Oral Presentation

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Room 411  November 22, 2010
Chair: Seiya ABE (The International Centre for the Study of East Asian Development)

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**Room 403**  
**November 22, 2010**  
**Chair:** Keiji IRAMINA (Kyushu University)

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### T9-3: Biomedical Engineering (III)

**Room 403**  
**November 22, 2010**  
**Chair:** Suparerk JANJARASJITT (Ubon Ratchathani University)

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**Room 405**  
**November 22, 2010**  
**Chair:** Masahiko NISHIMOTO (Kumamoto University)

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**Chair:** Takeshi FUKUSAKO (Kumamoto University)

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Chair: Yasuyuki NOGAMI (Okayama University)

A Markovian Approach with Batch Processes for Multifractal Network Traffic 757
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Tetsuya IZUTA, Yasuyuki NOGAMI, Yoshitaka MORIKAWA
Okayama University

Ultimately Customized Multiplication Algorithm in the Extension Field for Xate and R-ate Pairing with Freeman Curve 767
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Chair: Nobuo FUNABIKI (Okayama University)

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<td>Jitendra N. CHOURASIA, Preeti BAJAJ G. H. Raisoni College of Engineering</td>
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<td>Clickable Real World: Interaction with Real-World Landmarks Using Mobile Phone Camera</td>
<td>Naoyuki ABE, Wataru OOGAMI, Atsushi SHIMADA, Hajime NAGAHARA, Rin-ichiro TANIGUCHI Kyushu University</td>
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| T5-2.4                          | 17:20    | Velocity Kinematics Based Control of Rocker-Bogie Type Planetary Rover | Shrikant PARAKH, Pankaj WAHI, Ashish DUTTA Indian Institute of Technology Kanpur                |
| T5-2.5                          | 17:40    | Optimized Robust Controller for AUV-Manipulator System | Periasamy THANGAVEL, Asokan THONDIYATH, Singaperumal MAKARAM IIT Madras, **IIT Madras |

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| T5-6.4                      | 15:30    | Sp²-Bonded New Phases of BN; Their Growth by Laser-Plasma Synchronous Processing and Applications | Shojiro KOMASTU, Kazuaki KOBAYASHI, Takahiro NAGATA, Toyohiro CHIKYO National Institute for Materials Science |
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Chair: Kunihiro KANEKO (Kyushu University)

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National Taiwan Ocean University, *Institute for Information Industry

T7-3: Software Engineering
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Chair: Shigeru KUSAKABE (Kyushu University)

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Kyushu University, *National Institute of Informatics, **DENSO CORPORATION

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<td>A New CMOS Bandgap Low Voltage Reference without Resistance 1100</td>
<td>09:00-09:20</td>
<td>Rasoul DEHGHANI</td>
<td>Isfahan University of Technology</td>
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<td>Design of the Low-Noise LC Oscillator with the Digital Frequency Tuning Based on the Composite Resonator 1108</td>
<td>09:40-10:00</td>
<td>Oleg NIZHNIK, *Ramesh K. POKHAREL, Haruchi KANAYA, Keiji YOSHIDA Manenaka Human-sensing Fusion Project, *Kyushu University</td>
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<td>A New Low Power Flash ADC with Configurable Resolution 1111</td>
<td>10:00-10:20</td>
<td>Mahesh Kumar ADIMULAM, Krishna Kumar MOVVA, Sreehari VEERAMACHANENI, N Moorthy MUTHUKRISHNAN, M.B SRINIVAS Birla Institute of Technology and Science – Pilani</td>
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**T8-2: LSI Design (1)**

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<td>A High Throughput Digital Rank Order Filter in 0.18µm CMOS Technology 1117</td>
<td>11:20-11:40</td>
<td>George John TOSCANO, *Pran Kanai SAHA American International University-Bangladesh, *Bangladesh University of Engineering and Technology</td>
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<td>System-Level Simulation and Analysis of a WiMAX Direct-Conversion Receiver in 90nm CMOS 1123</td>
<td>11:40-12:00</td>
<td>Lendl Israel M. ALUNAN, Maria Theresa G. DE LEON, Christian Raymund K. ROQUE University of the Philippines</td>
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<td>Novel Design Concept and Technologies of the Switching Mode Circuit Based on the Electromagnetic Wave Theory and the Nonlinear Undulation Theory 1129</td>
<td>12:00-12:20</td>
<td>Hirokazu TOHYA, Noritaka TOYA ICAST, Inc.</td>
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<td>A Nanopower Single-Trim Voltage Reference in a 0.13µm Digital CMOS Process 1135</td>
<td>12:20-12:40</td>
<td>Yueming SUN, Jiana LOU, Xiaobo WU Zhejiang University</td>
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**T8-4: Analog Circuit Design and Analysis**

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<td>402</td>
<td>Analysis and Effects of D.C Motor Parameters Variations of the Transistor Controlled H-Bridge Motor Driver Circuit Using MATLAB Simulink® Modeling 1166</td>
<td>16:20-16:40</td>
<td>Vibhor GUPTA Panjab University</td>
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<td>Accuracy of Circuit Analysis Method Using Wavelet Transform with Adaptive Resolutions 1171</td>
<td>16:40-17:00</td>
<td>Masanori OISHI, Seichiro MORO, *Tadashi MATSUMOTO University of Fukui, *Fukui University of Technology</td>
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<td>The Implementation of an Adaptive Bandwidth All-Digital Phase-Locked Loop 1176</td>
<td>17:00-17:20</td>
<td>Chen-Feng CHEN, Yawgeng A. CHAU Yuan-Ze University</td>
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Consideration on Efficiency and Distortion in a Power-Factor-Corrected Constant-Voltage Constant-Current AC Power Supply Having Variable Capacitance Devices 1180
Akihiko KATSUKI, Takuya OKI
Kyushu Institute of Technology

T8-4.5 17:40-18:00
Design and Analysis of High Efficiency DC-DC Boost Converter with Active Resonant Technique for Small Grid-Connected PV Systems 1186
Damrong AMORNDECHAPHON, *Sutichai PREMRUDEEPREECHACHARN, **Kohji HIGUCHI
Phayao University, *Chiangmai University, **The University of Electro-Communications

WIE-4: Networks and Communications
Room 412  November 23, 2010
Chair: Ray ATARASHI (IIJ Innovation Institute, Japan)

WIE-4.1 09:00-09:20
High-Speed Fiber-Linked Remote Reconfiguration 1197
Yumiko UENO, Minoru WATANABE
Shizuoka University

WIE-4.2 09:20-09:40
An Efficient 3D NoC Synthesis by Using Genetic Algorithms 1201
Xin JIANG, Takahiroy WATANABE
Waseda University

WIE-4.3 09:40-10:00
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Ting LU, Jie ZHU
Shanghai Jiao Tong University

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Vijay LAXMI, Varsha SHARMA, Rekha AGARWAL, M. S. GAUR, V. VINEETHA
Malaviya National Institute of Technology

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Chair: Naho ITAGAKI (Kyushu University, Japan)

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Ya-Lan CHIOU, Ching-Ting LEE
National Cheng Kung University

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B. BHUVANESWAR, *K. MALATHI
Meenakshi College of Engineering, *Anna University

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FPGA Implementation of a Time Domain Reflectometry (TDR) System for Slope Monitoring Applications 1220
Miguel Carlo L. PURISIMA, Joel S. MARCIANO, JR., Roberto D. De JOYA JR., Paula P. MOGATAS, Carmela A. SALAZAR
University of the Philippines Diliman

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Chair: Seiya ABE (The International Centre for the Study of East Asian Development)

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En-Chih CHANG, *Fu-Juay CHANG, **Jiann-Fuh CHEN, **Tsong-Juu LIANG
I-Shou University, *National United University, **National Cheng Kung University

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Emad M. AHMED, Masahito SHOYAMA
Kyushu University

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An Analysis of Bidirectional Superposed Dual Active Bridge DC-DC Converter with Synchronous Rectifier 1235
Toshihiro HIROSE, *Takayuki KIMURA, **Kosuke HARADA, Hirofumi MATSUO
Nishimu Electronics Industries Co., Ltd., *Nagasaki University, **Sojo University

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E. J. YOO, T. Y. LEE, W. Y. PARK
Chungnam National University

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Chair: Masahito SHOYAMA (Kyushu University)

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Takeshi USUDA, Takeshi TAKAYANAGI, Yasuhiro MASUYA, *Yoshiki MATSUO
COSEL Co., Ltd., *Tokyo University of Technology

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En-Chih CHANG, Li-Peng YIN, *Fu-Juay CHANG, **Tsong-Juu LIANG, **Jiann-Fuh CHEN
I-Shou University, *National United University, **National Cheng Kung University

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B.L. NARASIMHARAJU, Dubey SATYA PRAKASH, S. P. SINGH
Indian Institute of Technology

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Room 406  November 24, 2010
Chair: Junya SUEHIRO (Kyushu University)

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Ngoc TRAN-HUYNH, Naebboon HOONCHAREON
Chulalongkorn University
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Apisit CHAIASAENGSKULKUL, Vijit KINARES, Norasage PATTANADECH
King Mongkut’s Institute of Technology

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ICSEAD, *Kyushu University, **Nagasaki University, ***NTT Facilities

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Pisitpol CHIRAPONGSANANURAK, Naebboon HOONCHAREON, Suchin ARUNSAWATWONG
Chulalongkorn University

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Yohei KAMIYA, Hiroshi HOSAKA, Manabu KASAHARA
The University of Tokyo

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Noriyuki KIMURA, Kenichi NAKATANI, Toshimitsu MORIZANE
Osaka Institute of Technology

T4-7: Wireless (2) Room 414 November 24, 2010
Chair: Hendra SETIAWAN (Kyushu Institute of Technology)

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Shudong FANG, Stevan BERBER, Akshya SWAIN, Saeed Ur REHMAN
The University of Auckland

T4-7.2 09:20-09:40 The Local Minima Convergence State Detector for QPSK Equalizer 1346
Jongman GIM, Seoungduk CHOI, *Changsoo EUN
Pine telecom, *Chungnam National University

T4-7.3 09:40-10:00 Doppler Estimation Based on Signal Phase Matching Principle in Wideband OFDM 1352
Jianguo HUANG, Maohua RAN, Tao ZHANG, Fangfei WU
Northwestern Polytechnical University

T4-7.4 10:00-10:20 RAM Based Physical-Layer Identity Detector for 3GPP Long Term Evolution 1356
Hendra SETIAWAN, Masayuki KUROSAKI, Hiroshi OCHI
Kyushu Institute of Technology
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Chair: Hendra SETIAWAN (Kyushu Institute of Technology)

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M. ISLAM, M. A. HANNAH, S. A. SAMAD, A. HUSSAIN
Universiti Kebangsaan Malaysia

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Gunawan WIBISONO, Dadang GUNAWAN, Lydia SARI
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Sungkyunkwan University, *Samsung Electronics

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Chair: Takeshi IKENAGA (Kyushu Institute of Technology)

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NTT Corporation, *Nagoya Institute of Technology

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Sugiyama Jogakuen University, *Nagoya Institute of Technology

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Nagoya Institute of Technology

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Dai-Hai TON-THAT, Anh-Vu DINH-DUC, Khoi PHAN-DINH
University of Technology

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Chittagong University of Engineering and Technology, *Premier University, **East West University
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**Room 403**  
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**Chair:** Yoshinori KATAYAMA (Kyushu University)

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Korea Advanced Institute of Science and Technology, *Kangwon National University, **Korea Electronic Technology Institute (KETI), ***Seoul National University, ****Eulji University

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James Cook University, *Swinburne University of Technology

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IIT Kanpur

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**Chair:** Toshihiko YOSHIMASU (Waseda University)

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University of the Philippines

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Kyushu University, *Universiti Malaysia Perlis

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National Cheng-Kung University

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King Mongkut’s Institute of Technology Ladkrabang, *Mahidol University

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### T9-5: RF Circuit Design

**Room 402**  
**November 24, 2010**

**Chair:** Toshihiko YOSHIMASU (Waseda University)

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### WIE-6: Computing Architectures and Systems, and CAS

**Room 412**  
**November 24, 2010**

**Chair:** Taeko MATSUNAGA (Waseda University, Japan)

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