

International Conference on Quantum Liquid Crystals 2021 (QLC2021)

May 11-13, 2021 (on-line)

Tuesday, May 11, 2021

8:00-8:10	Opening <i>Takasada Shibauchi, Co-Chair of QLC2021 (Univ. of Tokyo, Japan)</i>
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Session 1 Chair: <i>Takami Tohyama (Tokyo Univ. of Sci., Japan)</i>	
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8:10-8:40	Nematic quantum criticality in iron-based superconductors <i>Jiun-Haw Chu (Washington Univ., USA)</i>
8:40-9:10	Orbital transmutation in FeSe <i>Andrey .V. Chubukov (Univ. of Minnesota, USA)</i>
9:10-9:40	Perfect flat band and trimerized charge ordering out of strong spin-orbit interaction <i>Chisa Hotta (Univ. of Tokyo, Japan)</i>

Session 2 Chair: <i>Hiroshi Eisaki (AIST, Japan)</i>	
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10:00-10:30	Spectroscopic evidence of an additional symmetry breaking in bulk FeSe and superconductivity pairing at 83K in single-layer FeSe films <i>Xingjiang Zhou (Institute of Physics, CAS, China)</i>
10:30-11:00	Superconductivity in infinite-layer nickelates <i>Harold Y. Hwang (Stanford Univ., USA)</i>
11:00-11:25	Materials design of layered d^8 nickelates and magnetic exchange coupling <i>Yusuke Nomura (RIKEN, Japan)</i>

11:30- Remo venue open

12:30-14:30	Poster Session 1 12:30-13:30 = core time for posters with ODD Poster number 13:30-14:30 = core time for posters with EVEN Poster number
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Session 3 Chair: <i>Ryotaro Arita (Univ. of Tokyo, Japan)</i>	
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15:00-15:25	Superconductivity-driven ferromagnetism and spin manipulation using vortices in a magnetic superconductor $\text{EuRbFe}_4\text{As}_4$ <i>Hiroshi Eisaki (AIST, Japan)</i>
15:25-15:50	Exotic pairing states in FeSe-based nematic superconductors <i>Takasada Shibauchi (Univ. of Tokyo, Japan)</i>
15:50-16:15	FFLO superconducting states in the BCS-BEC crossover superconductor FeSe <i>Shigeru Kasahara (Okayama Univ., Japan)</i>
16:15-16:40	BCS-BEC crossover controlled by electronic nematicity in $\text{FeSe}_{1-x}\text{S}_x$ <i>Kozo Okazaki (Univ. of Tokyo, Japan)</i>

Session 4 Chair: <i>Kenya Ohgushi (Tohoku Univ., Japan)</i>	
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17:00-17:30	Presaturation phases in layered quantum ferro-antiferromagnets <i>Andrey Zheludev (ETH, Switzerland)</i>
17:30-18:00	$\alpha\text{-RuCl}_3$ on graphene: subtle interplay of spin, charge and strain effects <i>Roser Valenti (Goethe Univ. Frankfurt, Germany)</i>

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Wednesday, May 12, 2021

	Session 5 Chair: Kensuke Kobayashi (Univ. of Tokyo, Japan)
8:00-8:30	Quantum Criticality in Twisted Transition Metal Dichalcogenides <i>Abhay Narayan Pasupathy (Columbia Univ., USA)</i>
8:30-9:00	Twist engineering of two-dimensional magnetism in double bilayer CrI ₃ homostructures <i>Liuyan Zhao (Univ. of Michigan, USA)</i>
9:00-9:30	Visualization of stripe domains in strongly correlated materials by microwave microscopy <i>Keji Lai (Univ. of Texas at Austin, USA)</i>

	Session 6 Chair: Takahisa Arima (Univ. of Tokyo, Japan)
10:00-10:30	Cu and Co-based materials with spin-orbit entanglement <i>Je Geun Park (Seoul Nat. Univ., Korea)</i>
10:30-11:00	Coupling superconductors to magnets via spin and flux topology <i>Christos Panagopoulos (Nanyang Tech. Univ., Singapore)</i>
11:00-11:25	Observation of unconventional ferroic domains with linear optical effect <i>Tsuyoshi Kimura (Univ. of Tokyo, Japan)</i>

11:30- Remo venue open

12:30-14:30	Poster Session 2 12:30-13:30 = core time for posters with ODD Poster number 13:30-14:30 = core time for posters with EVEN Poster number
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	Session 7 Chair: Yoshihiko Togawa (Osaka Prefecture Univ, Japan)
15:00-15:25	Thermal Hall effect induced by magnetic skyrmion lattice in GaV ₄ Se ₈ <i>Takahisa Arima (Univ. of Tokyo, Japan)</i>
15:25-15:50	Deformation of skyrmion lattice in MnSi under current flow <i>Taku J. Sato (Tohoku Univ., Japan)</i>
15:50-16:15	Nano-to-micro spatiotemporal dynamics of metastable magnetic skyrmions <i>Takahiro Shimojima (RIKEN, Japan)</i>
16:15-16:40	Photo-induced magnetization dynamics observed with synchrotron radiation and free electron lasers <i>Kohei Yamamoto (Inst. for Molecular Sci., Japan)</i>

	Session 8 Chair: Nic Shanon (OIST, Japan)
17:00-17:30	Orbital dynamics in frustrated rare earth titanate pyrochlores <i>Urs Staub (PSI, Switzerland)</i>
17:30-18:00	Chemical tuning of the compositions, structures and properties of layered chalcogenides and oxide chalcogenides <i>Simon Clarke (Univ. of Oxford, UK)</i>

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Session 9 Chair: Hiroshi Kontani (Nagoya Univ., Japan)	
8:00-8:30	The Chemistry of Quantum Spin Liquids <i>Tyrel M. McQueen (Johns Hopkins, USA)</i>
8:30-9:00	Odd-parity superconductivity in UTe_2 and $CeRh_2As_2$ <i>Daniel Agterberg (Univ. of Wisconsin-Milwaukee, USA)</i>
9:00-9:30	Quantum liquid crystals in the Hubbard model <i>Thomas Peter Devereaux (Stanford Univ., USA)</i>

Session 10 Chair: Takasada Shibauchi (Univ. of Tokyo, Japan)	
10:00-10:30	Novel aspects of nematicity and superconductivity in Fe chalcogenides <i>Peter J. Hirschfeld (Univ. of Florida, USA)</i>
10:30-11:00	Hidden phases born of a quantum spin liquid <i>SungBin Lee (KAIST, Korea)</i>
11:00-11:25	Quantum spin nematics: quantum liquid crystals in magnets <i>Nic Shannon (OIST, Japan)</i>
11:25-11:50	Nonlinear optical responses in quantum spin liquids <i>Masahiro Sato (Ibaraki Univ., Japan)</i>
11:50-12:15	Large magnetic-field-induced strain in geometrically frustrated sulfides <i>Yoshihiko Okamoto (Nagoya Univ., Japan)</i>

Session 11 Chair: Takami Tohyama (Tokyo Univ. of Sci., Japan)	
13:50-14:15	Topological spin moiré and emergent electromagnetism <i>Yukitoshi Motome (Univ. of Tokyo, Japan)</i>
14:15-14:40	Emergent transport phenomena induced by spin-chirality fluctuations in a chiral magnet MnGe <i>Naoya Kanazawa (Univ. of Tokyo, Japan)</i>
14:40-15:05	Lattice dynamics coupled to charge and spin degrees of freedom in the molecular dimer-Mott insulator <i>Takahiko Sasaki (Tohoku Univ., Japan)</i>
15:05-15:30	Unified description of bond- and charge/spin loop current orders: importance of form factor and vertex corrections <i>Rina Tazai (Nagoya Univ., Japan)</i>

Session 12 Chair: Testuo Hanaguri (RIKEN, Japan)	
15:50-16:20	Topological nematic phase transition in Kitaev magnets <i>Satoshi Fujimoto (Osaka Univ., Japan)</i>
16:20-16:50	Evolution of charge and pair density modulations in cuprate <i>Xintong Li (Peking Univ., China)</i>

16:50-17:00	Closing <i>Tsuyoshi Kimura, Co-Chair of QLC2021 (Univ. of Tokyo, Japan)</i>
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