

The 3rd ERATO-SORST Quantum Computation and Information Workshop

Sanjo Conference Hall B001, The University of Tokyo, 2/28~3/1

2/28 (Mon)	
14:00-14:10	Opening Hiroshi Imai (ERATO-SORST, Univ. of Tokyo)
14:10-15:10 Session I	
14:10-14:40	Akihisa Tomita (ERATO-SORST, Hokkaido Univ.) Tokyo QKD Network and Beyond
14:40-15:10	Kenji Tsujino (ERATO-SORST) Quantum Receiver Technology for Optical Communication
15:10-15:25 Coffee Break	
15:25-16:45 Session II	
15:25-15:55	Takeshi Koshihara (Saitama Univ.) Quantum Computational Cryptography based on Quantum One-Way Function
15:55-16:25	Akinori Kawachi (Tokyo Institute of Technology) Quantum Proofs for Classical Cryptography
16:25-16:45	Kai Yuen Cheong (JAIST) On Weak Quantum Oblivious Transfer
16:45-17:00 Short Talks	
16:45-17:00	Yoshiyuki Tsuda (JEOL Ltd.)
	Rudy Raymond Harry Putra (IBM)
	Sonoko Moriyama (Tohoku Univ.)
18:00-20:00 Banquet	

3/1 (Tue)		
9:30–9:40 Greetings Kazuo Iwama (Kyoto Univ.)		
9:40–10:40 Session III		
9:40–10:10	Shigeru Yamashita (Ritsumeikan Univ.) A Restricted Quantum Circuit Class for Designing Large Quantum Circuits	
10:10–10:40	Keiji Matsumoto (ERATO–SORST, NII) Reverse Test and Characterization of Quantum Relative Entropy	
10:40–11:00 Coffee Break		
11:00–12:00 Session IV		
11:00–11:30	Jun Hasegawa (ERATO–SORST) Experimental Demonstration of Intercept–Resend Attack with Time Fluctuation of Quantum Devices on QKD	
11:30–12:00	Tomoyuki Yamakami (Univ. of Fukui) Complex–Weighted Counting Constraint Satisfaction Problems	
12:00–13:30 Lunch		
13:30–14:30 Session V		
13:30–13:45	Norie Fu (ERATO–SORST, Univ. of Tokyo) Nearest Neighbor Problem on Crystal Surface, with Application to Automatic Construction of Quantum Device	
13:45–14:00	Vorapong Suppakitpaisarn (ERATO–SORST, Univ. of Tokyo) Fast Elliptic Curve Cryptography Using Optimal Double–Base Chain	
14:00–14:15	Yoshikazu Aoshima (ERATO–SORST, Univ. of Tokyo) Enumerating Hamiltonian Paths on Acyclic USO Cube with History Based Pivot Rules	
14:15–14:30	Takahiko Sato (ERATO–SORST, Univ. of Tokyo) Path Selection in Heterogeneous Quantum Networks	
14:30–14:50 Coffee Break		
14:50–16:20 Session VI		
14:50–15:20	Tohya Hiroshima (ERATO–SORST, NEC) 1. Asymptotic teleportation and universal programmable quantum processor 2. A problem of existence of bound entangled states with non–positive partial transpose and the Hilbert’s 17th problem	
15:20–15:50	Buscemi Francesco (Nagoya Univ.) Comparison of quantum states and channels in terms of their information value	
15:50–16:20	Hiroshi Imai (ERATO–SORST, Univ. of Tokyo) Summary & Closing	