Updated: 2022/12/27, 15:42

Program of Second ExU Annual Meeting

Dec. 26:

	Title	Speaker	Chair
8:00-11:00	Preparation/Registration		
11:00-11:20	Opening and Summary of Annual Activities	Tadashi Takayanagi (YITP, Kyoto U.)	Takayanagi
11:20-11:45	A01 group report	Tomoyuki Morimae (YITP, Kyoto U.)	
11:45-12:10	Coffee Break		
12:10-12:35	B01 group report	Norihiro Iizuka (Osaka U.)	Ishibashi
12:35-13:00	B02 group report	Masaki Tezuka (Kyoto U.)	
13:00-14:30	Lunch Break		
14:30-16:00	E group report 1		Okunishi
	Theoretical research on methods to measure quantum natures of evaporating primordial black holes by using future observations	Kazunori Kohri (IPNS, KEK)	
	Application of tensor networks to elementary particle physics	Shinji Takeda (Kanazawa U.)	
	Theoretical modeling of optomechanical pendulum for testing quantumness of gravity	Kazuhiro Yamamoto (Kyushu U.)	
	Development of quantum many body system out-of-equilibrium and quantum information control with NMR	Yasuhiro Shimizu (Nagoya U.)	
	Quantum entanglement and information scrambling in inflationary models	Yasusada Nambu (Nagoya U.)	
	Study of quantum theory of gravity based on the Jackiw-Teitelboim gravity theory	Kentaroh Yoshida (Kyoto U.)	
	Generation of graph states using cold Rydberg atoms and the application to measurement-based quantum computation	Takafumi Tomita (Inst. Mol. Sci.)	
	Exploration of quantum gravity and quantum matter based on symmetry and information geometry	Hiroyasu Tajima (U. Electro-Comm.)	
16:00-16:30	Coffee Break		
16:30-17:10	Superradiant instability of rotating black strings	Keiju Murata (Nihon U.)	Shiromizu
17:10-17:40	Gongshow 1		
17:40-19:00	Poster session 1		

Dec. 27:

	Title	Speaker	Chair
9:00-9:25	B03 group report	Akihiro Ishibashi (Kindai U.)	Hotta, M.
9:25-9:50	C01 group report	Tadashi Takayanagi (YITP, Kyoto U.)	
9:50-10:15	C02 group report	Go Yusa (Tohoku U.)	
10:15-11:00	Coffee break		
11:00-12:30	E group report 2		Kobayashi
	Search of topological phenomena in correlated open quantum systems based on quantum entanglement	Tsuneya Yoshida (Tsukuba U.)	
	Mesoscopic picture of black holes from quantum information	Kotaro Tamaoka (Nihon U.)	
	Information-theoretical analysis of one-dimensional tensornetwork	Kohtaro Kato (Nagoya U.)	
	Study of physically natural method to generate t-design in quantum many-body systems based on quantum control theory	Masaki Owari (Shizuoka U.)	
	Study of emergence of spacetime in tensor network based on the renormalization group	Asato Tsuchiya (Shizuoka U.)	
	Study of novel quantum many-body phenomena originating from non-ergodicity in isolated quantum systems	Masaya Kunimi (Tokyo U. of Sci.)	
	An approach to quantum gravity from quantum information theory and condensed matter theory	Tokiro Numasawa (U. Tokyo)	
	Entanglement Witness in Quantum Frustrated Magnets	Tokuro Shimokawa (OIST)	
12:30-14:00	Group Photo + Lunch Break		
14:00-14:25	C03 group report	Tetsuya Shiromizu (Nagoya U.)	Izumi
14:25-14:50	D01 group report	Tatsuma Nishioka (Osaka U.)	
14:50-15:15	D02 group report	Kouichi Okunishi (Niigata U.)	
15:15-15:50	Coffee break		
15:50-16:30	Spectral form factor of JT gravity	Kazumi Okuyama (Niigata U.)	Nakata
16:30-17:10	ER= EPR for de Sitter	Tomonori Ugajin (Kyoto U.)	
17:10-17:40	Gongshow 2		Iizuka
17:40-19:00	Poster session 2		

Dec. 28:

	Title	Speaker	Chair
9:00-9:40	Spectral form factor and eigenstate entanglement entropy in Sachdev-Ye-Kitaev-type models	Masaki Tezuka (Kyoto U.)	Nakajima
9:40-10:20	Quantum cryptography without one-way functions	Tomoyuki Morimae (YITP, Kyoto U.)	
10:20-10:40	Coffee break		
10:40-11:20	Entanglement entropy of quantum Hall systems in torus and spherical geometry	Naokazu Shibata (Tohoku U.)	Hotta, C.
11:20-12:00	Search for tree tensor networks matching the entanglement structure of quantum many-body states	Hiroshi Ueda (QIQB, Osaka U.)	
12:00-13:20	Lunch Break		
13:20-14:00	Real-device quantum simulation of spin chains with integrable Trotterization	Takuya Okuda (U. Tokyo)	Ueda
14:00-14:40	Cosmology and Gravity beyond General Relativity	Tsutomu Kobayashi (Rikkyo U.)	
14:40-15:00	Coffee break		
15:00-15:10	Comment by Senior Scientific Research Specialist	Akihiro Minamino (Yokohama Nat. U.)	Takayanagi
15:10-15:30	Low-depth random Clifford circuits for quantum coding against Pauli noise using a tensor-network decoder	Andrew Darmawan (YITP, Kyoto U.)	
15:30-15:50	Advisor comment	Nobuyuki Imoto (U. Tokyo)	
15:50-16:00	Closing	Tadashi Takayanagi (YITP, Kyoto U.)	