

# The 3rd International Symposium on Information Electronics Systems

Program at a Glance

July 13 – 14, 2009 at Sendai Excel Hotel Tokyu, Sendai, Japan

## Monday, July 13

<b>9:00–9:15</b>		<b>Opening Session</b>	<b>Chair: Ejiro Sumii</b>
		Opening Remarks	Kunio Sawaya
		Welcome Address	Fumiyuki Adachi
<b>9:15–10:30</b>	<b>Session 1</b>	<b>Wireless/Optical Communications and Networks (1)</b>	<b>Chair: Xiaohong Jiang</b>
9:15–9:30	1-1	New Frontiers in Optical Communication: Ultrahigh-speed Transmission and Coherent Transmission	Masataka Nakazawa
9:30–9:45	1-2	Design of Future All-Optical Routers	Susumu Horiguchi
9:45–10:00	1-3	Recent Advances in Frequency-Domain Equalization and Distributed Antenna Network	Fumiyuki Adachi
10:00–10:15	1-4	Reflectarray Development for Improvement of Wireless Propagation Channel	Kunio Sawaya
10:15–10:30	1-5	A Fault-Tolerant Topology for Broadcasting in Ad-Hoc Networks	Nei Kato
<b>10:30–11:00</b>		<b>Break</b>	
<b>11:00–12:30</b>	<b>Session 2</b>	<b>Wireless/Optical Communications and Networks (2)</b>	<b>Chair: Toshihiko Hirooka</b>
11:00–11:45	2-1(Invited)	The Progress of National 973 Project “Cognitive Radio Networks”	Zhang Ping
11:45–12:30	2-2(Invited)	Distributed Source Coding and its Research in China	Zhang Lin
<b>12:30–13:45</b>		<b>Lunch</b>	
<b>13:45–15:15</b>	<b>Session 3</b>	<b>Intelligent Signal Processing and Multimedia Communications Technologies</b>	<b>Chair: Yukio Iwaya</b>
13:45–14:30	3-1(Invited)	Haptic Collaborative Virtual Environments with Physics-Based Online –Remesh Volume Models	Hiromi T. Tanaka
14:30–14:45	3-2	Toward Highly Realistic Acoustic and Multi-Modal Information Systems	Yôiti Suzuki
14:45–15:00	3-3	Closed Form Expressions of the Balanced Realizations of Second-Order Filters	Masayuki Kawamata
15:00–15:15	3-4	High-Accuracy Machine Vision Technology Using Phase-Only Correlation – From 3D Measurement to Biomedical Imaging –	Takafumi Aoki
<b>15:15–15:45</b>		<b>Break</b>	
<b>15:45–16:30</b>	<b>Session 4</b>	<b>Computing and Algorithm</b>	<b>Chair: Tachio Terauchi</b>
15:45–16:00	4-1	Probabilistic Image Processing and Bayesian Networks	Kazuyuki Tanaka
16:00–16:15	4-2	Optimal Insertion of a Segment Highway in a City Metric	Takeshi Tokuyama
16:15–16:30	4-3	Overview of the TRecS Project	Naoki Kobayashi
<b>16:30–17:45</b>		<b>Poster Session</b>	<b>Ball B</b>
<b>17:45–19:45</b>		<b>Banquet</b>	<b>Ball A</b>

## Tuesday, July 14

<b>9:00–10:30</b>	<b>Session 5</b>	<b>New Materials and Processing</b>	<b>Chair: Masao Sakuraba</b>
9:00–9:45	5-1(Invited)	Group-IV Heteroepitaxial Films for Micro and Opto Electronic Devices	Joerg Schulze
9:45–10:00	5-2	Optoelectronic-Nanodevices Oriented Nanoscopic Plasma Control	Rikizo Hatakeyama
10:00–10:15	5-3	Self-Alignment Process for the Fabrication of a Single Electron Transistor Using Anodization of an Aluminum Microelectrode	Michio Niwano
10:15–10:30	5-4	Atomically Controlled Processing for Future Si-Based Devices	Jun-ichi Murota
<b>10:30–11:00</b>		<b>Break</b>	
<b>11:00–12:30</b>	<b>Session 6</b>	<b>Magnetics and Spintronics</b>	<b>Chair: Fumihiro Matsukura</b>
11:00–11:45	6-1(Invited)	Controlling Magnetism with Light	Theo Rasing
11:45–12:00	6-2	Future Extendability of Magnetic Recording: Shingle Writing and Bit Patterned Media	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 Spin States in Semiconductors	Hideo Ohno
<b>12:30–13:45</b>		<b>Lunch</b>	
<b>13:45–15:00</b>	<b>Session 7</b>	<b>VLSI Design and Methodologies</b>	<b>Chair: Atsushi Matsumoto</b>
13:45–14:30	7-1(Invited)	Numeric Function Generators	Jon T. Butler
14:30–14:45	7-2	Interconnection-Aware High-Level Design Methodologies for Low-Power VLSIs	Michitaka Kameyama
14:45–15:00	7-3	High-throughput Bit-Serial LDPC Decoder LSI Based on Multiple-Valued Asynchronous Interleaving	Takahiro Hanyu
<b>15:00–15:30</b>		<b>Break</b>	
<b>15:30–16:30</b>	<b>Session 8</b>	<b>Fundamentals of Materials and Devices</b>	<b>Chair: Takahiro Ishinabe</b>
15:30–15:45	8-1	Cross-Sectional Observation of Nano-Domain Dots Formed in Lithium Tantalate Single Crystal	Yasuo Cho
15:45–16:00	8-2	Ultrasonic Micro-Spectroscopy Characterization of ZnO and AlN Crystals	Jun-ichi Kushibiki
16:00–16:15	8-3	Measurement of Single-Photon-Level Optical Nonlinearities in Waveguide Media	Keiichi Edamatsu
16:15–16:30	8-4	Research and Development of High Quality and Large Size Display Based on PLC and DLC Theories	Tatsuo Uchida
<b>16:30–16:45</b>		<b>Closing Session</b>	<b>Ball A</b>
		<b>Closing Remarks</b>	Kunio Sawaya