Superiore di Studi Avanzati, Trieste.)
Daniele Fausti
(University of Trieste, Elettra-Sincrotrone Trieste.)
Edwin Kermarrec
(Laboratoire de Physique des Solides, Université Paris Sud, Orsay.)
Michael Sentef
(Max Planck Insitute for the Structure and Dynamics of Matter, Hamburg.)