The 5th International Symposium and the 4th Student Organizing International Mini-Conference on
Information Electronics Systems,
The Westin Sendai, February 22nd to 24th, 2012

Program at a Glance

Wednesday, February 22nd, 2012

9:00-9:30		**Opening Session (Conference Room A : Take(竹))**	
		Opening Remarks	Nei Kato
		Opening Remarks	Akihisa Inoue
			(President, Tohoku University)
		GCOE Activities for Five Years	Fumiyuki Adachi
		v-QI School Outcomes	Masayuki Kawamata
9:30-10:20	1A-1	Strategic Research and Innovation in Optical Communications:	Tingye Li
		An Excited-State Lifetime of Forty Years at AT&T Bell Lads (Keynote)	(Emeritus AT&T)
10:20-10:40		**Break**	
10:40-11:20	1A-2	Vehicular Communication Networks: Opportunities and Challenges (Invited)	Weihua Zhuang
			(University of Waterloo)
11:20-12:00	1A-3	Sensitive Superconducting Detectors at Terahertz and	Jian Chen
		Optical Wavebands (Invited)	(Nanjing University)
12:00-13:20		**Lunch**	
13:20-13:50	2A-1	Challenge to Ultrafast and High-Spectral-Density Optical Communications Systems	Masataka Nakazawa
13:50-14:20	2A-2	Reflectarray Development for Elimination Blindness Propagation Channel	Kunio Sawaya
14:20-14:50	2A-3	Recent Advances in Gigabit Wireless Technology	Fumiyuki Adachi
14:50-15:20	2A-4	A Robust Optimization of Designing P2P System with Attack and Fault	Nei Kato
13:20-13:50	2B-1	Recent Progress in Spintronics Technology for Nonvolatile VLSIs	Hideo Ohno
13:50-14:20	2B-2	Tailor-Made Nano Structured Material for Highly Qualified Spin Related Devices	Migaku Takahashi
14:20-14:50	2B-3	Perspective of 10 Tbitt/inch^2 Information Storage	Hiroaki Muraoka
14:50-15:20	2B-4	Scanning Nonlinear Dielectric Microscopy	Yasuo Cho
15:20-15:40		**Break**	
15:40-16:20	3A-1	Constrained Nonnegative Matrix Factorization for Recognition Tasks from Facial Images (Invited)	Chiou-Ting Hsu
			(National Tsing Hua University)
16:20-16:40		**Break**	
16:40-17:10	3A-2	New VLSI Platform for Real-World Intelligent Integrated Systems based on Algorithm Selection	Michitaka Kameyama
17:10-17:40	3A-3	Wire-Fault-Tolerant Delay-Insensitive Asynchronous Communication Link with Current-Level Monitoring	Takahiro Hanyu
17:40-18:10	3A-4	Higher-Order Model Checking and its Applications	Naoki Kobayashi
16:40-17:10	3B-2	Nanocarbon-Nanoelectronics Oriented Nanoscopic Plasma Control	Rikizo Hatakeyama
17:10-17:40	3B-3	Self-ordered Nano-tubular Structures: Formation and Applications	Michio Niwano
17:40-18:10	3B-4	Application of the Ultrasonic Micro-spectroscopy Technology to Next-Generation Functional Glasses	Jun-ichi Kushibiki
18:10-19:40		**Welcome Reception (Hermitage 3F)**	All

Thursday, February 23rd, 2012

9:00-9:50	4A-1	Spin Based Quantum Computation with Quantum Dots: Qubit, Qubit Gate and Scale-up (Keynote)	Seigo Tarucha
			(University of Tokyo)
9:50-10:30	4A-2	Nanostructured Semiconductor Layers Grown on Oxidized Si Surfaces (Invited)	Alexander A. Shklyaev
			(The Institute of Semiconductor Physics)
10:30-10:50		**Break**	
10:50-11:20	4A-3	Multi-Photon Quantum Optics and Quantum Information	Keiichi Edamatsu
11:20-11:50	4A-4	Atomically Controlled Processing for Future Si-based Devices	Junichi Murota
11:50-13:10		**Lunch**	
13:10-15:00		Short Presentation I & II (Conference Room A: Take(竹)) (14:00-14:10 Break)	All RAs
15:00-17:00		Poster Session and Exhibition (Conference Room B: Suzume (雀) & Sakura(桜))	All Members and RAs
17:00-19:00		**Banquet (Hermitage 3F)**	All

Friday, February 24th, 2012

9:00-9:50	5A-1	Symbolic Interaction in Sound and Music (Keynote)	Gérard Assyag
			(IRCAM, CNRS, UPMC)
9:50-10:30	5A-2	High-Accuracy Design and Implementation of All Pass-Based Hilbert Transformers and Fractional Delay Filters (Invited)	Georgi Stoyanov
			(Technical University of Sofia)
10:30-10:50		**Break**	
10:50-11:20	6A-1	Toward Realizing High Sense-of-Presence Communications with 3D Spatial Sound Systems	Yôiti Suzuki
11:20-11:50	6A-2	Efficient Image Segmentation Algorithms with Flexible Shape Control	Takeshi Tokuyama
11:50-12:20	6A-3	Toward Machine Vision Technology Overcoming the Pixel Resolution Limit --- From 3D Vision to Medical Imaging ---	Takafumi Aoki
10:50-11:20	6B-1	Development of the Next Generation Highly Functional Display Systems	Tatsuo Uchida
11:20-11:50	6B-2	The Class of Digital Filters with All Second-Order Modes Equal	Masayuki Kawamata
11:50-12:20	6B-3	Probabilistic Computational Models for Statistical Inference and Learning Based on Bayesian Analysis and Belief Propagation	Kazuyuki Tanaka
12:20-12:40		**Break**	
12:40-13:20	7A-1	What Future Robots Will Understand by Analyzing Human Movements and Biological Signals (Invited)	Adrian Stoica
			(Jet Propulsion Laboratory)
13:20-13:30		**Closing Remarks**	Nei Kato
13:30		**Adjourn**	

Location of Session A: Conference Room A (Take:竹), Location of Session B: Conference Room B (Suzume:雀)