

# Program in Detail

## May 10th Wednesday

<b>9:00~9:40</b>	<b>Registration</b>	
<b>9:40~10:10</b>	<b>Opening</b>	
9:40	Opening address	
9:50 10AM-0	Introducing "Topological Materials Science"	N. Kawakami (20)
<b>10:10~10:50</b>	<b>Majorana Fermion</b>	chair: Y. Ando
10:10 10AM-1	Discovery of the chiral Majorana fermion	S.-C. Zhang (40)
<b>10:50~11:20 Coffee Break (30)</b>		
<b>11:20~12:50</b>	<b>Topological Quantum Devices</b>	chair: S.-C. Zhang
11:20 10AM-2	Topological Physics in HgTe-based Quantum Devices	L. Molenkamp (40)
12:00 10AM-3	Majorana bound states in superconductor-semiconductor hybrid nanowire system	M.-T. Deng (30)
12:30 10AM-4	Observation of a $4\pi$ -periodic Supercurrent in $\text{Bi}_{1-x}\text{Sb}_x$ Dirac Semimetal Based Josephson Junctions	J. de Boer (20)
<b>12:50~14:20 Lunch Break (90)</b>		
<b>14:20~16:30</b>	<b>Topology and Quantum Computing</b>	chair: S. Fujimoto
14:20 10PM-1	Topological superconductivity: Is the mean-field approach adequate?	A. Leggett (40)
15:00 10PM-2	Quantum Supremacy: checking a quantum computer with a classical supercomputer	J. Martinis (40)
15:40 10PM-3	Experimental study on correlated Andreev pairs under magnetic field in graphene	G.-H. Lee (30)
16:10 10PM-4	Generalized parafermions in multi-layered fractional quantum Hall systems	Y. Tanaka (20)
<b>16:30~17:00 Coffee Break (30)</b>		
<b>17:00~18:00</b>	<b>Poster Preview A (60)</b>	chair: T. Sato
<b>18:00~19:30</b>	<b>Poster Session A (90)</b>	

## May 11th Thursday

<b>9:30~11:10</b>	<b>Nonlinear effects, nonequilibrium states, dynamics</b>	chair: K. Nomura
9:30 11AM-1	Nonlinear and nonreciprocal responses of topological matters	N. Nagaosa (30)
10:00 11AM-2	Giant anisotropic nonlinear optical response in transition metal monpnictide Weyl semimetals	J. Orenstein (30)
10:30 11AM-3	Observation of edge states of Floquet topological phases in PT symmetric quantum walks	H. Obuse (20)
10:50 11AM-4	Fractional-Charge Excitation in a Breakdown Region of an Integer Quantum Hall System	M. Hashisaka (20)

### ***11:10~11:40 Coffee Break (30)***

<b>11:40~12:50</b>	<b>Magnetoelectric and Chiral Magnetic Effects</b>	chair: M. Sato
11:40 11AM-5	Electrodynamics of skyrmion-string, emergent monopole and axion in topological magnets	Y. Tokura (40)
12:20 11AM-6	Chiral Magnetic Effect	K. Fukushima (30)

### ***12:50~13:00 Photo (10)***

### ***13:00~14:30 Lunch Break (90)***

<b>14:30~16:10</b>	<b>Topological Semimetal</b>	chair: Y. Tokura
14:30 11PM-1	Strategies for discovering new topological semimetals	L. Schoop (30)
15:00 11PM-2	Fermiology of Weyl and Dirac materials	J. Analytis (30)
15:30 11PM-3	Quantum Hall states observed in thin films of Dirac semimetal Cd <sub>3</sub> As <sub>2</sub>	M. Uchida (20)
15:50 11PM-4	Charge Fractionalization in Quantum Hall Line Junctions for Varying Interaction Strength	N. Kumada (20)

### ***16:10~16:40 Coffee Break (30)***

<b>16:40~17:40</b>	<b>Poster Preview B (60)</b>	chair: T. Mizushima
<b>17:40~19:10</b>	<b>Poster Session B (90)</b>	

## May 12th Friday

- 9:30~10:50 Magnetic Topological Insulator** chair: L. Molenkamp
- 9:30 12AM-1 Searching for high temperature quantum anomalous Hall materials Q.-K. Xue (40)
- 10:10 12AM-2 Observation and control of the quantized conduction on the domain wall of a magnetic topological insulator K. Yasuda (20)
- 10:30 12AM-3 A large-gap magnetic topological heterostructure formed by self-organized incorporation of a ferromagnetic layer T. Hirahara (20)

### ***10:50~11:20 Coffee Break (30)***

- 11:20~12:40 Topological Magnets** chair: S. Nakatsuji
- 11:20 12AM-4 Topological edge states in honeycomb materials H.-Y. Kee (30)
- 11:50 12AM-5 Quantum Liquid state of  $J_{\text{eff}}=1/2$  isospins in complex Ir oxides H. Takagi (30)
- 12:20 12AM-6 Magnetic fluctuations of Kitaev's spin liquid M. Udagawa (20)

### ***12:40~14:40 Lunch Break (120)***

- 14:40~15:50 Spin Order and Electron Correlation** chair: Y. Matsuda
- 14:40 12PM-1 Anomalous Transport Phenomena in Non-Collinear Antiferromagnets S. Nakatsuji (30)
- 15:10 12PM-2 Extraordinary spin correlations and incipient excitonic instability of 2D Weyl fermions M. Hirata (20)
- 15:30 12PM-3 Correlation effects on Majorana modes in CeCoIn<sub>5</sub>/YbCoIn<sub>5</sub> superlattice systems - an test bed of reduction of the topological classification - T. Yoshida (20)

### ***15:50~16:20 Coffee Break (30)***

<b>16:20~17:30</b>	<b>Topological Superconductivity</b>	chair: Q.-K. Xue
16:20 12PM-4	Nematic superconducting gap of $\text{Cu}_x\text{Bi}_2\text{Se}_3$ revealed by field-angle resolved calorimetry	S. Yonezawa (30)
16:50 12PM-5	Quasi-localized bound state and spin-triplet superconductivity in doped topological insulators	G.-q. Zheng (20)
17:10 12PM-6	Topological nonsymmorphic superconductivity in $\text{UPt}_3$	Y. Yanase (20)

**17:30~18:00 Transfer to Tokyo Tech Centennial Hall**

**18:00~20:00 Information Exchange Meeting with Dinner**

## May 13th Saturday

<b>9:30~11:00</b>	<b>Topology and Symmetry</b>	chair: M. Ueda
9:30 13AM-1	Topological Crystalline Materials	M. Sato (40)
10:10 13AM-2	Odd-frequency superconducting states with different types of Meissner response: problem of coexistence	Y. Fominov (30)
10:40 13AM-3	Topological quantum criticality in confined superfluid $^3\text{He-B}$	T. Mizushima (20)

### ***11:00~11:30 Coffee Break (30)***

<b>11:30~13:00</b>	<b>Topological Insulators and Superconductors</b>	chair: Y. Maeno
11:30 13AM-4	Sub-nm probing of Topological insulators and Rashba systems	M. Morgenstern (30)
12:00 13AM-5	Unconventional topological phase transition in two-dimensional noncentrosymmetric systems	B.-J. Yang (20)
12:20 13AM-6	Exotic Phenomena in Topological Insulators and Superconductors	Y. Ando (40)

**13:00~13:10**    **Closing**