

## program

### A-14-1 (14 morning 10:30-12:00 porous $^4\text{He}$ )

Chair; M. Imada

10:30-10:40 Opening

10:40-10:55 白浜 圭也 K. Shirahama Quantum Phenomena in  $^4\text{He}$  Confined in Nano-porous Structures

11:00-11:15 鈴木 勝 M. Suzuki Simultaneous Measurements of an Ultrasound and a Torsional Oscillator for  $^4\text{He}$  in a Nano-porous Glass

11:20-11:35 和田 信雄 N. Wada  $^4\text{He}$  and  $^3\text{He}$  Quantum Fluids Realized in N-Dimensional Nanopores

11:40-11:55 高橋 大輔 D. Takahashi Property of Surface Electrons on Rotating Superfluid  $^4\text{He}$

12:00-13:20 Lunch

### A-14-2 (14 afternoon 13:20- 15:00 anisotropic superconductors I)

Chair; K. Miyake

13:20-13:45 M. Sigrist Theoretical discussion of Superconductivity in Materials without Inversion Symmetry

13:50-14:05 佐藤 憲昭 N.K. Sato Magnetism and superconductivity in the ferromagnet  $\text{UGe}_2$

14:10-14:25 石田 憲二 K. Ishida Measurements of Knight Shift and Spontaneous Field in Superconducting State of  $\text{Sr}_2\text{RuO}_4$

14:30-14:45 池田 浩章 H. Ikeda Magnetic properties in the normal and superconducting states in  $\text{Sr}_2\text{RuO}_4$

14:50-15:05 天谷 健一 K. Tenya Anisotropy of the Upper Critical Field in  $\text{Sr}_2\text{RuO}_4$

15:10-15:30 Break

### A-14-3 (15:30-17:10 $^3\text{He}$ ; anisotropic superfluid with boundaries as in aerogel)

Chair; Y. Maeno

15:30-15:45 石川 修六 S. Ishikawa Superfluid  $^3\text{He}$  in aerogel and in a narrow cylinder

15:50-16:05 池田 隆介 R. Ikeda Theoretical Study of Superfluid Helium-three in Aerogels

16:10-16:25 斎藤 政通 M. Saito Investigation of Phase Transition in Submicron Superfluid  $^3\text{He}$  Film

16:30-16:45 永井 克彦 K. Nagai Surface Enhancement of Spin Susceptibility in Superfluid  $^3\text{He-B}$

16:50-17:05 松原 明 A. Matsubara Visualization of Vortex Lattice in Rotating Superfluid  $^3\text{He-A}$

### A-14-4 (17:30-18:50; anisotropic superconductors II)

Chair; M. Ogata

17:30-17:45 田仲由喜夫 Y. Tanaka Odd-frequency pairing state in superconducting junctions

17:50-18:05 浅野 泰寛 Y. Asano Josephson Spin Current in Triplet Superconductor Junctions

18:10-18:25 太田 幸則 Y. Ohta Spin-Triplet Superconductivity and Excitation Spectra in the Two-Chain Hubbard Models

18:30-18:45 横山 寿敏 H. Yokoyama Superconductor as Doped Mott Insulator in 2D Hubbard Model

18:50-20:10 Dinner

14 evening 20:10-22:00 informal discussion

Panel Discussion: Outlook of Super Clean Project

Shirahama, Wada, Maeno, Miyake, Tsubota, Ueda, Ishimoto, Fukuyama, Kono (10min. each)

A-15-1 (15 morning 8:40-10:20 quantum vortex, dynamics)

Chair; M. Ueda

8:40-8:55	坪田 誠	M. Tsubota	Quantum Turbulence ~ Another Da Vinci Code ~
9:00-9:15	矢野 英雄	H. Yano	Generation of Quantum Turbulence by a Vibrating Wire in Superfluid $^4\text{He}$
9:20-9:35	原田 賢介	K. Harada	Millimeter-wave Spectroscopy of the $(\text{He})_n\text{-HCN}$ clusters
9:40-9:55	奥田 雄一	Y. Okuda	Crystal growth of solid $^4\text{He}$ in the quantum limit
10:00-10:15	佐々木豊	Y. Sasaki	Field Induced First Order Phase Transition near Absolute Zero Between Nuclear Antiferromagnetic Phases of Solid $^3\text{He}$

10:20-10:40 Break

A-15-2 (10:40-11:40 frustration & spin liquid I)

Chair; N. Kawakami

10:40-10:55	石本 英彦	H. Ishimoto	Two-dimensional $^3\text{He}$ film on graphite in high magnetic field
11:00-11:15	桃井 勉	T. Momoi	Octupolar order in the multiple spin exchange model on a triangular lattice
11:20-11:35	常次 宏一	H. Tsunetsugu	Magnetic Properties of Spin Nematic State

11:40-12:50 poster preview I; P01-P56, 1minute each

Chair; H. Fukuyama

12:50-14:10 Lunch

15 afternoon 14:10-15:20 poster preview II; P57-P113, 1 minute each

Chair; K. Shirahama

15:20-17:50 poster session

A-15-3 (17:50-19:10 frustration & spin liquid II)

Chair; K. Kubo

17:50-18:05	引原 俊哉	T. Hikihara	Magnetic phase diagram of spin-1/2 two-leg ladder with four-spin ring exchanges
18:10-18:25	川村 光	H. Kawamura	Novel ordering of frustrated 2D triangular and 3D pyrochlore systems
18:30-18:45	坂井 徹	T. Sakai	Ring Exchange Induced Charge Stripes in 2D t-J Model
18:50-19:05	初貝 安弘	Y. Hatsugai	Quantum and Topological Orders of Quantum Liquids: use of Berry Connection and Entanglement Entropy with Bulk-Edge Correspondence

19:20- Banquet

### A-16-1 (16 morning 9:00-10:40 BEC, optical lattice)

Chair; M. Tsubota

9:00-9:15	上田 正仁	M. Ueda	Symmetry Breaking in Dilute Bose-Einstein Condensates
9:20-9:35	平野 琢也	T. Hirano	Dynamics of atomic Bose-Einstein condensates with internal degrees of freedom
9:40-9:55	町田 昌彦	M. Machida	Numerical Observation of Kolmogorov Spectrum in Rotating BEC
10:00-10:15	川上 則雄	N. Kawakami	I. Time Evolution of Energy Spectrum and Vortex Dynamics
10:20-10:35	高橋 義朗	Y. Takahashi	Correlated Fermions in Optical Lattice with Harmonic Confinement
			Quantum Simulation Using Quantum Degenerate Ytterbium Atoms in Optical Lattices

10:40-11:00 Break

### A-16-2 (11:00-12:40 2D $^3\text{He}$ )

Chair; H. Ishimoto

11:00-11:15	福山 寛	H. Fukuyama	Zero-Point Vacancies Doped into a Two-Dimensional Gapless Spin-Liquid
11:20-11:35	高木 丈夫	T. Takagi	A $7 \times 7$ phase of the second adsorbed $^3\text{He}$ layer on a graphite
11:40-11:55	小形 正男	M. Ogata	A Model Calculation of $^3\text{He}$ on Two-Dimensional Graphite
12:00-12:15	岡本 徹	T. Okamoto	Spin Polarization in Strongly Correlated 2D Systems in Semiconductors
12:20-12:35	澤田安樹	A. Sawada	Novel Quantum Phases in the Bilayer Quantum Hall Regime

12:40-14:00 Lunch

### A-16-3 (16 afternoon 14:00-16:00 Mott physics, MI transitions, quantum criticality)

Chair; H. Fukuyama

14:00-14:15	鹿野田一司	K. Kanoda	Recent results on Mott criticality in 2D organics
14:20-14:35	中村 文彦	F. Nakamura	Novel quantum phenomena in single-layered ruthenates under pressure
14:40-14:55	高木 英典	H. Takagi	Charge transport at quantum critical point in "clean" $\text{NiS}_2$ pyrite
15:00-15:15	田村 雅史	M. Tamura	Valence Bond States and Pressure-Induced Superconductivity in Quantum Triangular Antiferromagnets, $[\text{Pd}(\text{dmit})_2]$ Salts
15:20-15:35	今田 正俊	M. Imada	Topology transition vs. symmetry breaking at quantum end point of 1st-order transition
15:40-16:00	Closing	H.Fukuyama	