

# Program of QBIC Workshop 2019

## October 9, 2019, Wednesday - Main Session (1)

- 9:50 ~ 10:00 *Opening Address* (H. Takayanagi, Vice-Rector, Director of RIST, Tokyo University of Science, Japan)
- 10:00 ~ 10:50 L. Accardi, Roma II University, Italy  
*Some recent progress in quantum Markov chains*
- 10:50 ~ 11:10 **Coffee Break**
- 11:10 ~ 11:50 I. Ojima, RIMS, Kyoto University, Japan,  
*The meaning of categorical dualities formulated by adjunctions*
- 11:50 ~ 14:00 **Lunch Break and Poster Presentation (Photo 1)**
- 14:00 ~ 14:40 S. Oryu, Emeritus Professor, Tokyo University of Science, Japan  
*An investigation for the appearance of long range nuclear potential on the ultra low energy nuclear synthesis*
- 14:40 ~ 15:20 Si Si, Emeritus Professor, Aichi Prefectural University, Myanmar  
*Some particular Gaussian Processes derived from Lévy's Brownian motion*
- 15:20 ~ 15:40 **Coffee Break**
- 15:40 ~ 16:20 N. Asai, Aichi University of Education, Japan  
*Deformed Fock spaces and operators*
- 16:20 ~ 17:00 K. Sanaka, Tokyo University of Science, Japan  
*Polarization-entangled photons based on multiple quantum interference*
- 17:00 ~ 17:20 **Coffee Break**
- 17:20 ~ 18:00 M. Asano, National Institute of Technology, Tokuyama College, Japan  
*Quantum-like Game Theory -Expansion of Nash Equilibrium*
- 18:30 ~ **Welcome Party** (at 6th floor Meeting Room in Building No.7)

**October 10, 2019, Thursday - Main Session (2)**

- 10:00 ~ 10:50 A. Jamiolkowski, Nicolaus Copernicus University, Poland  
*On Some Methods of Investigation of Nonpositive Maps*
- 10:50 ~ 11:10 **Coffee Break**
- 11:10 ~ 11:50 F. Hiai, Emeritus Professor, Tohoku University, Japan  
*Measured divergences and optimized measurements*
- 11:50 ~ 13:40 **Lunch Break and Poster Presentation (Photo 2)**
- 13:40 ~ 14:20 M. Yoshida, Kanagawa University, Japan  
*On Hida distribution and renormalization methods for quantum field theories*
- 14:20 ~ 15:00 N. Watanabe, Tokyo University of Science, Japan  
*A Note on Complexities for Quantum Compound Systems*
- 15:00 ~ 15:10 **Coffee Break**
- 15:10 ~ 15:50 T. Matsuoka, Suwa Tokyo University of Science, Japan  
*On mutual entropy*
- 15:50 ~ 16:30 S. Watabe, Tokyo University of Science, Japan,  
Y. Seki and S. Kawabata, AIST, Japan  
*Enhancing quantum annealing performance by a degenerate two-level system*
- 16:30 ~ 16:50 **Coffee Break**
- 16:50 ~ 17:20 K. Ohmura and N. Watanabe, Tokyo University of Science, Japan  
*New Formulations of Quantum Entropies and Their Applications*
- 18:00 ~ **Banquet** (at 6th floor Meeting Room in Building No.7)

**October 11, 2019, Friday - Main Session (3)**

- 10:00 ~ 10:50 A. Khrennikov, Linnaeus University, Sweden,  
*Getting rid of nonlocality from quantum physics*
- 10:50 ~ 11:10 **Coffee Break**
- 11:10 ~ 11:50 K. Kuchitsu, Tokyo University of Science, Japan  
*Long-distance signal transmission and morphogenesis in plants: roles of  $Ca^{2+}$  and reactive oxygen species*
- 11:50 ~ 14:00 **Lunch Break**
- 14:00 ~ 14:40 Y. Kondo and S. Miyazaki, Tokyo University of Science, Japan  
*Studies on expression regulation of intronic non-coding RNAs and cancer-associated long non-coding RNAs*
- 14:40 ~ 15:20 T. Toyoda and M. Fujita, Tokai University, Japan  
*Teaching Basics Physics*
- 15:20 ~ 15:40 **Coffee Break**
- 15:40 ~ 16:20 Y. Tanaka, National Institutes for Quantum and Radiological Science and Technology, Japan  
Masanari Asano, National Institute of Technology, Tokuyama College, Japan  
Makiko Yamada, National Institutes for Quantum and Radiological Science and Technology, Japan  
*Quantum cognitive classification of individual differences in dopamine*
- 16:20 ~ 17:00 T. Kamizawa, Tokyo University of Science, Japan  
*Matrix Continued Fractions and Reduction Methods*
- 17:00 ~ 17:20 **Coffee Break**
- 17:20 ~ 17:50 M. Kihara and S. Iriyama, Tokyo University of Science, Japan  
*Secure Authentication Algorithm Based on Verifiable Encryption and Its Application*