

2017 January FCMP Japan Tour: JPARC neutron + muon + HEP Tour



REIMEI Workshop on correlated electrons and spintronics





Dinner party for JPARC Tour participants on Jan. 13, 2017

Joined by 22 grad students from the US, Canada and China,
plus 11 grad students from Univ. Tokyo and RIKEN

FCMP Symposium
on Mott Transitions
2017 Jan 17, Tokyo Univ.



Ben Frandsen



Prof. Qikun Xue
Tsinghua U
2017 Chinese
Nobel Prize

Quantum
Anomalous
Hall Effect

Five-day FCMP Tour/Workshop/Symposium in Japan: January 13-17, 2017

Jan 13: JPARC neutron and muon facility tour

at JPARC, Tokai, Ibaraki: 70 min north of Tokyo by train

Jan 14-16: REIMEI Workshop on Correlated Quantum Matters and Spintronics

at iVil Hall (former Richotte Hall), Tokai Station, Tokai, Ibaraki

Jan17: FCMP-DMREF Symposium on Mott Transitions and Computational Approaches

at Takeda Hall, University of Tokyo, Tokyo

Jan 13: Naohito Saito (JPARC Director): JPARC facilities and partiel/nuclear physics studies

Kazuhiisa Kakurai: JPARC neutron facilities and recent/future physics studies

Wataru Higemoto: JPARC muon facilities and recent/future physics studies

Tour of JPARC instruments: particle physics, neutron scattering, MuSR

Jan 14 – 16: List of speakers (all confirmed)

Sadamichi Maekawa (JAEA ASRC)	opening address
Gerrit Bauer (Tohoku IMR)	spintronics theory
Chris Bell (Bristol)	thin films
Joseph Checkelsky (MIT)	spin-dependent transport
Lieh-Jeng Chang (Cheng Kung U, Taiwan)	spin ice and Higgs theory
Pengcheng Dai (Rice)	neutron scattering in FeAs systems
Daichi Chiba (Tokyo U)	Gating manipulation of spins in devices
Yejun Feng (OIST)	x-ray studies of quantum critical phenomena
Ben Frandsen (UC Berkeley)	MuSR in RENiO ₃ and (V,Ti) ₂ O ₃
Atsushi Fujimori (Tokyo U)	ARPES / x-ray studies of multi-layer cuprates
Yann Gallais (U Paris / Tokyo U)	Raman studies of nematicity in Fe-based systems
Dustin Gilbert (NIST)	neutron detection of Skyrmions
Changqing Jin (IOP Beijing)	Andreev reflection of a junction of DMS with Pb
Naoya Kanazawa (Tokyo U)	Skyrmions in MnSi and MnGe
Gabi Kotliar (Rutgers; via simulcast)	computational methods for FeAs and Mott systems
Naoto Nagaosa (Tokyo U / RIKEN)	dynamics of Skyrmions
Yusuke Nambu (Tohoku IMR)	neutron and muon studies of frustrated magnets
Ni Ni (UCLA)	synthesis and characterization of the 112 FeAs
Fanlong Ning (Zhejiang U, China)	synthesis, NMR and MuSR of DMS systems
Yoshichika Otani (ISSP)	spintronics
Yuya Sakuraba (NIMS)	anomalous Nernst effect
Eiji Saito (IMR / ASRC)	spin current
Masahiro Sato (Ibaraki)	spin Zeebech effect
Takasada Shibauchi (U Tokyo)	quantum criticality in FeAs systems
Shinichi Shamoto (JAEA ASRC)	neutron studies in correlated magnetic systems
Shik Shin (ISSP)	ARPES studies of FeAs systems
Ross Springel (Bristol, UK)	Uranium films
Frank Zhao / Jess Crossno (Harvard)	Noise measurements using nano-scale devices
Guoqing Zheng (Okayama / Beijing IOP)	NMR studies of CuxBi ₂ Se ₃ , FeAs and cuprates
Tadashi Adachi (Sopia) / Zurab Guguchia (Columbia / PSI)	Cuprates materials and MuSR
Minoru Yamashita (ISSP)	Thermal-Hall effects of spins and phonons

Jan 17: Tokyo University Symposium Speakers (all confirmed)

Yoshinori Tokura (RIKEN, U Tokyo)	Mott transition systems and applications
Masatoshi Imada (Tokyo U)	Theory of multi orbital Mott transitions
Dimitri Basov (Columbia)	nano- and bulk-optics studies of Mott systems
Yoshiteru Maeno (Kyoto U)	current-induced phenomena of Mott Insulator Ca_2RuO_4
Yasutomo Uemura (Columbia)	first-order quantum criticality of correlated electrons
Dietrich Belitz (U Oregon Eugene)	critical behaviors in itinerant electron and Mott systems
Qikun Xue (Tsinghua U)	quantum anomalous Hall effect and single-layer FeSe
Atsushi Fujimori (Tokyo U)	closing address

There will be an **extended poster session** on Jan 17 at U Tokyo Symposium, where graduate students and post-docs are encouraged to present posters of their current research activities

We are hoping to organize **a party** in the evening of Jan 13 where our participants can make friends with their international counterparts. There is **a banquet** in the evening of Jan 15. We also plan to have **a beer toast** after Jan 17 Symposium to celebrate Qikun Xue's receiving the Future Science Prize: http://europe.chinadaily.com.cn/china/2016-09/19/content_26831850.htm

Graduate Student and Post-doc Participation from Foreign Institutions

Presently, graduate students and post-docs from the following foreign institutions are planning to attend the consecutive events of Jan 13-17, 2017:

USA: Columbia U (13), Harvard U (2), UC Berkeley (1), UCLA (1), U. Oregon Eugene (1), Rice (1)

China: IOP Beijing (2), Zhejiang U (1)

Canada: McMaster (1)

Registration: No registration fee. Everybody welcome. Fill in forms at <http://asrc.jaea.go.jp/soshiki/gr/Nanoscale-gr/files/RegistrationForm.doc>
https://docs.google.com/forms/d/e/1FAIpQLSd3-uNGxsfoylhb8_Zpo8fHqv-19FZYqAaN9FIDgwQZz8UDyQ/viewform?c=0&w=1

Date: 13 (Fri) Jan. 2017 J-PARC Tour: Conference hall (1F) at Advanced Science Research Center

10:00-12:30 Lecturers: Shoji Nagamiya (Introduction),
Naohito Saito (J-PARC facility and its particle physics)
Tour of particle physics facilities

12:30-14:00 Lunch

14:00-15:30 Lecturers: Kazuhisa Kakurai (neutron),
Wataru Higemoto (muon)

15:30-16:30 Tour guides in MLF: Kenji Nakajima, Yukinobu Kawakita, Ryoichi Kajimoto,
Wataru Higemoto, Kenji M. Kojima

18:00-20:00 Evening party at Japanese restaurant "**Hakkaku**" (029-284-0405)
<https://tabelog.com/ibaraki/A0805/A080501/8001376>

REIMEI Workshop

	(8:30 Ueno	Tokiwa	10:19 Tokai)
		Session chair	
14-Jan	10:30 - 12:00	Uemura	Maekawa opening (15), Nagaosa (45) Kanazawa (30)
	12:00 - 1:30	Lunch	
	1:30 - 3:30	Belitz	Gilbert, Frandsen, Feng, Zheng
	3:50 - 5:50	Kambe	Otani, Chiba, Springell, Bell
15-Jan	9:30-10:45	Kakurai	Kotliar (30) Dai (45)
	11:00 - 12:00	Ziman	Gallais, Ni Ni
	12:00 - 1:30	Lunch	
	1:30 - 3:30	Fujita	Shin, Shibauchi, Nambu, Bauer,
	3:50 - 5:50	Mori	Fujimori, Jin, Ning, Bo Gu,
	7:00 - 9:00	Banquet	Hotel Crystal Palace: Speech: Ziman
16-Jan	9:30 -11:00	Onoda	Chang, Yamashita, Checkelsky,
	11:15-12:35	Koike	Zhao + Crossno (35), Adachi + Guguchia (45)
	12:35 - 1:55	Lunch	
	1:55 - 4:10	Maekawa	Eiji Saito (45), Sato, Sakuraba, Shamoto
	(16:40	Tokiwa 84	from Tokai to Ueno 18:07)

Tokyo University FCMP Symposium

Jan 17

	(Session Chair)	Lecturer	
9:30 -11:00	(Checkelsky)	Tokura Imada	
11:15- 12:45	(Dai)	Basov Maeno	
12:45 - 2:00		Lunch Poster	
2:00 - 3:00		Session	
3:00-4:30	(Ziman)	Uemura Belitz	
4:45 - 5:30	(Maekawa)	Xue	
5:30 - 5:45		Fujimori	closing speech
5:45-6:00		Kampai	

Poster session on Jan.17, 2017 – quantum matter and spintronics

1	Amitava Bhattacharyya	Ramakrishna Mission Vivekananda University	Broken time-reversal symmetry probed by muon spin relaxation in the caged type superconductor Lu ₅ Rh ₆ Sn ₁₈
2	Zhendong CHI	University of Tokyo	Origin of enhanced magnetization in Co-substituted BiFeO ₃ studied by x-ray magnetic circular dichroism
3	Yosuke Nonaka	University of Tokyo	Angle-dependent XMCD study of the magnetite Fe ₃ O ₄
4	Goro Shibata	University of Tokyo	Anisotropy of spin-density distribution in La _{1-x} Sr _x MnO ₃ thin films: angle-dependent XMCD study
5	Shoya Sakamoto	Univ. of Tokyo	Electronic structure of the novel high-T _c ferromagnetic semiconductor (Ga,Fe)Sb
6	Toru Sakai	University of Hyogo	Quantum Spin Liquid of the Kagome-Lattice Antiferromagnet
7	Dita Puspita Sari	RIKEN, Osaka University	muSR study on Pairing Symmetry of Organic Superconductor lambda-(BETS) ₂ GaCl ₄
8	Retno Asih	Osaka University, RIKEN	muSR study on magnetic ordered states of pyrochlore iridates Nd ₂ Ir ₂ O ₇ and Sm ₂ Ir ₂ O ₇
9	Fahmi Astuti	RIKEN	Muon Spin Relaxation Study on the Magnetic Order of π -electrons in the Alkali metal Superoxide
10	Julia Angel	RIKEN, Hokkaido University	μ SR Studies on h ₈ - and d ₈ - β' -(BEDT-TTF) ₂ ICl ₂
11	Suguru Nakata	Univ. of Tokyo	Search for a nematic state in the cuprate superconductor Bi ₂ 212 by angle-resolved photoemission spectroscopy
12	Keisuke Koshiishi	Univ. of Tokyo	The electronic structure of BaFe ₂ As ₂ in the electronic "nematic" phase revealed by angle-resolved photoemission
13	Zizhou Gong	Columbia University	Skyrmion phase transition and low-temperature excitations in MnGe studied by MuSR
14	Keisuke Ikeda	University of Tokyo	Magnetic moment anisotropies of L1 ₀ -ordered FePt films studied by x-ray magnetic circular dichroism.
15	Yi Lin	Columbia University	Observation of Image Potential State in Oxygen-Intercalated Graphene on Iridium by Two-Photon-Photoemission Spectroscopy
16	Guo-qiang Zhao	Institute of Physics, Chinese Academy of Science	Single crystal growth and Andreev reflection junction of diluted magnetic semiconductor (BaK)(ZnMn) ₂ As ₂
17	Zurab Guguchia	Columbia University	Direct evidence for the emergence of a pressure induced nodal superconducting gap in the iron-based superconductor Ba _{0.65} Rb _{0.35} Fe ₂ As ₂
18	Masafumi Horio	University of Tokyo	ARPES of the superconducting parent compound of the electron-doped cuprates Pr ₂ CuO ₄
19	Kenta Hagiwara	University of Tokyo	Energy gap of the superconducting PrFeAsO _{1-y} studied by ARPES
20	Eve Emmanouilidou	UCLA	Transport properties of the Dirac line-node semimetals CaTX
21	Wencan Jin	Columbia University	Applications of LEEM/PEEM in electronic structure and surface physics of two-dimensional materials
22	Shengli Guo	Zhejiang University	A New Diluted Magnetic Semiconductor Li(Zn,Mn,Cu)As with Mn and Cu codoping at the same Zn sites
23	Sky Cheung	Columbia University	Understanding Magnetism and Superconductivity in Iron Pnictide Superconductors using Muon Spin Relaxation
24	Zurab Guguchia	Columbia University	Investigating the quantum phase transition in Mott insulator BaCoS ₂ tuned by pressure and Ni-substitution
25	Yusuke Nomura	University of Tokyo	Exotic s-wave superconductivity in alkali-doped fullerenes: equilibrium and non-equilibrium properties
26	Yipeng Cai	McMaster University	muSR study of spin freezing and persistent spin dynamics in NaCaNi ₂ F ₇
27	Erick Andrade	Columbia University	Strain and Scanning Tunneling Microscopy – Studying Nematicity in NaFeAs
28	Huiyuan Man	University of Tokyo	Quantum fluctuations in the Kagome spin ice state of Pr ₂ Zr ₂ O ₇
29	Giuliano Chiriacò	Columbia University	Destabilizing a Mott insulator with an electric field: 1D density wave model

Hotels (nights of):

Jan 13, 14, 15: Hotel Terrace the Garden Mito

Jan 16, 17: Akihabara Washington Hotel in Tokyo

Grad students and postdocs accommodation:

Jan 12, 13, 14, 15: JPARC Dormitory (Foreign participants)

Jan 13, 14, 15: Katsuta Crystal Hotel (Japanese participants)

Jan 16, 17: Akihabara Washington Hotel in Tokyo