

The 2nd International Symposium on Information Electronics Systems

July 14-15, 2008 at Sendai Excel Hotel Tokyu, Sendai, Japan

Monday, July 14

9:00-9:15		Opening Session	Chair: Ryota Miyauchi
		Opening Remarks	Masataka Nakazawa (Organizing Committee Chair)
		Welcome Address	Fumiyuki Adachi (GCOE Director)
		President's Welcome Greeting	Akihisa Inoue (President, Tohoku University)
9:15-10:30	Session 1	Nano Technologies 1: Material Evaluation and Characterization	Chair: Hiroyuki Odagawa
9:15-10:00	1-1 (Invited)	The Secret Life of Ferroelectric Domain Walls	Venkatraman Gopalan (Pennsylvania State University)
10:00-10:15	1-2	Study on Si(111)7x7 Surface Using Non-contact Scanning Nonlinear Dielectric Microscopy	Yasuo Cho
10:15-10:30	1-3	Homogeneous TiO ₂ -SiO ₂ Ultra-low-expansion Glass for the Extreme Ultra-violet Lithography System	Jun-ichi Kushibiki
10:30-11:00		Break	
11:00-12:15	Session 2	Photonic Devices and Materials	Chair: Yasuyoshi Mitsumori
11:00-11:45	2-1 (Invited)	Recent Progress in Advanced Photonic Crystal Fiber Devices – in a DTU Fotonik Perspective	Anders Bjarklev (Technical University of Denmark)
11:45-12:00	2-2	Development of Entangled Photon Sources	Keiichi Edamatsu
12:00-12:15	2-3	Establishment of High Accuracy Measurement Method of LC Parameters and Surface Alignment Control	Tatsuo Uchida
12:15-13:30		Lunch	
13:30-14:45	Session 3	Optical Communication and Networks	Chair: Toshihiko Hirooka
13:30-14:15	3-1 (Invited)	Femtosecond Technology for Optical Arbitrary Waveform Generation	Erich P. Ippen (Massachusetts Institute of Technology)
14:15-14:30	3-2	New Frontiers in Optical Communication: Ultrahigh-speed Transmission and Coherent Transmission	Masataka Nakazawa
14:30-14:45	3-3	Design of High-Performance Optical Switches	Susumu Horiguchi
14:45-15:15		Break	
15:15-16:45	Session 4	Wireless Communication and Networks	Chair: Eisuke Kudoh
15:15-16:00	4-1 (Invited)	Enhancing the Social Web through Augmented Social Cognition Research	Ed Chi (PARC)
16:00-16:15	4-2	Broadband Wireless Distributed Signal Processing and Network Technology	Fumiyuki Adachi
16:15-16:30	4-3	Efficient Method of Moments for Large-scale Periodic Array Antennas	Kunio Sawaya
16:30-16:45	4-4	A New Data Gathering Scheme Based on Set Covering Technique for Mobile Sinks in WSNs	Nei Kato
16:45-18:00	Poster Session		Ball B
18:00-20:00	Banquet		Ball A

Tuesday, July 15

9:00-10:30	Session 5	Nano Technologies 2: New Materials and Processing	Chair: Toshiro Kaneko
9:00-9:45	5-1 (Invited)	Functional Carbon Nanotube and ZnO Nano-Architectures by Pulsed Plasma Deposition for Hybrid Optoelectronics Devices	Carlo Taliani (ISMN-CNR Institute)
9:45-10:00	5-2	Nanodevice-Oriented Nanoscopic Plasma Process Control	Rikizo Hatakeyama
10:00-10:15	5-3	Fabrication of Anodic Titanium Nanotubes Used for Dye-sensitized Solar Cells	Michio Niwano
10:15-10:30	5-4	Atomically Controlled Processing for Future Si-Based Devices	Jun-ichi Murota
10:30-11:00		Break	
11:00-12:30	Session 6	Magnetics and Spintronics	Chair: S. J. Greeves
11:00-11:45	6-1 (Invited)	Ferrofluids: Magnetic Liquids	Kevin O'Grady (University of York)
11:45-12:00	6-2	Perpendicular Magnetic Recording and Its Extension for High Density Data Storage Technologies	Hiroaki Muraoka
12:00-12:15	6-3	Tailor-Made Nano Structured Material for Highly Qualified Spin Related Devices	Migaku Takahashi
12:15-12:30	6-4	Control of Spins in Semiconductor Structures	Hideo Ohno
12:30-13:30		Lunch	
13:30-15:15	Session 7	Intelligent Signal Processing and Multimedia Communication	Chair: Naofumi Homma
13:30-13:45	7-1	Realization of Advanced Acoustic and Multi-Modal Information Systems	Yoiti Suzuki
13:45-14:30	7-2 (Invited)	Quo Vadis Nanoarchitectures?	Valeriu Beiu (United Arab Emirates University)
14:30-14:45	7-3	Fine-Grained Low-Power Reconfigurable VLSI for Real-World Applications	Michitaka Kameyama
14:45-15:00	7-4	Novel-Device-Based Circuit Architecture for New-Paradigm VLSI Computation	Takahiro Hanyu
15:00-15:15	7-5	High-Accuracy Machine Vision Technology Using Phase-Only Correlation	Takafumi Aoki
15:15-15:45		Break	
15:45-16:45	Session 8	Computing and Algorithm	Chair: Jinhee Chun
15:45-16:00	8-1	TyPiCal: A Type-Based Analyzer for the Pi-Calculus	Naoki Kobayashi
16:00-16:15	8-2	Consistent Digital Rays	Takeshi Tokuyama
16:15-16:30	8-3	Optimal Realizations of State-Space Digital Filters	Masayuki Kawamata
16:30-16:45	8-4	Probabilistic Information Processing and Bayesian Networks	Kazuyuki Tanaka
16:45-16:50	Closing Session		Ball A
	Closing remarks		Masataka Nakazawa (Organizing Committee Chair)