

Program

Sunday 13 September

17:00-18:00 Registration

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

Monday 14 September

MORNING SESSION

08:00-08:30 Registration and opening words

08:30-09:00 **Jan Tomczak (lecture)**, TU Wien — TBA

09:00-09:30 **Priyanka Seth**, Ecole polytechnique, France — Advances in ab-initio DFT +DMFT treatment of strongly-correlated systems

09:30-10:00 **Jan Tomczak (invited)** — Separability of dynamical and non-local correlations in three dimensions

10:00-10:30 *Coffee break*

10:30-11:00 **Giovanni Sordi (invited)**, Royal Holloway University of London — Remnant of the first-order Mott transition at finite doping as an organizing principle for strongly correlated superconductors

11:00-11:30 **Agnese Tagliavini**, Institute of Solid State Physics, TU Wien — Critical analysis of the preformed pair physics: the attractive Hubbard model under a pairing forcing field

11:30-12:00 **Thomas Schäfer**, Institute of Solid State Physics, TU Wien — Fluctuation diagnostics of the electron self-energy: Origin of the pseudogap physics

12:00-14:00 *Free time - Lunch break*

AFTERNOON SESSION

14:00-14:30 **Krzysztof Wohlfeld**, University of Warsaw — Is charge and spin degree of freedom effectively decoupled in the 2D Hubbard model?

14:30-15:00 **Petra Pudleiner**, Johannes Gutenberg-University, Mainz — Momentum-space structure of the self-energy in the two-dimensional Hubbard model

15:00-15:30 **Philipp Hansmann**, Max-Planck-Institute for Solid State Research — Electronic interactions in effective cuprate models beyond a Cu Hubbard U

15:30-16:00 *Coffee break*

16:00-17:00 **Flash talks**

17:00-18:00 Discussion

18:00-20:00 **Poster session & aperitif**

Tuesday 15 September

MORNING SESSION

08:30-09:00 **Eduardo da Silva Neto (lecture)**, University of British Columbia — TBA

09:00-09:30 **Edoardo Baldini**, École Polytechnique Fédérale de Lausanne — Evidence for pre-formed Cooper pairs in the pseudogap phase of slightly underdoped $\text{NdBa}_2\text{Cu}_3\text{O}_{6+x}$

09:30-10:00 **Eduardo da Silva Neto (invited)** — Charge ordering in hole and electron-doped cuprates

10:00-10:30 **Coffee break**

10:30-11:00 **Neven Barišić (invited)**, TU Wien — Evidence for good metal behavior in normal state of the cuprate high-temperature superconductors

11:00-11:30 **Jonathan Rameau**, Brookhaven National Lab — Ultrafast self energy dynamics via time resolved photoemission in the cuprates

11:30-12:00 **Alice Cantaluppi**, Max Planck Institute for the Structure and Dynamics of Matter (MPSD) — Stimulated superconducting-like properties in K_3C_{60} far above the equilibrium critical temperature

12:00-14:00 **Free time - Lunch break**

AFTERNOON SESSION

14:00-14:30 **Frédéric Hardy (invited)**, Karlsruhe Institute of Technology — Strong correlations and new magnetic phases in $\text{Ba}_{1-x}\text{K}_x\text{Fe}_2\text{As}_2$ and $\text{Ba}_{1-x}\text{Na}_x\text{Fe}_2\text{As}_2$ iron pnictides

14:30-15:00 **Natalia Lera**, nanoGUNE, Donostia-San Sebastian and Universidad Autonoma de Madrid — Superconductivity from the unconventional metallic state of $\text{Li}_{0.9}\text{Mo}_6\text{O}_{17}$

15:00-15:30 **Yusuke Nomura**, École Polytechnique — Fully ab-initio calculation of transition temperature for alkali-doped fullerene superconductors

15:30-16:00 **Coffee break**

16:00-16:30 **Nenad Lazarević**, Institute of Physics Belgrade — Vacancies and phase separation in pure and transitional metal doped $\text{K}_x\text{Fe}_{2-y}\text{Se}_2$: The Raman scattering study

16:30-16:50 **Maksym Surmach**, Technische Universität Dresden — Superconducting properties and pseudogap from preformed Cooper pairs in the triclinic $(\text{CaFe}_{1-x}\text{Pt}_x\text{As})_{10}\text{Pt}_3\text{As}_8$

Wednesday 16 September

MORNING SESSION

08:30-09:00 **Nils Wentzell (lecture)**, Uni. Tübingen — Functionnal renormalization group

09:00-09:30 **Dante Kennes (invited)**, RWTH Aachen — Dynamics in dissipative quantum systems

09:30-10:00 **Andreas Hausoel**, University of Würzburg — Ab-initio study of the finite temperature magnetism in iron and nickel

10:00-10:30 **Coffee break**

10:30-11:00 **Damien Stricker**, University of Geneva — Fermi liquid behaviour in strongly correlated metals

11:00-11:30 **Michael Sentef**, Max Planck Institute for the Structure and Dynamics of Matter, Hamburg — Theory of laser-driven nonequilibrium superconductivity

12:00-18:00 **Excursion**

19:00-21:00 **Conference dinner (fish menu) at local restaurant in the Old City of Trogir**

Thursday 17 September

MORNING SESSION

08:30-09:00 **Katharina Franke (lecture)**, Freie Universität Berlin — TBA

09:00-09:30 **Michael Karolak**, University of Würzburg — Tunable Kondo effect of Pc molecules on noble metal surfaces

09:30-10:00 **Katharina Franke (talk)** — Electron transport through Shiba states induced by magnetic adsorbates on a superconductor

10:00-10:30 **Coffee break**

10:30-11:00 **Tobias Meng (invited)**, TU Dresden — Quantum LEGO: from quantum wires to three-dimensional topological phases

11:00-11:20 **Rainer Härtle**, Georg-August-Universität Göttingen — Hierarchical quantum master equations and driven long-term impurity dynamics

11:20-11:40 **Igor Kuzmenko**, Ben-Gurion University of the Negev, Beer-Sheva — Carbon nanotube quantum dot: realization of two-channel Kondo effect

11:40-12:00 **Claudia Giuseppina Fatuzzo**, EPFL — Spin-orbit-induced orbital excitations in Sr_2RuO_4 and Ca_2RuO_4 : a resonant inelastic X-ray scattering study

12:00-14:00 **Free time - Lunch break**

AFTERNOON SESSION

14:00-14:30 **Jelena Klinovaja (lecture)**, University of Basel — TBA

14:30-15:00 **Michael Mulligan**, Stanford University — A 2D Metallic Phase at Half-Filling

15:00-15:30 **Jelena Klinovaja (talk)**, Engineering Topological Quantum States: From 1D to 2D

15:30-16:00 **Coffee break**

16:00-16:30 **Adriano Amaricci (invited)**, SISSA Trieste — First order character and observable signatures of topological quantum phase transitions

16:30-17:00 **Aldo Isidori**, Royal Holloway University of London — Coexisting electronic orders in the ultra-quantum limit of graphite

Friday 18 September

MORNING SESSION

08:30-09:00 **Alberto Crepaldi (invited)**, Elettra - Sincrotrone Trieste — Optical control of the electronic properties of ZrTe_5

09:00-09:30 **Alberto de la Torre**, University of Geneva — Emergence of a nodal liquid in the pseudospin-1/2 antiferromagnet Sr_2IrO_4 from ARPES

09:30-09:50 **Tobias Ritschel**, Leibniz Institute for Solid State and Materials Research IFW Dresden — Electronic self-organization in layered transition metal dichalcogenides

10:00-10:30 **Coffee break**

10:30-11:00 **Tadeusz Domanski**, Marie Curie Skłodowska University, Poland — Superconductivity in nanoscopic systems

11:00-11:30 **Irakli Titvinidze**, TU Graz — Non-equilibrium inhomogeneous DMFT for correlated heterostructures

11:30-12:00 **Closing remarks**

12:00-14:00 **Free time - Lunch break**