

## 23th September (Tuesday)

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18:00-20:30 -Registration & petit welcome-

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## 24th September (Wednesday)

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10:20-10:45 Opening -

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Discussion leader: **Tohru Suemoto**

10:45-11:15 R.J. Dwayne Miller Mapping Atomic Motions with Ultrabright Electrons: The Chemists ' Gedanken Experiment Enters the Lab Frame

11:15-11:45 Kenji Ohmori Exploring Quantum-Classical Boundary with Light

11:45-12:15 Hidefumi Akiyama Smart Nano Light Emitters: Device physics of semiconductor lasers and firefly bioluminescence

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12:15-14:00 -Lunch & Poster- -

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Discussion leader: **Bernard Barbara**

14:00-14:30 Arzhang Ardavan Coherent interactions in molecular nanomagnet dimers

14:30-15:00 Hiroyuki Nojiri Fast Spin Reversal at Level Crossing and EPR Line Width

15:00-15:15 -Coffee break- -

15:15-15:45 Irinel Chiorescu Spin dynamics in quantum magnets using high field electron paramagnetic resonance

15:45-16:15 Lapo Bogani Controlling molecular magnets: from weak to strong coupling to photons

16:15-17:30 -Short talk presentation of poster (3min x 17)-

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17:30-17:45 -Ceremonial photograph & Coffee break-

17:45-18:15 Bernard Barbara -Special lecture- New aspects of dissipative and coherent magnetism

18:15-18:45 Toshimitsu Yamazaki -Special lecture- Playing with Metastable Exotic Atoms, Molecules and Nuclei constituents - a revived Heitler-London-Heisenberg mechanism

19:00-21:30 -Banquet- -

21:30-22:00 -Private discussion- -

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## 25th September (Thursday)

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| Discussion leader: <b>Seigo Tarucha</b> |                      |   |
| 09:00-09:20                             | Seigo Tarucha        | Overview  |
| 09:20-09:50                             | Christopher Eichler  | Simulating Interacting Quantum Gases with a Superconducting Circuit   |
| 09:50-10:20                             | Koichi Semba         | Superconducting Flux Qubit & Electron Spin Ensemble in Diamond Hybrid Quantum System                          |
| 10:20-10:35                             | -Coffee break-       | -   |
| 10:35-11:05                             | Albert Schliesser    | Exploiting Field-Enhanced Coupling of Photons to Phonons for an Electro-Opto-Mechanical Transduction Cascade  |
| 11:05-11:35                             | Akira Oiwa           | Conversion from a single photon to a single electron spin using electrically controlled quantum dots          |
| 11:35-12:05                             | Thomas Pfeifer       | Physics of Resonances in Short and Strong Fields  |
| 12:05-12:35                             | Atsushi Noguchi      | Quantum tunneling rotor in a Linear Paul Trap   |
| 12:35-13:30                             | -Lunch & Poster-     | -   |
| 13:30-18:00                             | -Conference tour-    | -   |
| 18:00-19:30                             | -Dinner-             | -   |
| 19:30-20:30                             | Daniel Esteve        | -Special lecture- Superconducting processors of quantum information: state of the art, challenges, new routes |
| 20:30-21:30                             | -Private discussion- | -   |

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## 26th September (Friday)

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| Discussion leader: <b>Shin-ya Koshihara</b> |                            |  |
| 09:00-09:30                                 | Isabella Gierz             | Exciting Graphene - interband Transitions, Free Carrier Absorption, and Phonon Pumping   |
| 09:30-10:00                                 | Takashi Oka                | Floquet topological phase transitions: Control of solid state systems by laser   |
| 10:00-10:15                                 | -Coffee break-             | -  |
| 10:15-10:45                                 | Nuh Gedik                  | Observation Of Floquet-Bloch states on the surface of a topological insulator  |
| 10:45-11:15                                 | Hiroshi Okamoto            | New Aspects of Photoinduced Phase Transitions in Correlated Electron Materials   |
| 11:15-11:45                                 | Ryo Shimano                | Real-time observation of Higgs mode in superconductors   |
| 11:45-12:15                                 | Tohru Suemoto              | Observation and control of spin dynamics by a impulsive magnetic field of terahertz radiation  |
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| 12:15-14:00                                 | -Lunch & Poster-           | -  |
| <hr/>                                       |                            |  |
| Discussion leader: <b>Hervé Cailleau</b>    |                            |  |
| 14:00-14:20                                 | Hervé Cailleau             | Overview   |
| 14:20-14:50                                 | Shin-ichi Ohkoshi          | Novel magneto-optical functionalities in cyano-bridged bimetal assemblies and metal oxide nanomaterials                                    |
| 14:50-15:20                                 | Eric Collet                | Photoinduced dynamics in spin-crossover solids: from femtosecond molecular switching to cooperative response driven by elastic interaction |
| 15:20-15:35                                 | -Coffee break-             | -  |
| 15:35-16:05                                 | Shin-ya Koshihara          | Search for a hidden phase based on the photo-induced cooperative effect  |
| 16:05-16:35                                 | Peter Hommelhoff           | Control of free electrons by phase-controlled laser pulses: from a nanoscale vacuum tube diode to laser-based particle acceleration        |
| 16:35-17:05                                 | Kenji Yonemitsu            | Pulsed vs. CW Laser Excitations: Different Controlling Mechanisms of Photoinduced Charge Transfers in Molecular Crystals                   |
| 17:05-16:13                                 | Shik Shin                  | Time-resolved photoemission study on strongly-correlated materials   |
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| 17:35-18:00                                 | -Free discussion & poster- |  |
| 18:00-19:30                                 | -Dinner-                   | -  |
| 19:30-20:30                                 | Alfred Leitenstorfer       | -Special lecture- Time-Domain Quantum Physics  |
| 20:30-21:30                                 | -Private discussion-       | -  |

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## 27th September (Saturday)

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|   |                   |  |
|---|-------------------|--|
| Discussion leader: <b>Daniel Esteve</b> |                   |  |
| 09:00-09:30                             | Hans De Raedt     | Simulation of (driven) decoherence and spin transport in spin-1/2 systems                                    |
| 09:30-10:00                             | Franco Nori       | Electron vortex beams in a magnetic field: A new twist on Landau levels and Aharonov-Bohm states             |
| 10:00-10:15                             | -Coffee break -   | -  |
| 10:15-10:45                             | Dieter H. Jaksch  | Tensor Network Theory and applications in non-equilibrium condensed matter physics                           |
| 10:45-11:15                             | Hiroko Tokoro     | Unique functionalities on a charge-transfer phase transition material of rubidium manganese hexacyanoferrate |
| 11:15-11:45                             | Shoji Yamamoto    | Phototunable Magnetism in Octacyano-Bridged Bimetallic Assemblies  |
| 11:45-12:15                             | Yasunobu Nakamura | Toward quantum magnonics: hybridizing magnon mode in ferromagnet with superconducting qubit                  |
| 12:15-12:45                             | Seiji Miyashita   | Collapse of metastable states in quantum systems with time dependent fields                                  |
| 12:45-13:00                             | -Closing-         | -  |

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## Poster presentation

24th (Wednesday) 16:15-17:30 -Short talk presentation-

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|------|-------------------|--|
| P-01 | Nao Yamaya        | Ultrafast spectroscopic study of layered perovskite-type cobalt oxides   |
| P-02 | Yuki I. Hamada    | Development of time-resolved terahertz near-field microscope for observing ultrafast spatiotemporal dynamics in solids   |
| P-03 | Masahiro Sato     | Theory for Dynamical Control of Magnetization and Chirality in Quantum Magnets and Multiferroics                         |
| P-04 | Sergio Andraus    | A study of correlations in the Dyson model   |
| P-05 | Tatsuhiko Shirai  | Periodically driven steady states independent of the structures of a thermal bath  |
| P-06 | Kenta Imoto       | Fe-[Nb(CN) <sub>8</sub> ]-based three dimensional assembly exhibiting photo-induced spin-crossover magnetization         |
| P-07 | Kosuke Nakagawa   | Interaction between magnetic ordering and ionic conductivity on Prussian blue analogs                                    |
| P-08 | Noriaki Ozaki     | Photo-induced magnetization effect in an octacyano-CoW bimetal assembly  |
| P-09 | Marie Yoshikiyo   | Electronic structure and magnetic properties of $\epsilon$ -Fe <sub>2</sub> O <sub>3</sub>                               |
| P-10 | Asuka Namai       | The study of magnetic properties of epsilon-iron oxide exhibiting gigantic coercive field                                |
| P-11 | Tadahiko Ishikawa | Photo-induced dynamics of Pt(dmit) <sub>2</sub> salts studied by optical spectroscopy and electron-diffraction technique |
| P-12 | Yoichi Okimoto    | Ultrafast ferroelectric control of a cobalt oxide BiCoO <sub>3</sub>   |
| P-13 | Rekishu Yamazaki  | Development of Opto-Electromechanical System as a Quantum Transducer   |
| P-14 | Takashi Mori      | Natural correlation between a system and a thermal reservoir and the Markovianity of reduced dynamics                    |
| P-15 | Christian Sommer  | Ultrafast coherent control of an ultracold Rydberg gas   |
| P-16 | Eric Heintz       | Photoinduced domain wall kickoff in Single Chain Magnets   |
| P-17 | Go Yumoto         | Nonlinear terahertz Faraday rotation in monolayer epitaxial graphene   |

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