



## Monday June 16<sup>th</sup>

**9:00 Introduction and Welcome**

**9:30 Session 1: Quantum Materials**

9:30-10:00 *“Charge Order Phase Transition in Underdoped YBCO: a velocity sound study”*  
**David Le Beouf** (LNMI, CNRS, Grenoble, France)

10:00-10:30 *“Doping dependence of the paramagnetic state in 1111 iron pnictides and its connection to the competition of ground states”*  
**Guillaume Lang** (LPEM/ESPCI, CNRS, Paris, France)

10:30-11:00 *Coffee Break*

**11:00 Session 2: Quantum Materials**

11:00-11:30 *“Low energy excitations in cuprate high temperature superconductors”*  
**Inna Vishik** (MIT, Boston, USA)

11:30-12:00 *“Are electron-phonon interaction strong enough to enhance orbital fluctuations in iron-based superconductors?”*  
**Yusuke Nomura** (University of Tokyo, Japan)

12:00-12:30 *“Density Functional Theory for Plasmon-Assisted Superconductivity”*  
**Ryosuke Akashi** (University of Tokyo, Japan)

12:30-15:00 *Lunch Break*

### **15:00 Session 3: Quantum Materials**

15:00-15:30 *“Measuring the dynamical microwave response close to a quantum-critical point”*

**Diana Geiger** (Vienna University of Technology, Austria)

15:30-16:00 *“Doping of Strontium oxychloride: A model system to test sensitivity of ARPES to short-range antiferromagnetic order”*

**Robert Wallauer** (Technion, Haifa, Israel)

16:00-16:30 *Coffee Break*

### **16:30 Session 4: Poster Presentations**

16:30-17:30 Flash Talks (2min) for Poster Presentations

18:00-20:00 Poster Session

## **Tuesday June 17<sup>th</sup>**

### **9:00 Session 5: Engineered Correlations**

9:00-9:30 *“Controlling correlated magnetic nanostructures using photons and electrons (I)”*

**Lapo Bogani** (University of Stuttgart, Germany)

9:30-10:00 *“Manipulating magnetism one atom at a time”*

**Sebastian Loth** (CFEL Hamburg&Max-Planck MPI-FKF, Stuttgart, Germany)

– Invited Talk

10:00-10:30 *“Tuning magnetic correlations in graphene nano-flake”*

**Angelo Valli** (Vienna University of Technology, Austria)

10:30-11:00 *Coffee Break*

### **11:00 Session 6: Engineered Correlations**

11:00-11:30 *“Controlling correlated magnetic nanostructures using photons and electrons(II)”*

**Lapo Bogani** (University of Stuttgart, Germany)

11:30-12:00 *"Kondo effect in Transition Metal Phthalocyanine Molecules on metal surfaces"*  
**Michael Karolak** (University of Wurzburg, Germany)

12:00-12:30 *"Long-range correlations in strongly correlated systems: insights into two-dimensional systems of adatoms on surfaces from self-consistently combined GW and Dynamical Mean Field Theory"*  
**Thomas Ayrat** (Ecole Polytechnique&CEA-Saclay, Paris, France)

12:30-15:00 *Lunch Break*

### **15:00 Session 7: Engineered Correlations**

15:00-15:30 *"DFT+Many-Body Perspective on Electron Correlation in Oxide Heterostructures"*  
**Frank Lechermann** (University of Hamburg, Germany)

15:30-16:00 *"Orientational tuning of the 2D-superconductivity in LaAlO<sub>3</sub>/SrTiO interfaces"*  
**Gyanendra Singh** (LPEM/ESPCI, CNRS, Paris, France)

16:00-16:30 *Coffee Break*

16:30-17:00 *"Characterization and control of charge and spin order in nickel oxide films and superlattices under epitaxial strain"*  
**Matteo Minola** (Max-Planck MPI-FKF, Stuttgart, Germany)

### **17:00 Session 8: Quantum Materials**

17:00-17:30 *"Choosing the basis for low energy Hamiltonians of transition metal oxides"*  
**Philipp Hansmann** (Ecole Polytechnique, Paris, France)

17:30-18:00 *"Dynamics of Charge-Order Fluctuations in Two Dimensional Organic Metals  $\beta^{\prime}$ -(BEDT-TTF)<sub>2</sub>X*  
**Matteo Masino** (University of Parma, Italy)

## Wednesday June 18<sup>th</sup>

### 9:00 Session 9: Non-Equilibrium Dynamics

9:00-9:30 *"Non-equilibrium dynamics, universality and non-thermal steady states"*  
**Alessandro Silva** (Sissa, Trieste, Italy)

9:30-10:00 *"Quantum flutter versus Bloch oscillations of impurities in one-dimensional quantum liquids"*  
**Michael Knap** (Harvard University, Boston, USA)

10:00-10:30 *"Pre-Thermalization in Quantum Spin Chains"*  
**Jamir Marino** (University of Innsbruck, Austria)

10:30-11:00 *Coffee Break*

### 11:00 Session 10: Non-Equilibrium Dynamics

11:00-11:30 *"Quantum quenches, linear response and superfluidity out of equilibrium"*  
**Alessandro Silva** (SISSA, Trieste, Italy)

11:30-12:00 *"Equilibrium and Non-Equilibrium Surface effects in strongly correlated heterostructure"*  
**Giacomo Mazza** (SISSA, Trieste, Italy)

12:00-12:30 *"Ultrafast Charge Localization in a Stripe-ordered Nickelate"*  
**Giacomo Coslovich** (LNBL, Berkeley, USA)

12:30 – 19:00 *Excursion + Conference Dinner (More Info TBA)*

## Thursday June 19<sup>th</sup>

### 9:00 Session 11: Non-Equilibrium Dynamics

9:00-9:30 *"Reducing phase fluctuations in a layered superconductor via driving"*  
**Ludwig Mathey** (University of Hamburg, Germany)

9:30-10:00 *"Real-time observations of the quasi-particle relaxation dynamics in different iron-based pnictides by means of femtosecond laser spectroscopy"*  
**Ljupka Stojchevska** (Josef Stefan Institute, Ljubljana, Slovenia)

10:00-10:30 *"Photoinduced antinodal metallicity in the pseudogap state of high-Tc cuprates"*  
**Federico Cilento** (ELETTRA Synchrotron, Trieste, Italy)

10:30-11:00 *Coffee Break*

### **11:00    Session 12: Non-Equilibrium Dynamics**

11:00-11:30 *"Ultrafast dynamics in BaFe<sub>2</sub>As<sub>2</sub> and Bi<sub>2</sub>Sr<sub>2</sub>CaCu<sub>2</sub>O<sub>8+x</sub>"*  
**Kerstin Haff** (University of Kiel, Germany)

11:30-12:00 *"Ultrafast evolution of the model Mott-Hubbard compound V<sub>2</sub>O<sub>3</sub>"*  
**Evangelos Papalazarou** (LPS-Orsay, Paris, France)

12:00-12:30 *"Ultrafast charge recombination in photoexcited Mott-Hubbard insulator"*  
**Zala Lenarcic** (Josef Stefan Institute, Ljubljana, Slovenia)

12:30-15:00 *Lunch Break*

### **15:00    Session 13: Quantum Materials**

15:00-15:30 *"Light-induced nonequilibrium Haldane multilayers in graphene"*  
**Michael Sentef** (Stanford University, USA & University of Bonn, Germany)

15:30-16:30 *"From the adiabatic theorem of quantum mechanics to topological states of matter"*  
**Jan Budich** (University of Wurzburg, Germany)

15:30-16:00 *"Strong correlation effects in quantum spin Hall insulators"*  
**Adriano Amaricci** (SISSA, Trieste, Italy)

16:30-17:00 *Coffee Break*

**17:00**    **Session 14: Quantum Materials**

17:00-17:30    *"Search for localized Wannier functions of topological band structures"*  
**Jan Budich** (University of Wurzburg, Germany)

17:30-18:00    *"Topological invariants in interacting Quantum Spin Hall insulators: a Cluster Perturbation Theory approach"*  
**Franca Manghi** (University of Modena and Reggio Emilia, Italy)

18:00-18:30    *"Topological nature and the multiple Dirac cones in Bismuth high-Tc superconductors"*  
**Gang Li** (University of Wurzburg, Germany)

**Friday June 20<sup>th</sup>**

**9:00**    **Session 15: Quantum Materials**

9:00-9:30    *"The phase diagram of the Kondo lattice model"*  
**Rot Zitko** (Josef Stefan Institute, Ljubljana, Slovenia)

9:30-10:00    *"Nonlocal correlations and criticality in 3 dimensions beyond the weak-coupling regime"*  
**George Rohringer** (Vienna University of Technology, Austria)

10:00-10:30    *Coffee Break*

**10:30**    **Session 16: Quantum Materials**

10:30-11:00    *"Understanding Electronic Scattering beyond Fermi-liquid Theory: from Pseudogap Phases to the MIT"*  
**Thomas Schafer** (Vienna University of Technology, Austria)

11:00-11:30    *"Inverse indirect magnetic exchange in one and higher dimensions"*  
**Irakli Titvinidze** (Hamburg University, Germany)

**12:00**    **Closing Remarks**