

New Frontiers in Advanced Magnetism 2024

5-9 August 2024

Hokkaido University, Sapporo, Japan

6th August (Tuesday)

- 9:30-10:30 **Gang Chen** (Peking University, China)
“Some unexpected emergent physics in tow-dimensional quantum magnets”
- 10:30-11:00 **Han Yan** (ISSP, The University of Tokyo, Japan)
“Designing light in an artificial universe”
- 11:00-11:20 Coffee break
- 11:20-11:50 **Rikuto Oiwa** (RIKEN CEMS, Japan)
“Microscopic stability mechanism of the helical structure of Tellurium”
- 11:50-12:10 **Margarita Dronova** (OIST, Japan)
“Checkerboard antiferromagnetic ground state in ZnFe_2O_4 ”
- 12:10-13:30 Lunch break
- 13:30-14:30 **Xichao Zhang** (Waseda University, Japan)
“Dynamics of topological spin textures”
- 14:30-15:00 **Masahiro Sato** (Chiba University, Japan)
“Floquet theory of inverse Faraday effects in dissipative electron and spin systems”
- 15:00-15:30 **Tsutomu Momoi** (RIKEN, Japan)
“Dynamics of quantum spin-nematics”
- 15:30-15:40 Short break
- 15:40-16:10 **Fumitaka Kagawa** (Tokyo Institute of Technology, Japan)
“Domain wall inductance in permalloy wires”
- 16:10-16:30 **Akane Inda** (Hokkaido University, Japan)
“Quantitative evaluation of chirality using the electric toroidal monopole”
- 16:30-16:50 Coffee break
- 16:50-17:50 **Joji Nasu** (Tohoku University, Japan)
“Observation and control of fractional quasiparticles in Kitaev spin liquids”
- 17:50-18:10 **Masahiro O. Takahashi** (Osaka University, Japan)
“Spin-S magnetic impurity harboring an Ising anyon in the spin-1/2 Kitaev spin liquid”

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7th August (Wednesday)

- 9:00-10:00 **Andrej Zorko** (Jozef Stefan Institute, Slovenia)
“Quantum magnetism in triangular-lattice antiferromagnets”
- 10:00-10:30 **Daniel Lozano-Gómez** (Technische Universität Dresden, Germany)
“A classical chiral spin liquid from chiral interactions on the Pyrochlore lattice”
- 10:30-11:00 **Tokuro Shimokawa** (OIST, Japan)
“Can experimentally-accessible entanglement measures distinguish quantum spin liquid and random singlet states?”
- 11:00-11:20 Coffee break
- 11:20-12:20 **Flash talks and Group Photo**
- 12:20-13:30 Lunch break
- 13:30-15:30 **Poster session**
- 15:30-15:50 Coffee break
- 15:50-16:50 **SungBin Lee** (KAIST, Republic of Korea)
“Hidden hyperspace geometry and long-distance quantum coupling in quasicrystals”
- 16:50-17:20 **Mingxuan Fu** (The University of Tokyo, Japan)
“Strange metal behavior and quantum criticality driven by Kondo entanglement of multipolar moments with conduction electrons”
- 17:20-17:50 **Hironori Sakai** (JAEA, Japan)
“Single crystal NMR study of triangular Kondo lattice system $\text{CePtAl}_4\text{Ge}_2$ ”
- 17:50-18:20 **Tomoki Kanda** (Hokkaido University, Japan)
“Magnetic anisotropy of CeCoSi under high magnetic fields”
- Evening **Banquet**

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8th August (Thursday)

- 9:00-10:00 **Je-Geun Park** (Seoul National University, Republic of Korea)
“Van der Waals magnets: a new platform for 2D magnetism”
- 10:00-10:30 **Hideki Hirori** (Kyoto University, Japan)
“Nonlinear spin excitation in antiferromagnets with strong THz magnetic fields”
- 10:30-10:50 Coffee break
- 10:50-11:50 **Ryutaro Okuma** (ISSP, The University of Tokyo, Japan)
“Itinerant frustration in van der Waals antiferromagnets”
- 11:50-12:20 **Xuguang Zhou** (ISSP, The University of Tokyo, Japan)
“Giant linear dichroism controlled by magnetic fields in the van der Waals magnet FePS₃”
- 12:20-13:30 Lunch break
- 13:30-14:30 **Paul A. McClarty** (CNRS, France)
“Non-Hermitian topology and magnon lineshapes”
- 14:30-15:00 **Tomoki Hirose** (Aoyama Gakuin University, Japan)
“Magnetolectric cavity magnonics and topological magnon-polaritons”
- 15:00-15:30 **Naoya Iwahara** (Chiba University, Japan)
“Persistent quantum vibronic dynamics in a 5d¹ double perovskite oxide”
- 15:30-15:50 Coffee break
- 15:50-16:50 **Oleg Tchernyshyov** (Johns Hopkins University, USA)
“Field theory of 3-sublattice antiferromagnets”
- 16:50-17:20 **Kazushi Aoyama** (Osaka University, Japan)
“Chirality selection and spin-wave propagation in breathing-kagome antiferromagnets”
- 17:20-17:40 **Kaito Kobayashi** (The University of Tokyo, Japan)
“Signatures of quantum phase transitions in local quench dynamics by quantum reservoir probing”
- 17:40-18:10 **Kiyu Fukui** (The University of Tokyo, Japan)
“Topological Majorana flat bands in the Kitaev model on a Bishamon-kikko lattice”

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9th August (Friday)

- 9:00-10:00 **Guo-Yi Zhu** (THP University of Cologne, Germany/HKUST, China)
“Monitored quantum circuits and Kitaev spin liquids”
- 10:00-10:30 **Hakuto Suzuki** (Tohoku University, Japan)
“Magnetic dynamics and d - p hybridization in the Kitaev spin liquid candidates RuX_3 ($X = Cl, Br, I$) probed with resonant inelastic x-ray scattering”
- 10:30-10:50 **Ruo Hibino** (Hokkaido University, Japan)
“Ultrasonic investigation of quadrupolar Kondo effect in the non-Kramers system $Y_{1-x}Pr_xIn_2Zn_{20}$ ”
- 10:50-11:10 Coffee break
- 11:10-12:10 **Kensuke Kobayashi** (The University of Tokyo, Japan)
“Quantum spin microscope for magnetism study”
- 12:10-12:30 **Manami Yamagishi** (The University of Tokyo, Japan)
“Proposal of Kondo quantum walks”