

# **TENCON 2010 – 2010 IEEE Region 10 Conference**

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# Technical Program

## Oral Presentation

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### T1-1: Power Electronics (I)

Room 411 November 22, 2010

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

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**T1-1.1** 11:00-11:20  
**An Application of Genetic Algorithm and Support Vector Machine to Power Flow Allocation in Pool Trade Power System**

Mohd Herwan SULAIMAN, \*Omar ALIMAN,  
\*\*Mohd Wazir MUSTAFA,  
\*\*Saifulnizam Abd. KHALID, \*\*\*Hussain SHAREEF  
*Universiti Malaysia Perlis, \*Universiti Malaysia Pahang, \*\*Universiti Teknologi Malaysia, \*\*\*Universiti Kebangsaan Malaysia*

**T1-1.2** 11:20-11:40  
**Inverter-Based Photovoltaic Distributed Generations: Modeling and Dynamic Simulations**

Natthaphob NIMPITIWAN  
*Bangkok University*

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### T1-2: Power Electronics (II)

Room 411 November 22, 2010

Chair: Masahito SHOYAMA (*Kyushu University*)

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**T1-2.1** 13:30-13:50  
**Robust Hybrid Anti-Islanding Method for Inverter-Based Distributed Generation**

Maheer G. M. ABDOLRASOL, Saad MEKHILEF  
*University of Malaya*

**T1-2.2** 13:50-14:10  
**A Switched-Capacitor Based Embedded DC-DC Buck Converter for High Power Efficiency and High Power Density**

Biswajit MAITY, Pradip MANDAL  
*IIT Kharagpur*

**T1-2.3** 14:10-14:30  
**Dynamic Characteristics of Digitally Controlled Converter with Pole-Zero-Cancellation Technique**

Seiya ABE, \*Toshiyuki ZAITSU, \*Satoshi OBATA,  
\*\*Mariko OGAWA, \*\*Masahito SHOYAMA,  
\*\*\*Tamotsu NINOMIYA  
*ICSEAD, \*Texas Instruments Japan Ltd., \*\*Kyushu University, \*\*\*Nagasaki University*

**T1-2.4** 14:30-14:50  
**State Observer with Stator Resistance and Back-EMF Constant Estimation for Sensorless PMSM**

Jun Sung PARK, Sung Hun LEE, Cheol MOON,  
Young Ahn KWON  
*Pusan National University*

**T1-2.5** 14:50-15:10  
**Sliding Mode Observer with Parameter Estimation for Sensorless Induction Motor**

Yong Hun PARK, Kang Hyo PARK,  
Seung Chul BAEK, Young Ahn KWON  
*Pusan National University*

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### T1-3: Power Electronics (III)

Room 411 November 22, 2010

Chair: Masahito SHOYAMA (*Kyushu University*)

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**T1-3.1** 16:10-16:30  
**Power Transfer Capability Enhancement with Multitype FACTS Controllers Using Particle Swarm Optimization**

Suppakarn CHANSAREEWITTAYA,  
Peerapol JIRAPONG  
*Chiang Mai University*

**T1-3.2** 16:30-16:50  
**A Z-Source Inverter Accepting Rapid Reverse Current Flow**

Naoki YAMASHITA, Masato ASANO,  
Makoto YAMANAKA, Hirotaka KOIZUMI  
*Tokyo University of Science*

**T1-3.3** 16:50-17:10  
**Two High Speed Brushless DC Motors of Different Rotor Configuration**

Ling LUO, Weiguo LIU, Manfeng DOU  
*Northwestern Polytechnical University*

**T1-3.4** 17:10-17:30  
**Control of Three Phase Cascaded Multilevel Inverter Using Various Novel Multicarrier Pulse Width Modulation Techniques**

P. PALANIVEL, \*Subhransu Sekhar DASH  
*M.A.M College of Engineering, \*SRM University*

**T1-3.5** 17:30-17:50  
**Sensorless, Vector-Controlled, Induction Motor Drive Based on New Phase Current Reconstruction & Speed Estimation Techniques**

S. B. BODKHE, \*M. V. AWARE  
*G. H. Rasoni College of Engineering, \*Visvesvaraya National Institute of Technology*

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### T1-10: Electric Power System Hardware (I)

Room 406 November 22, 2010

Chair: Satoru SUMYOSHITANI (*Fukuoka University*)

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**T1-10.1** 11:00-11:20  
**An 800 Volts High Voltage Interconnection Level Shifter Using Floating Poly Field Plate (FPFP) Method**

Rudy Octavius SIHOMBING, Gene SHEU,  
Shao-Ming YANG, Hutomo Suryo WASISTO,  
\*Yu-Feng GUO, \*\*Shang-Hui TU, \*\*Yu-Lung CHIN,  
\*\*Jin-Shyong JAN, \*\*Chia-Hao LEE  
*Asia University, \*Nanjing University of Posts and Telecommunications, \*\*Vanguard International Semiconductor*

**T1-10.2** 11:20-11:40  
**A Novel 800V Multiple RESURF LDMOS Utilizing Linear P-Top Rings**

Hutomo Suryo WASISTO, Gene SHEU,  
Shao-Ming YANG, Rudy Octavius SIHOMBING,  
\*Yufeng GUO, \*\*Shang-Hui TU, \*\*Chia-Hao LEE,  
\*\*Yu-Lung CHIN, \*\*Jin-Shyong JAN  
*Asia University, \*Nanjing University of Posts and Telecommunications, \*\*Vanguard International Semiconductor*

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**T1-11: Electric Power System Hardware (II)**

Room 406 November 22, 2010

*Chair: Satoru SUMYOSHITANI (Fukuoka University)*

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**T1-11.1 13:30-13:50**  
**ESD Simulation on GGNMOS for 40V BCD**

Aloysius Priartanto HERLAMBANG, Gene SHEU,  
Shao-Ming YANG, Priyono Tri SULISTYANTO,  
\*Shang-Hui TU, \*Jin-Shyong JAN, \*Yeh-Ning JOU,  
\*Chia-Wei HUNG  
Asia University, \*Vanguard International  
Semiconductor Corporation

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**T1-11.2 13:50-14:10**  
**Optimal Sizing Stand-Alone PV Systems Based on the**  
**Observed Extremes over a Threshold**

Shin-Guang CHEN  
Tungnan University

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**T1-11.3 14:10-14:30**  
**Self-Adaptive Differential Evolution Algorithm for Economic**  
**Dispatch with Transmission Losses Consideration**

Thanathip SUM-IM  
Srinakharinwirot University

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**T1-11.4 14:30-14:50**  
**Detection and Classification of High Impedance Faults in**  
**Power Distribution Networks Using Multilayer SVM Classifier**

I. NIKOOFEKR, M. SARLAK, S.M. SHAHRTASH  
Iran University of Science and Technology

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**T1-11.5 14:50-15:10**  
**Measurement of Grounding Resistance by U-Shape and**  
**Square Grids**

M. A. SALAM, Saifulbahri JA'AFAR, Md. ARIFFIN  
Institute Technology Brunei

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**T1-12: Electric Power System Hardware (III)**

Room 406 November 22, 2010

*Chair: Md. Salam ABDUS (Institute Technology Brunei)*

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**T1-12.1 16:10-16:30**  
**Power Transformer Diagnosis Decision-Making Based on**  
**Unified Combination Rule and Maximax-Maximin Criterion**

A. Mohd RADZIAN, M. ITOH, T. INAGAKI  
University of Tsukuba

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**T1-12.2 16:30-16:50**  
**Harmonic Analysis and Simulation of CC-VSI for Grid**  
**Interactive PV System Using Wavelet Technique**

R.Kameswara RAO, \*G.Ravi KUMAR,  
S.S.Tulasi RAM  
JNTU College of Engineering,  
\*Bapatla Engineering college

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**T1-12.3 16:50-17:10**  
**Study on Magnetic Field Measurement around Power Lines**  
**Using Ordinary Materials with Faraday Effect**

S. SUMIYOSHITANI  
Fukuoka University

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**T2-1: Spintronics and Photonics**

Room 404 November 22, 2010

*Chair: Kouhei HAMAYA (Kyushu Univ.)*

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**T2-1.1 11:00-11:20**  
**Stochastic Nature of Current-Excited Magnetic Domain and**  
**Domain Wall Dynamics Microscopically Investigated by**  
**Lorentz Microscopy**

Yoshihiko TOGAWA, \*Takashi KIMURA,  
\*\*Ken HARADA, \*\*\*Akira TONOMURA,  
\*\*\*\*Yoshichika OTANI  
Osaka Prefecture University, \*Kyushu University,  
\*\*Hitachi Ltd., \*\*\*Institute of Physical and Chemical  
Research (RIKEN), \*\*\*\*University of Tokyo

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**T2-1.2 11:20-11:40**  
**Optimization of Interface Condition for Efficient Spin Injection**  
**in Permalloy/Cu Lateral Spin Valve**

S. YAKATA, Y. ANDO, T. KIMURA  
Kyushu University

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**T2-1.3 11:40-12:00**  
**Spectroscopic Properties of J-Aggregated Cyanine in Micro-**  
**Sized Film by Ink-Jet Spotting**

Tokuma NAKAMICHI, Yu YANG, Soichiro OMI,  
Ryo GOTO, Hirofumi WATANABE, Yuji OKI,  
\*Masayuki YAHIRO, \*\*Masanao ERA  
Kyushu University, \*Institute of Systems, Information  
and Technologies and Nanotechnologies,  
\*\*Saga University

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**T2-2: Device Simulations**

Room 404 November 22, 2010

*Chair: Akihiro IKEDA (Kyushu University)*

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**T2-2.1 13:30-13:50**  
**Impact of Doping Concentration and Donor-Layer Thickness**  
**on the dc Characterization of Symmetric Double-Gate and**  
**Single-Gate InAlAs/InGaAs/InP HEMT for Nanometer Gate**  
**Dimension-A Comparison**

Monika BHATTACHARYA, Jyotika JOGI,  
\*R.S GUPTA, Mridula GUPTA  
University of Delhi,  
\*Maharaja Agrasen Institute of Technology

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**T2-2.2 13:50-14:10**  
**Effect of Gate Voltage on the Performance of a Novel In<sub>m</sub>Ga<sub>1-</sub>**  
**mN/InN HEMT: A Quantum Mechanical Self Consistent Study**

Sakib M. MUHTADI, S. M. Sajjad HOSSAIN,  
Sherajul ISLAM, Ashraf G. BHUIYAN,  
\*M. Mofazzal HOSSAIN  
Khulna University of Engineering and Technology,  
\*East West University

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**T2-2.3 14:10-14:30**  
**Time Domain Analysis of High Speed MIS Interconnects on**  
**Lossy Substrate in RF MEMS and Integrated Circuits Using a**  
**Compact Distributed RLCG Model**

Avanish BHADAURIA  
Central Electronics Engineering Research Institute

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**T2-3: Plasma-nano Interface**

Room 404 November 22, 2010

*Chair: Tatsuru SHIRAFUJI (Osaka City University)*

**T2-3.2** 16:40-17:00  
**Synthesis of Nanoparticles Conjugated with Carbon Nanotubes Using Gas-Liquid Interfacial Plasmas** (Toshiro KANEKO, Takashi HARADA, Qiang CHEN, Rikizo HATAKEYAMA  
*Tohoku University*

**T2-3.3** 17:00-17:20  
**Effect of Water Pressure on the Size of Nanoparticles in Liquid-Phase Laser Ablation** (Wafaa SOLIMAN, Noriharu TAKADA, \*Koichi SASAKI  
*Nagoya University, \*Hokkaido University*

**T2-3.4** 17:20-17:40  
**Nano-Graphite Formation Enhanced by Fluorine in Gas Phase of Carbon Sputtering Plasmas**, Tomo IDE, Koji NISHIO, Kazuo TAKAHASHI  
*Kyoto Institute of Technology*

**T2-3.5** 17:40-18:00  
**Inactivation Mechanism of *Penicillium digitatum* Using Atmospheric Pressure Plasma** (Takayuki OHTA, \*Masafumi ITO, \*\*Sachiko ISEKI, \*\*Masaru HORI  
*Wakayama University, \*Meijo University, \*\*Nagoya University*

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### **T3-1: Face Recognition (I)**

**Room 413** November 22, 2010  
*Chair: Siu-Yeung CHO (Nanyang Technological University)*

**T3-1.1** 11:00-11:20  
**A Spectral Domain Feature Extraction Algorithm for Face Recognition** (Hafiz IMTIAZ, Shaikh Anowarul FATTAH  
*Bangladesh University of Engineering and Technology*

**T3-1.2** 11:20-11:40  
**Automatic and Accurate 3D Face Registration under the Guidance of Intra-Class Difference Measurement** (Xinmin TANG, Jing QIN, \*Wai-Man PANG  
*The Chinese University of Hong Kong, \*University of Aizu*

**T3-1.3** 11:40-12:00  
**A Novel Face Representation Toward Pose Invariant Face Recognition** (Liang YU, Sei-ichiro KAMATA, \*Yong FANG  
*Waseda University, \*Shanghai University*

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### **T3-2: Video Processing**

**Room 413** November 22, 2010  
*Chair: Alireza AHRARY (Nagasaki Institute of Applied Science)*

**T3-2.1** 13:30-13:50  
**A Robust Motion Detection Technique Using Unit Gradient Vectors** (Toshiaki KONDO  
*Thammasat University*

**T3-2.2** 13:50-14:10  
**Image Authentication by Motion Blur Consistency Verification**, Pravin KAKAR, Sudha NATARAJAN, Wee SER  
*Nanyang Technological University*

**T3-2.4** 14:30-14:50  
**A New Approach of Crowd Density Estimation** (Wei LI, Xiaojuan WU, \*Koichi MATSUMOTO, \*Hua-An ZHAO

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### **Shandong University, \*Kumamoto University**

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### **T3-3: Image Processing Applications**

**Room 413** November 22, 2010  
*Chair: Qunfei ZHAO (Shanghai Jiao Tong University)*

**T3-3.1** 16:10-16:30  
**Exudates Detection in Fundus Image Using Non-Uniform Illumination Background Subtraction**, W. SAE-TANG, W. CHIRACHARIT, W. KUMWILAIKAK  
*King Mongkut's University of Technology Thonburi*

**T3-3.2** 16:30-16:50  
**A Novel Smoke Detection Method Using Support Vector Machine** (Hidenori MARUTA, Akihiro NAKAMURA, Fujio KUOKAWA  
*Nagasaki University*

**T3-3.3** 16:50-17:10  
**Automatic Parameter Regulation for CT/MRA Viscous Fluid Registration** (Soichiro TOKUHISA, Kunihiko KANEKO  
*Kyushu University*

**T3-3.4** 17:10-17:30  
**A Novel Ship Detection Approach in Polarimetric SAR Images Based on a Foreground/Background Separation Framework** (Bin LIU, Huanyu WANG, Kaizhi WANG, Xingzhao LIU, Wenxian YU, \*Jiancheng DANG  
*Shanghai Jiao Tong University, \*Shanghai Institute of Satellite Engineering*

**T3-3.5** 17:30-17:50  
**Using Infrared Imaging Technology for Concealed Weapons Detection and Visualization** (Siu-Yeung CHO, Nanda-Pwint TIN  
*Nanyang Technological University*

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### **T4-1: Ubiquitous Network (1)**

**Room 414** November 22, 2010  
*Chair: Masato TSURU (Kyushu Institute of Technology)*

**T4-1.1** 13:30-13:50  
**LRD : A Distributed and Accurate Localization Technique for Wireless Sensors Networks** (Kouakou Jean Marc ATTOUNGBLE, Kazunori OKADA  
*The University of Electro-Communications*

**T4-1.2** 13:50-14:10  
**Efficient Network Coverage for Wireless Sensor Networks** (Wan Norsyafizan W. MUHAMAD, Nasreen Hani RODZI, Naimah Mat ISA, Norfishah Ab WAHAB  
*Universiti Teknologi MARA Malaysia*

**T4-1.3** 14:10-14:30  
**An Optimized Routing Protocol for Vehicular Ad Hoc Networks** (Huaqun GUO, \*Firdaus B. Alias THANI, \*Wai Choong WONG, Yongdong WU  
*A\*STAR, \*National University of Singapore*

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**T4-2: Ubiquitous Network (2)**

Room 414

November 22, 2010

*Chair: Masato TSURU (Kyushu Institute of Technology)*

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**T4-2.1 16:10-16:30**  
**Estimating the Initial Battery Power of Nodes and the Optimal Number of Clusters to Achieve the Expected Life Span of Wireless Sensor Networks**

Akramul AZIM, \*Mohammad Mahfuzul ISLAM,  
\*\*Golam SORWAR  
*University of Waterloo, \*Bangladesh University of Engineering and Technology,*  
*\*\*Southern Cross University*

**T4-2.2 16:30-16:50**  
**Markov Chain-Based Analytical Model of Opportunistic Routing Protocol for Wireless Sensor Networks**

Mohd Ezanee RUSLI, Richard HARRIS,  
Amal PUNCHIHEWA  
*Massey University*

**T4-2.3 16:50-17:10**  
**Modeling and Analysing a Novel Restricted Angle Scenario Model in MANET**

N VETRIVELAN, \*A V REDDY  
*Periyar Maniammai University,*  
*\*National Institute of Technology*

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**T6-1: Computing Architectures and Systems (I)**

Room 402

November 22, 2010

*Chair: Motoki AMAGASAKI (Kumamoto University)*

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**T6-1.1 13:30-13:50**  
**Recognition of Human Gait Using 2D Continuous Dynamic Programming Towards Realization of Invisible User Interfaces**

Hiroyuki TAKAI, Mika OIKAWA,  
Masahito HIRAKAWA  
*Shimane University*

**T6-1.2 13:50-14:10**  
**A Conceptual Framework for Creating Interactive Narratives**

Samiullah PARACHA, \*Osamu YOSHIE  
*Yufu City Board of Education, \*Waseda University*

**T6-1.3 14:10-14:30**  
**A Framework for Parallel Code Execution Using Java**

Mehnaz HAFEEZ, Naveed RIAZ, \*Sajjad ASGHAR,  
\*Usman A. MALIK, \*Adeel-ur- REHMAN  
*Shaheed Zulfikar Ali Bhutto Institute of Science and Technology, \*National Centre for Physics*

**T6-1.4 14:30-14:50**  
**Reducibility Considerations for an Aggregated Markov Chain**

Kutluyil DOGANCAI  
*University of South Australia*

**T6-1.5 14:50-15:10**  
**Cooperative MPR Selection to Reduce Topology Control Packets in OLSR**

Kenji YAMADA, Tsuyoshi ITOKAWA,  
Teruaki KITASUKA, Masayoshi ARITSUGI  
*Kumamoto University*

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**T6-2: Computing Architectures and Systems (II)**

Room 402

November 22, 2010

*Chair: Hyungshin KIM (Chungnam National University)*

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**T6-2.1 16:10-16:30**  
**Design and Implementation of Hard-Wired Tracking Control System**

Yasuaki TEZUKA, Shuichi ICHIKAWA,  
Yoshiyuki NODA  
*Toyohashi University of Technology*

**T6-2.2 16:30-16:50**  
**A Less Configuration Memory Reconfigurable Logic Device with Error Detect and Correct Circuit**

Qian ZHAO, Yoshihiro ICHINOMIYA,  
Yasuhiro OKAMOTO, Motoki AMAGASAKI,  
Masahiro IIDA, Toshinori SUEYOSHI  
*Kumamoto University*

**T6-2.3 16:50-17:10**  
**A Prototype Chip of Reconfigurable Logic Device Using Variable Grain Logic Cell Architecture**

Kazuki INOUE, Yasuhiro OKAMOTO, Qian ZHAO,  
Hiroki YOSHO, Komei YOSHIZAWA,  
Masahiro KOGA, Motoki AMAGASAKI, Masahiro IIDA, Morihiro KUGA, Toshinori SUEYOSHI  
*Kumamoto University*

**T6-2.4 17:10-17:30**  
**A Power-Gatable Reconfigurable Logic Chip with FeRAM Cells**

Masahiro KOGA, Masahiro IIDA,  
Motoki AMAGASAKI, \*Yoshinobu ICHIDA,  
\*Mitsuro SAJI, \*Jun IIDA, Toshinori SUEYOSHI  
*Kumamoto University, \*ROHM Co., Ltd.*

**T6-2.5 17:30-17:50**  
**A Case Study of Evaluation Technique for Soft Error Tolerance on SRAM-Based FPGAs**

Tsuyoshi KIMURA, Noritaka KAI,  
Motoki AMAGASAKI, Morihiro KUGA,  
Toshinori SUEYOSHI  
*Kumamoto University*

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**T9-1: Biomedical Engineering (I)**

Room 403

November 22, 2010

*Chair: Bor-Shyh LIN (National Chiao Tung University)*

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**T9-1.1 11:00-11:20**  
**Survey Items Essential to Feasibility Study on Satellite-Based Medical Network and Considerations Therein**

Yasumitsu TOMIOKA, Kaoru NAKADA,  
Isao NAKAJIMA  
*Tokai University*

**T9-1.2 11:20-11:40**  
**Telemedicine Framework for Bangladesh**

Ameer ALI, Ahmed FAISAL, \*Golam SORWAR  
*East West University, \*Southern Cross University*

**T9-1.3 11:40-12:00**  
**Medical Image Archiving, Processing, Analysis and Communication System for Teleradiology**

Piyamas SUAPANG, Kobchai DEJHAN,  
\*Surapun YIMMUN  
*King Mongkut's Institute of Technology Ladkrabang,*  
*\*King Mongkut's University of Technology North Bangkok*

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**T9-2: Biomedical Engineering (II)**

Room 403 November 22, 2010

*Chair: Keiji IRAMINA (Kyushu University)*

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**T9-2.1 13:30-13:50**  
**Human Cognitive Application by Using Wearable Mobile Brain Computer Interface** ( \$

Lun-De LIAO, I-Jan WANG, Che-Jui CHANG,  
Bor-Shyh LIN, Chin-Teng LIN, \*Kevin C. TSENG  
*National Chiao Tung University,*  
*\*Chang Gung University*

**T9-2.2 13:50-14:10**  
**Measurement of Cerebral Blood Oxygenation during a Verbal Fluency Task with Juggling by Means of fNIRS** ( \*

Kenji MISHIMA, Keiichi IRIE, Takafumi KATO,  
Tadashi SUETSUGU, Shigeto ARAMAKI,  
Hiroaki TANAKA, Yasuki HIGAKI, Sei HIGUCHI,  
Yoshiharu AKITAKE, Kenichi MISHIMA,  
Michihiro FUJIWARA, Hiroyuki AI, Masahiro ABIRU  
*Fukuoka University*

**T9-2.3 14:10-14:30**  
**Change of EEG Activity by Repetitive Transcranial Magnetic Stimulation** ( -

Kazuhisa NOJIMA, Yoshinori KATAYAMA,  
Keiji IRAMINA  
*Kyushu University*

**T9-2.4 14:30-14:50**  
**Investigation of Temporal Variability of Epileptic EEG Signals** ( \*

Suparek JANJARASJITT, \*Kenneth A. LOPARO  
*Ubon Ratchathani University,*  
*\*Case Western Reserve University*

**T9-2.5 14:50-15:10**  
**VLSI Implementation for Epileptic Seizure Prediction System Based on Wavelet and Chaos Theory** ( ),

Shao-Hang HUNG, Chih-Feng CHAO,  
Shu-Kai WANG, \*Bor-Shyh LIN, Chin-Teng LIN  
*National Chiao Tung University,*  
*\*National Chiao-Tung University*

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

Room 403 November 22, 2010

*Chair: Suparek JANANJARASJITT (Ubon Ratchathani University)*

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**T9-3.1 16:10-16:30**  
**The Long-Lasting Effect Caused by Direct Current for Somatosensory Evoked Potentials and High Frequency Oscillations** ( \*\*

Daisuke NOMURA, Yoshinori KATAYAMA,  
Keiji IRAMINA  
*Kyushu University*

**T9-3.2 16:30-16:50**  
**Wavelet-Based Fractal Analysis of Multi-Channel Epileptic ECoG** ( \*\* +

Suparek JANJARASJITT, \*Kenneth A. LOPARO  
*Ubon Ratchathani University,*  
*\*Case Western Reserve University*

**T9-3.3 16:50-17:10**  
**A Wearable Mobile Electrocardiogram Measurement Device with Novel Dry Polymer-Based Electrodes** ( \*\* +

I-Jan WANG, Lun-De LIAO, Yu-Te WANG,  
Chi-Yu CHEN, Bor-Shyh LIN, Shao-Wei LU,  
Chin-Teng LIN  
*National Chiao-Tung University*

**T9-3.4 17:10-17:30**  
**Cardiac Autonomic Neuropathy Evaluated by Time Asymmetric Analysis for Heart Rate Variability in Patients with Peritoneal Dialysis** ( \*\* +

Jen-Kuang LEE, \*Chuan-Wei TING,  
\*Sung-Ya TSENG, \*Ching-Yao WANG,  
\*Chih-Liang HE  
*National Taiwan University Hospital,*  
*\*Institution Technology Research Institute*

**T9-3.5 17:30-17:50**  
**Variability of Pacemaker Rhythm in a Detailed Model of Cardiac Sinoatrial Node Cells** ( \*\*, (

Zhenxing PAN, \*Shinji DOI  
*Osaka University, \*Kyoto University*

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**T10-1: Scattering and Guided Wave Analysis**

Room 405 November 22, 2010

*Chair: Masahiko NISHIMOTO (Kumamoto University)*

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**T10-1.1 11:00-11:20**  
**Spectral-Domain Analysis of Electromagnetic Scattering from Lamellar Grating with Defects** ( \*\* - \$

Koki WATANABE  
*Fukuoka Institute of Technology*

**T10-1.2 11:20-11:40**  
**Analysis of Metal Waveguides Loaded with a Dielectric Post by FEGTD Method** ( \*\* - (

Kengo TAIRA, Seiji FUJINO, \*Kazuya MIYAGI  
*Kyushu University, \*University of the Ryukyus*

**T10-1.3 11:40-12:00**  
**Two Dimensional Scattering from Double Layered Arrays of Arbitrary Shapes in Slab Medium** ( \*\* - -

Maurice SESAY, Mitushiro YOKOTA  
*University of Miyazaki*

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**T10-2: Antenna Design**

Room 405 November 22, 2010

*Chair: Takeshi FUKUSAKO (Kumamoto University)*

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**T10-2.1 13:30-13:50**  
**Development of Phased Array Systems in Japan** ( ( \$ (

Isamu CHIBA, Yoshihiko KONISHI,  
Tamotsu NISHINO  
*Mitsubishi Electric Corporation*

**T10-2.2 13:50-14:10**  
**Broadband Printed Dipole Antennas with Shaped Ground Plane** ( ( %

Rajendra Prosad GHOSH, Bhaskar GUPTA,  
S.K. CHOWDHURY  
*Jadavpur University*

**T10-2.3 14:10-14:30**  
**Effects of Ground-Plane Size on Planar UWB Monopole Antenna** ( ( %

Y. F. WENG, S. W. CHEUNG, T. I. YUK  
*The University of Hong Kong*

**T10-2.4 14:30-14:50**  
**Broadband Circularly Polarized Cavity-Backed Antenna** ( ( & \$

Ronald JOSEPH, Syuhei NAKAO,  
Takeshi FUKUSAKO  
*Kumamoto University*

**T10-2.5 14:50-15:10**  
**Circular Polarization Quality Analysis Using Cross Polarization Ratio** ( ( &

Mazlaini YAHYA, Zaiki AWANG  
*Universiti Teknologi MARA*

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**T10-3: Optoelectronics and Lasers**  
Room 405 November 22, 2010  
Chair: Daisuke NAKAMURA (Kyushu University)

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**T10-3.1** 16:10-16:30  
**Burst Error Reduction in Rewritable-Type Holographic Memory Using Scattering Recording and Phase Conjugate Retrieving** (&  
Yutaka MUTO, Masatoshi BUNSEN,  
Hirosuke FURUTA  
Fukuoka University

**T10-3.2** 16:30-16:50  
**A Distributed-Feedback Organic Waveguide Blue Laser Using Spirobifluorene Derivatives** (' ('  
Hirotaka SO, Hirofumi WATANABE, Yu YANG,  
Yuji OKI, Chihaya ADACHI  
Kyushu University

**T10-3.3** 16:50-17:10  
**Tunable Waveguide Dye Laser on a Plastic Optical Fiber** (' (' ,  
Soichiro OMI, Hiroyuki KUBOTA, Yu YANG,  
Hirofumi WATANABE, Yuji OKI  
Kyushu University

**T10-3.4** 17:10-17:30  
**Synthesis of ZnO Nanowire with Dope of Phosphorus by NAPLD and Its Characteristic Evaluation** (' (' (\$  
Akio KUMEDA, K. TOYA, K. KUBO, K. TSUTA,  
M. HIGASHIHATA, D. NAKAMURA, T. OKADA,  
\*Bingqiang CAO, \*\*Kentaro SAKAI  
Kyushu University, \*University of Jinan,  
\*\*University of Miyazaki

**T10-3.5** 17:30-17:50  
**Laser Induced Breakdown Spectroscopy Analysis of Lunar Simulants under High Vacuum Conditions** (' (' ('  
Jobin K. ANTONY, Nilesh J. VASA,  
\*V. L. N. Sridhar RAJA, \*A. S. LAXMIPRASAD  
Indian Institute of Technology Madras,  
\*LEOS, Indian Space Research Organization

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**WIE-1: Pattern recognition**  
Room 412 November 22, 2010  
Chair: Yumi IWASHITA (Kyushu University, Japan)

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**WIE-1.1** 11:00-11:20  
**A Compact 3D Descriptor in ROI for Human Action Recognition** (' (' (,  
Yanli JI, Atsushi SHIMADA, Rin-ichiro TANIGUCHI  
Kyushu University

**WIE-1.2** 11:20-11:40  
**Algorithm for Gene Selection from DNA-Microarray Data for Disease Classification** (' (' ('  
Ikumi YOSHIDA, Chakraborty GOUTAM  
Iwate Prefectureal University

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**WIE-2: Power and Energy**  
Room 412 November 22, 2010  
Chair: Junya SUEHIRO (Kyushu University, Japan)

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**WIE-2.1** 13:30-13:50  
**Design and Testing of PV Maximum Power Tracking System with MATLAB Simulation** (' (' (\* \$  
A. K. SINHA, Venkataiah MEKALA,  
S.K. SAMANTARAY  
National Institute of Technology Silchar

**WIE-2.2** 13:50-14:10  
**Optimal Location and Size Determination of FACTS Devices by Using Multiobjective Optimal Power Flow** (' (\* ,  
T. MALAKAR, N. SINHA, \*S. K. GOSWAMI,  
L. C. SAIKIA  
National Institute of Technology Silchar,  
\*Jadavpur University

**WIE-2.3** 14:10-14:30  
**Digital Sensitivity of Transmission Lines** (' (' (+'  
Rachana GARG, Parmod KUMAR,  
\*Mini S. THOMAS  
Delhi Tech. University, \*JMI

**WIE-2.4** 14:50-15:10  
**Asymmetrical DC Link Voltage Balance of a Cascaded Two Level Inverter Based STATCOM** (' (' ++  
N. N. V. Surendra BABU, D. Appa RAO,  
B. G. FERNANDES  
Indian Institute of Technology Bombay

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**WIE-3: Signal Processing**  
Room 412 November 22, 2010  
Chair: Akinori NISHIHARA (Tokyo Institute of Technology, Japan)

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**WIE-3.1** 16:10-16:30  
**Comparative Study of Acoustic Echo Cancellation Algorithms for Speech Recognition System in Noisy Environment** (' (' , '  
Urmila SHRAWANKAR, \*Vilas THAKARE  
G H Rasoni College of Engg.,  
\*SGB Amravati University

**WIE-3.2** 16:30-16:50  
**Modified Delta Encoding and Its Applications to Speech Signal** (' (' , -  
Yanna MA, Hisayori NODA, Izumi ITO,  
Akinori NISHIHARA  
Tokyo Institute of Technology

**WIE-3.3** 16:50-17:10  
**Hilbert Scan Based Tree Representation for Image Search** (' (' (-'  
Pengyi HAO, Sei-ichiro KAMATA  
Waseda University

**WIE-3.4** 17:10-17:30  
**Radiation Dose and Objective Image Quality Evaluation on Low Dose CT Image** (' (' --  
Mingna LIU, Xin YANG, Qian WANG, Ming ZHU  
Shanghai Jiaotong University

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**T1-4: Electric Power System Analysis (I)**  
Room 411 November 23, 2010  
Chair: Junya SUEHIRO (Kyushu University)

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**T1-4.1** 09:00-09:20  
**Operation and Control of Hybrid Microgrid with Angle Droop Controller** (' (' ) \$'  
Ritwik MAJUMDER, \*Arindam GHOSH,  
\*Gerard LEDWICH, \*Firuz ZARE  
ABB Corporate Research,  
\*Queensland University of Technology

**T1-4.2** 09:20-09:40  
**A New Heuristic Reconfiguration Method for Distribution Networks** (' (' ) %\$  
M. SRIKUMAR  
Nuclear Power Coop.

**T1-4.3** 09:40-10:00  
**Managing Demand with Respective Production Using Fuzzy Logic Controller for Maximum Energy Conservation** (' (' ) %  
M. Prabhavathi REDDY, A. PRAVEEN,  
Ch. VIKASCHANDRA  
CVRCE, Hyd





**T1-14.3** 12:00-12:20  
**Study for Return on Investment by Safety Protection Measures\*\* &**

Takashi MIYAKAWA, \*Shigeo UMEZAKI,  
\*\*Rituo MIHIRA  
Pilz Japan Co., Ltd.,  
\*National Institute of Occupational Safety and  
Health, \*\*Safety Assessment Co., Ltd.

**T1-14.4** 12:20-12:40  
**Optimal Load Shedding: An Economic Approach\*\*\* \$**

Deepak Kumar SINGH, Rajiv SHEKHAR,  
Prem K KALRA  
IIT Kanpur

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### **T1-15: Power and Energy -Miscellaneous (III)**

**Room 406** November 23, 2010

*Chair: Yasin KHAN (King Saud University)*

**T1-15.1** 14:10-14:30  
**Electricity Demand Forecasting of Electricité Du Lao (EDL) Using Neural Networks\*\*\* (**

V. SACKDARA, S.  
PREMRUDEEPREECHACHARN, \*K.  
NGAMSANROAJ  
Chiang Mai University,  
\*Electricity Generating Authority of Thailand (EGAT)

**T1-15.2** 14:30-14:50  
**Proposal of Using IH Cooking Heater Technology for Energy-Saving Home Appliances\*\*\* -**

S. MURAKAMI, Y. OOKUMA, T. NOGUCHI  
Kyushu Electric Power Co., Inc.

**T1-15.3** 14:50-15:10  
**Power Quality Indices of Compact Fluorescent Lamps for Residential Use – A New Zealand Study\*\* (%**

Rémy RIGO-MARIANI, \*Ramesh K. RAYUDU,  
\*\*Mike S. WITHERDEN, \*Edmund M-K. LAI  
RTE SESO, \*Massey University,  
\*\*Energy Efficiency and Conservation Authority

**T1-15.4** 15:10-15:30  
**An Intelligent Water Heating System – A Case Study\*\* (+**

P. RAVIBABU, \*Ch. VIKASCHANDRA,  
\*\*A. PRAVEEN  
ACE, \*CVRH, Hyd., \*\*CVRH

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### **T1-16: Power and Energy -Miscellaneous (IV)**

**Room 406** November 23, 2010

*Chair: Junya SUEHIRO (Kyushu University)*

**T1-16.1** 16:20-16:40  
**Parallel Computing for Smart Power Oscillation Monitoring Using Synchrophasor Measurements\*\*\*) %**

Jimmy C.-H. PENG, Andrew MEADS,  
Nirmal-Kumar C. NAIR  
University of Auckland

**T1-16.2** 17:00-17:20  
**Identification of DC Corona Generating SF<sub>6</sub> Decomposition Gases Adsorbed on CNT Gas Sensor Using FTIR Spectroscopy\*\*\*) +**

Yul MARTIN, Zhenyu LI, Takuya TSUTSUMI,  
Junya SUEHIRO, \*Kiminobu IMASAKA,  
\*\*Shinya OHTSUKA  
Kyushu University, \*Kyushu Sangyo University,  
\*\*Kyushu Institute of Technology

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### **T3-4: Face Recognition (II)**

**Room 413** November 23, 2010

*Chair: Hiroshi INABA (Waseda University)*

**T3-4.1** 09:00-09:20  
**Face Recognition with Local Gradient Derivative Patterns\*\*\* %**

Xianchun ZHENG, Sei-ichiro KAMATA, Liang YU  
Waseda University

**T3-4.2** 09:20-09:40  
**A Face Recognition Scheme Based on Spatial Correlation Function\*\*\*)**

Mirza Saquib Us SARWAR, Anika SHARIN,  
Mahmudur Rahman KHAN, Hafiz IMTIAZ,  
Shaikh Anowarul FATTAH  
Bangladesh University of Engineering and  
Technology

**T3-4.3** 09:40-10:00  
**A Novel Scheme for Face Detection Using Entropy Initialized Counterpropagation Network\*\*\* -**

Ashutosh DWIVEDI, Nishchal VERMA,  
Prem K KALRA  
IIT Kanpur

**T3-4.4** 10:00-10:20  
**Face Detection in Color Images Based on Skin Color Models\*\* +)**

Li ZOU, Sei-ichiro KAMATA  
Waseda University

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### **T3-5: Image Coding and Processing**

**Room 413** November 23, 2010

*Chair: Yoshimitsu KUROI (Kurume National College of Technology)*

**T3-5.1** 11:20-11:40  
**Advanced Zero-Block Mode Decision Algorithm for H.264/AVC Video Coding\*\* , %**

Wei-Yao CHIU, Yu-Ming LEE, Yinyi LIN  
National Central University

**T3-5.2** 11:40-12:00  
**Improving Watermark Detection Performance Using Suprathreshold Stochastic Resonance\*\* , )**

Rajib Kumar JHA, \*P. K. BISWAS, D. MISHRA  
Indian Institute of Information Technology Design  
and Manufacturing, \*IIT Kharagpur

**T3-5.3** 12:00-12:20  
**A Novel Approach for Double Image Encryption\*\* - %**

Xue Mei LI, \*Lin DAI  
Beijing Electronic Science and Technology Institute,  
\*Beijing Institute of Technology

**T3-5.4** 12:20-12:40  
**HD Resolution Intra Prediction Architecture for H.264 Decoder\*\* - \***

Jimit SHAH, K.S. RAGHUNANDAN,  
Kuruvilla VARGHESE  
CEDT, Indian Institute of Science

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### **T3-6: Signal Processing (I)**

**Room 413** November 23, 2010

*Chair: Hideki NODA (Kyushu Institute of Technology)*

**T3-6.1** 14:10-14:30  
**A Novel Class of Binary Zero-Correlation Zone Sequence Sets\*\*+\$&**

Takao MAEDA, Shigeru KANEMOTO,  
Takafumi HAYASHI  
The University of Aizu

**T3-6.2** 14:30-14:50  
**Signal Frequency Estimation Based on Modified Window Scaling Constant with Maximum Deviation Criterion**<sup>++\*</sup>  
Yang LI, Ning ZHANG, Shang SHANG, Song HAO  
*Harbin Institute of Technology*

**T3-6.3** 14:50-15:10  
**A Low-Complexity Noise Removal Technique and its Hardware Implementation**<sup>++%</sup>  
Takeaki MATSUBARA, Vasily G. MOSHNYAGA,  
Koji HASHIMOTO  
*Fukuoka University*

**T3-6.4** 15:10-15:30  
**Pre-Whiten Approach in Passive Detection Using Small Aperture Array**<sup>++%</sup>  
Qunfei ZHANG, Jing WANG, Jianguo HUANG  
*Northwestern Polytechnical University*

**T3-6.5** 15:30-15:50  
**Diagnostic Method of Low Speed Rolling Element Bearing Using AE Envelope Waveform**<sup>++%</sup>  
Takashi SAKO, Osamu YOSHIE  
*Waseda University*

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**T3-7: Speech Recognition and Processing**  
Room 413 November 23, 2010  
*Chair: Jie ZHU (Shanghai Jiao Tong University)*

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**T3-7.1** 16:20-16:40  
**Study of Acoustic Source Localization Algorithm for Planar Arrays**<sup>++&</sup>  
GVSSKR NAGANJANEYULU, K.V.S. HARI  
*Indian Institute of Science*

**T3-7.2** 16:40-17:00  
**A Spearman Correlation Coefficient Ranking for Matching-Score Fusion on Speaker Recognition**<sup>++\$</sup>  
\*Di LIU, Siu-Yeung CHO, \*Dong-Mei SUN,  
\*Zheng-Ding QIU  
*Nanyang Technological University,*  
*\*Beijing Jiaotong University*

**T3-7.3** 17:00-17:20  
**Research on Bandwidth Efficient Underwater Acoustic Communications**<sup>++'</sup>  
Chengbing HE, Jianguo HUANG, Qunfei ZHANG  
*Northwestern Polytechnical University*

**T3-7.4** 17:20-17:40  
**Personal Speech Calendar with Timing Keywords Aware and Schedule Time Prediction Functions**<sup>++(\$</sup>  
Po-Chuan LIN  
*Tung Fang Institute of Technology*

**T3-7.5** 17:40-18:00  
**An Improved Method for Predicting Fundamental Frequency Contour in Mandarin Text-to-Speech System with a Small Corpus**<sup>++()</sup>  
Liang WANG, Jie ZHU, Yao LV  
*Shanghai Jiao Tong University*

**T3-7.6** 18:00-18:20  
**A Two Pass Algorithm for Speaker Change Detection**<sup>++(-</sup>  
Sunil Kumar KOPPARAPU, Ahmed IMRAN,  
G. SITA  
*Tata Consultancy Services Limited*

**T3-7.7** 18:20-18:40  
**An Acoustic Echo Cancellation Scheme Based on Particle Swarm Optimization Algorithm**<sup>++)</sup>  
Upal MAHBUB, Partha Pratim ACHARJEE,  
Shaikh Anowarul FATTAH  
*Bangladesh University of Engineering and Technology*

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**T4-3: Theory**  
Room 414 November 23, 2010  
*Chair: Yasuyuki NOGAMI (Okayama University)*

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**T4-3.1** 09:00-09:20  
**A Markovian Approach with Batch Processes for Multifractal Network Traffic**<sup>++)</sup>  
Jusak JUSAK, Richard J. HARRIS  
*Massey University*

**T4-3.2** 09:20-09:40  
**Ordinary Pairing Friendly Curve of Embedding Degree 1 Whose Order Has Two Large Prime Factors**<sup>++\*'</sup>  
Tetsuya IZUTA, Yasuyuki NOGAMI,  
Yoshitaka MORIKAWA  
*Okayama University*

**T4-3.3** 09:40-10:00  
**Ultimately Customized Multiplication Algorithm in the Extension Field for Xate and R-ate Pairing with Freeman Curve**<sup>++\*+</sup>  
Kenta NEKADO, Yasuyuki NOGAMI,  
Yoshitaka MORIKAWA  
*Okayama University*

**T4-3.4** 10:00-10:20  
**Output Rate-Controlled Generalized Processor Sharing: End-to-End Delay Bounds Calculation**<sup>++'</sup>  
Masaki HANADA, \*Hidenori NAKAZATO,  
Hiroshi WATANABE  
*Tokyo University of Science, \*Waseda University*

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**T4-4: Security & System**  
Room 414 November 23, 2010  
*Chair: Yukinobu FUKUSHIMA (Okayama University)*

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**T4-4.1** 11:20-11:40  
**Performance Evaluation of Multi-Stage Change-Point Detection Scheme with Alert Weighting**<sup>++-</sup>  
Mari NAKAGAWA, Yukinobu FUKUSHIMA,  
\*Tutomu MURASE, \*Ryohei FUJIMAKI,  
\*\*Shunsuke HIROSE, Tokumi YOKOHIRA  
*Okayama University, \*NEC Corporation,*  
*\*\*SAS Institute Japan*

**T4-4.2** 11:40-12:00  
**RDAP: Rapid Deployment Authentication Protocol between Mobile Devices and Femtocells**<sup>++),</sup>  
Yao-Hsin CHEN, \*Li-Wei HUANG, Yue-Hsun LIN,  
Shao-Wei HUANG, Chun-Hao YEH,  
Hung-Min SUN  
*National Tsing Hua University,*  
*\*Institute for Information Industry*

**T4-4.3** 12:00-12:20  
**A New Business Model in Pay-TV Broadcasting Systems and Its Conditional Access System**<sup>++-%</sup>  
Chien-Ming CHEN, \*Hsin-Ta CHIAO,  
Shiuan-Tung CHEN, Hung-Min SUN  
*National Tsing Hua University,*  
*\*Industrial Technology Research Institute*

**T4-4.4** 12:20-12:40  
**Mitigate Web Phishing Using Site Signatures**<sup>+++ +</sup>  
Chun-Ying HUANG, Shang-Pin MA, Wei-Lin YEH,  
Chia-Yi LIN, \*Chien-Tsung LIU  
*National Taiwan Ocean University,*  
*\*Institute for Information Industry*

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**T4-5: Traffic & Optical**

Room 414 November 23, 2010

Chair: Nobuo FUNABIKI (Okayama University)

**T4-5.1** 14:10-14:30  
Early Detection of Increasing Traffic with Distributed Traffic Measurement, \$'Yukinobu FUKUSHIMA, Mamoru NIBOSHI,  
\*Tutomu MURASE, \*Ryohei FUJIMAKI,  
\*\*Shunsuke HIROSE, Tokumi YOKOHIRA  
Okayama University, \*NEC Corporation,  
\*\*SAS Institute Japan**T4-5.2** 14:30-14:50  
A Design Approach to Automotive Network Controller Based Black Box Using Master/Slave Controllers, \$-Milind KHANAPURKAR, Rajendra REWATKAR,  
Preeti BAJAJ  
G. H. Rasoni College of Engineering**T4-5.3** 14:50-15:10  
New Strategies for Efficient Traffic Grooming with Assured Survivability in De Bruijn WDM Networks, %&Monish CHATTERJEE, Ankur PAUL,  
Somarka CHAKRAVARTI, \*Abhijit SHARMA,  
\*\*Tanmay KARMY, \*\*Uma BHATTACHARYA  
Asnasol Engineering College,  
\*National Institute of Technology, \*\*Bengal Engg. &  
Sc. University Shibpur**T4-5.4** 15:10-15:30  
A Node Aggregation Approach for WDM Ring Networks, &Nobuo FUNABIKI, Toru NAKANISHI,  
Megumi ISOGAI  
Okayama University

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**T4-6: Wireless (1)**

Room 414 November 23, 2010

Chair: Mark GREGORY (RMIT University)

**T4-6.1** 16:20-16:40  
On the Decodable Probability Bound of Linear Network Coding in Acyclic Lossy Networks, &Wuttipong KUMWILAISAK  
King Mongkut's University of Technology**T4-6.2** 16:40-17:00  
Performance Analysis of Uplink Sounding in Frequency Selective Fading Channel, ')Hyung-Sin KIM, Seung-Hwan LEE,  
Yong-Hwan LEE  
Seoul National University**T4-6.3** 17:00-17:20  
Fixed Contention Window Backoff Scheme for the Contention-Based IEEE 802.11 MAC, (%Yaw-Wen KUO, Tung-Lin TSAI  
National Chi Nan University**T4-6.4** 17:20-17:40  
User Grouping and Adaptive Modulation for Downlink MC-CDMA Systems, (\*Chun-Chieh LU, Guan-Yi SHEN, Yaw-Wen KUO  
National Chi Nan University**T4-6.5** 17:40-18:00  
Pricing and Optimal Power Allocation in Collaborative Primary-Secondary Transmission Using Superposition Coding, )%Insook KIM, Dongwoo KIM  
Hanyang University**T4-6.6** 18:00-18:20  
Fair, Class Based, Delay Jitter Controlled Packet Scheduling Scheme Managing Handoff and Buffer Occupancy for 4G Wireless Access Systems, )\*Hussain MOHAMMED, Mark A. GREGORY  
RMIT University

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**T10-4: Microwave Devices**

Room 405 November 23, 2010

Chair: Mohad Fadzil Ain (Universiti Sains Malaysia)

**T10-4.1** 09:00-09:20  
A Compact and UWB Time-Delay Line Inspired by CRLH TL Unit Cell, \*&J. ZHANG, S.W. CHEUNG, T.I. YUK  
The University of Hong Kong**T10-4.2** 09:20-09:40  
Parasitic Dielectric Resonators Excited Horn Antenna at 38GHz, \*+Mohd Fadzil AIN, Zainal Arifin AHMAD,  
Mohamadarif OTHMAN, Ihsan Ahmad ZUBIR,  
\*Ali OTHMAN, \*Ahmad Asari SULAIMAN  
Universiti Sains Malaysia,  
\*Universiti Teknologi MARA**T10-4.3** 09:40-10:00Design of 5<sup>th</sup>-Order Analog Predistorter, +\$X.L. SUN, S.W. CHEUNG, T.I. YUK  
The University of Hong Kong

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**T10-5: Radio Wave Propagation**

Room 405 November 23, 2010

Chairs: Horace KING (BioMed and WireLess Technologies) and Mayumi MATSUNAGA (Ehime University)

**T10-5.1** 11:20-11:40  
An Analysis of the Electromagnetic Waves Propagating inside Rooms in which People Exist, +{Mayumi MATSUNAGA, \*Toshiaki MATSUNAGA  
Ehime University, \*Fukuoka Institute of Technology**T10-5.2** 11:40-12:00  
Performance Analysis of Smart Antenna System for Mobile Terminals, +,Hak-Lim KO, Yong-Hyun SEO, Kil-Yong KIM,  
Deok-Won YUN, Ok-Min KIM, Dae-Geon CHO,  
Seok-Hoon LEE  
Hoseo University**T10-5.3** 12:00-12:20  
Comparison between Xia and Walfisch-Ikegami Models for Low-Rise Building Path Loss Prediction, , 'Supachai PHAIBOON, Pisit PHOKHARATKUL  
Mahidol University**T10-5.4** 12:20-12:40  
Performance Analysis of SOHO in DSSS Composite Neighbour Sets: A Function of  $E_b/N_0$  and BER Influenced by Peak Electromagnetic Field Intensity of an  $N$ -Element Linear Array Antenna, , +Horace L. KING  
BioMed and Wireless Technologies

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**T5-1: Image Analysis**

Room 405 November 23, 2010

Chair: Rin-ichiro TANIGUCHI (Kyushu University)

**T5-1.1** 14:10-14:30  
Fault-Tolerant Image Filter Design Using GA, - %Zhiguo BAO, Fangfang WANG, Xiaoming ZHAO,  
Takahiro WATANABE  
Waseda University

**T5-1.2** **14:30-14:50**  
**A Reliability Estimation Method of Character Recognition Using Maximization of Error-Rejection Rate**, - +  
Yoshimasa KIMURA, Hiroyuki NISHI, Eiich MUKAI  
*Sojo University*

**T5-1.3** **14:50-15:10**  
**A Novel Approach for Traffic Sign Detection and Classification with Centroid Matching** - \$  
Jitendra N. CHOURASIA, Preeti BAJAJ  
*G. H. Rasoni College of Engineering*

**T5-1.4** **14:10-15:30**  
**Clickable Real World: Interaction with Real-World Landmarks Using Mobile Phone Camera** - \$,  
Naoyuki ABE, Wataru OOGAMI, Atsushi SHIMADA, Hajime NAGAHARA, Rin-ichiro TANIGUCHI  
*Kyushu University*

**T5-1.5** **15:30-15:50**  
**Bicycle Detection Using Pedaling Movement by Spatiotemporal Gabor Filtering** - %&  
Kazuyuki TAKAHASHI, Yasutaka KURIYA, Takashi MORIE  
*Kyushu Institute of Technology*

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## **T5-2: Robotics and Applications**

**Room 405** **November 23, 2010**  
*Chair: Yoshimasa KIMURA (Sojo University)*

**T5-2.1** **16:20-16:40**  
**Automatic Construction of Gesture Network for Gesture Recognition** - %&  
Akihiro MORI, Seiichi UCHIDA, Ryo KURAZUME, Rin-ichiro TANIGUCHI, Tsutomu HASEGAWA  
*Kyushu University*

**T5-2.2** **16:40-17:00**  
**System of Recognizing Human Action by Mining in the Intelligent Space** - &  
Kazumasa MURAKAMI, Yihsin HO, Takahiro IJIMA, Toru YAMAGUCHI  
*Tokyo Metropolitan University*

**T5-2.3** **17:00-17:20**  
**On the Motion Planning of Human-Like Reaching Movements by a Minimum Variance Model** - &+  
Mikhail SVININ, Motoji YAMAMOTO  
*Kyushu University*

**T5-2.4** **17:20-17:40**  
**Velocity Kinematics Based Control of Rocker-Bogie Type Planetary Rover** - ' '  
Shrikant PARAKH, Pankaj WAHI, Ashish DUTTA  
*Indian Institute of Technology Kanpur*

**T5-2.5** **17:40-18:00**  
**Optimized Robust Controller for AUV-Manipulator System** - ' - '  
Periasamy THANGAVEL, Asokan THONDIYATH, Singaperumal MAKARAM  
*IIT Madras, \*IIT Madras, \*\*IIT Madras*

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## **T2-4: Devices**

**Room 404** **November 23, 2010**  
*Chair: Taizo SADOH (Kyushu Univ.)*

**T2-4.1** **09:00-09:20**  
**Grain Filtering in MILC and Its Impact on Performance on n- and p-channel TFTs** - ( )  
Sho NAGATA, Gou NAKAGAWA, Tanemasa ASANO  
*Kyushu University*

**T2-4.2** **09:20-09:40**  
**RF MEMS DMTL Phase Shifter on Low-Resistivity Silicon for Ku Band with Reduced Substrate Loss** - ) %  
Avra KUNDU, Bhaskar GUPTA, \*Hiranmay SAHA, \*\*Binay K. SARKAR, \*\*Samir K. LAHIRI  
*Jadavpur University, \*Bengal Engineering and Science University, \*\*I.I.T, Kharagpur*

**T2-4.3** **09:40-10:00**  
**Electric Conduction Improvement of Well-Structured Multi-Walled Carbon Nanotubes** - ) +  
J. T. H. TSAI, Y. T. CHIAO, \*Y. ZHANG, \*W. I. MILNE  
*Tatung University, \*University of Cambridge*

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## **T2-5: Processing**

**Room 404** **November 23, 2010**  
*Chair: Giichiro UCHIDA (Kyushu Univ.)*

**T2-5.1** **11:20-11:50**  
**Generation and Characterisation of Nano Tungsten Carbide Particle by Wire Explosion Process (Invited Paper)** - \* \$  
B. DEBALINA, M. KAMARAJ, N.J. VASA, S. R. CHAKRAVARTHI, R. SARATHI  
*IIT Madras*

**T2-5.2** **11:50-12:20**  
**Control of Crystalline and Electronic Structures of Carbon Nanowalls for Their Device Applications (Invited Paper)** - \*\*  
Hiroki KONDO, Masaru HORI, \*Mineo HIRAMATSU  
*Nagoya University, \*Meijo University*

**T2-5.3** **12:20-12:40**  
**Etch Chemistry Effect Study for Poly Stringer Defecton High Topology PIP Process** - + \$  
Gladys NGIAW, Oh Sang HUN, Chai Yu CHEN, You Hyuk JOON  
*X-FAB Sarawak Sdn. Bhd*

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## **T2-6: ZnO-related Material I**

Session co-sponsored by Special Coordination Funds for Promoting Science and Technology

**Room 404** **November 23, 2010**  
*Chair: M. S. Ramachandra RAO (Indian Institute of Technology Madras, India)*

**T2-6.1** **14:10-14:40**  
**Structure and Photoluminescence of C-Axis Oriented Nnanocrystalline ZnO Films Synthesized by Plasma Assisted Pulsed Laser Deposition (Invited Paper)** - + )  
Jie GAN, Kun GAO, Qian LI, Jian SUN, Ning XU, Jiada WU  
*Fudan University*

**T2-6.2** **14:40-15:10**  
**Radial and Axial Nanowire Heterostructures Grown with ZnO Nanowires as Templates (Invited Paper)** - , \$  
B. Q. CAO, X. L. HU, H. M. WEI, H. Y. XU  
*University of Jinan*

**T2-6.3** **15:10-15:30**  
**Synthesis of Layer-Structured ZnO Nano-Crystals by Nanoparticle-Assisted Pulsed Laser Deposition** - , ( )  
D. NAKAMURA, K. OKAZAKI, A. KUMEDA, K. TOYA, K. KUBO, K. TSUTA, M. HIGASHIHATA, T. OKADA  
*Kyushu University*

**T2-6.4** **15:30-15:50**  
**Sp<sup>3</sup>-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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**T2-7: ZnO-related Material II**

Session co-sponsored by Special Coordination  
Funds for Promoting Science and Technology

**Room 404 November 23, 2010**

*Chair: Bing Quiang CAO (University of Jinan,  
China)*

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**T2-7.1 16:20-16:50**  
**Thin Film Growth, Electrical Transport and Ohmic Contact  
Studies of p-ZnO (Invited Paper)** - , -

E. Senthil KUMAR, Jyothirmoy CHATERJEE,  
Shubra SINGH, Nandita DASGUPTA,  
M. S. Ramachandra RAO  
*Indian Institute of Technology Madras*

**T2-7.2 16:50-17:20**  
**Novel Fabrication Method for Oxide Semiconductors Via  
Atomic-Additive Mediated Crystallization (Invited Paper)** - - &  
Naho ITAGAKI  
*Kyushu University*

**T2-7.3 17:20-17:40**  
**Deposition of Transparent Conducting Al-Doped ZnO Thin  
Films by ICP-Assisted Sputtering** - - \*

Ryota SHINDO, Tadashi IWATA,  
Akinori HIRASHIMA, Masanori SHINOHARA,  
Yoshinobu MATSUDA  
*Nagasaki University*

**T2-7.4 17:40-18:00**  
**Low-Temperature Photoluminescence of Phosphorous-  
Doped ZnO Nanowires Synthesized by Nanoparticle-Assisted  
Pulsed-Laser Deposition** %\$\$%

Kentaro SAKAI, Atsuhiko FUKUYAMA,  
Tetsuo IKARI, \*Tatsuo OKADA  
*University of Miyazaki, \*Kyushu University*

**T2-7.5 18:00-18:20**  
**Recombination Dynamics of Excitons in Phosphorus-Doped  
ZnO Nanostructures** %\$\$)

Hideaki MUROTANI, Daiki AKASE, Yoichi YAMADA,  
\*Takafumi MATSUMOTO, \*Daisuke NAKAMURA,  
\*Tatsuo OKADA  
*Yamaguchi University, \*Kyushu University*

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**T7-1: Modeling and Theoretical Aspects**

**Room 403 November 23, 2010**

*Chair: Yoichi OMORI (Kyushu University)*

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**T7-1.1 09:00-09:20**  
**Enterprise Service Bus Dependency Injection on MVC Design  
Patterns** %\$\$-

Sidhant RAJAM, Ruth CORTEZ,  
Alexander VAZHENIN, Subhash BHALLA  
*University of Aizu*

**T7-1.2 09:20-09:40**  
**Robust Genetic Network Programming on Asset Selection** %\$\$)  
Victor PARQUE, Shingo MABU, Kotaro HIRASAWA  
*Waseda University*

**T7-1.3 09:40-10:00**  
**Theoretical Analysis on Pruning Nearest Neighbor  
Candidates by Locality Sensitive Hashing** %\$\$&

Tomoyuki MUTOH, Masakazu IWAMURA,  
Koichi KISE  
*Osaka Prefecture University*

**T7-1.4 10:00-10:20**  
**A Heuristic Algorithm for Computing Parallel Degree of Well-  
Structured Workflow Nets** %\$\$&

Nan QU, Shingo YAMAGUCHI  
*Yamaguchi University*

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**T7-2: Network and Remote System**

**Room 403 November 23, 2010**

*Chair: Kunihiko KANEKO (Kyushu University)*

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**T7-2.1 11:20-11:50**  
**Recovery Processing for High Availability Stream Processing  
Systems in Local Area Networks (Invited Paper)** %\$\$ \$

Masayoshi ARITSUGI, Kyoko NAGANO  
*Kumamoto University*

**T7-2.2 11:50-12:10**  
**Study of a Remote Monitoring System for Senior Drivers** %\$\$ \*

Hiroyuki YAMAGISHI, Hidekazu SUZUKI,  
Akira WATANABE  
*Meijo University*

**T7-2.3 12:10-12:30**  
**Accelerate In-Line Packet Processing Using Fast Queue** %\$\$ (&

Chun-Ying HUANG, Chi-Ming CHEN, Shu-Ping YU,  
Sheng-Yao HSU, \*Chih-Hung LIN  
*National Taiwan Ocean University,  
\*Institute for Information Industry*

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**T7-3: Software Engineering**

**Room 403 November 23, 2010**

*Chair: Shigeru KUSAKABE (Kyushu University)*

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**T7-3.1 14:10-14:30**  
**Ontology Based Semiformal Design of Teleteaching System** %\$\$ (+

Animesh DUTTA, Vivek NAIR,  
\*Ranjan DASGUPTA, Swapan BHATTACHARYA  
*NIT Durgapur, \*NITTTR Kolkata*

**T7-3.2 14:30-14:50**  
**Reusable Aspect Components for Web Applications** %\$\$)'

Keiji HOKAMURA, Naoyasu UBAYASHI,  
\*Shin NAKAJIMA, \*\*Akihito IWAI  
*Kyushu University, \*National Institute of Informatics,  
\*\*DENSO CORPORATION*

**T7-3.3 14:50-15:10**  
**Tool Support for Domain Analysis of the Software  
Specification in Natural Language** %\$\$) -

Yoichi OMORI, Keijiro ARAKI  
*Kyushu University*

**T7-3.4 15:10-15:30**  
**Perverse UML for Generating Web Applications Using  
YAMDAT** %\$\$\*)

Kurt T. RUDAHL, Sally E. GOLDIN  
*King Mongkut's University of Technology Thonburi*

**T7-3.5 15:30-15:50**  
**A Relationship between the Quality Attributes and the Trust in  
Financial Services Information Systems** %\$\$+%

Weng Tat CHAN, Ying FENGWEI  
*National University of Singapore*

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**T7-4: Virtualization and High Performance  
Computing**

**Room 403 November 23, 2010**

*Chair: Teruaki KITASUKA (Kumamoto University)*

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**T7-4.1 16:20-16:50**  
**Academic Refactoring Through Realizing Academic Cloud  
(Invited Paper)** %\$\$+\*

Shoji KAJITA  
*Nagoya University*

**T7-4.2 16:50-17:10**  
**SIVARM: A Virtual Machine Monitor for the ARM Architecture** %\$\$, &

Akihiro SUZUKI, Shuichi OIKAWA  
*University of Tsukuba*

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**T7-4.3** 17:10-17:30  
**Hybrid OpenCL over High Speed Networks**, ,  
Ryo AOKI, Shuichi OIKAWA, \*Ryoji TSUCHIYAMA,  
\*Takashi NAKAMURA  
*University of Tsukuba, \*Fixstars Corporation*

**T7-4.4** 17:30-17:50  
**Parallel Programming Framework for Heterogeneous Computing Environment with Xen Virtualization** (,  
Masamitsu HONJO, Atsushi KUBOTA,  
Toshiaki KITAMURA  
*Hiroshima City University*

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### **T8-1: Analog Circuit Design**

**Room 402** November 23, 2010  
*Chair: Shigetoshi NAKATAKE (University of Kitakyushu)*

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**T8-1.1** 09:00-09:20  
**A New CMOS Bandgap Low Voltage Reference without Resistance** (,  
Rasoul DEGHANI  
*Isfahan University of Technology*

**T8-1.2** 09:20-09:40  
**A New Dynamic Fast-Settling Low Dropout Regulator with Programmable Output Voltage** (,  
Hsiang-Hsiung CHANG, Jsung-Mo SHEN,  
Wei-Bin YANG, \*Yu-Lung LO  
*Tamkang University,*  
*\*National Kaohsiung Normal University*

**T8-1.3** 09:40-10:00  
**Design of the Low-Noise LC Oscillator with the Digital Frequency Tuning Based on the Composite Resonator** (,  
Oleg NIZHNIK, \*Ramesh K. POKHAREL,  
\*Haruichi KANAYA, \*Keiji YOSHIDA  
*Maenaka Human-sensing Fusion Project,*  
*\*Kyushu University*

**T8-1.4** 10:00-10:20  
**A New Low Power Flash ADC with Configurable Resolution** (,  
Mahesh Kumar ADIMULAM, Krishna Kumar  
MOVVA, Sreehari VEERAMACHANENI,  
N Moorthy MUTHUKRISHNAN, M.B SRINIVAS  
*Birla Institute of Technology and Science – Pilani*

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### **T8-2: LSI Design (1)**

**Room 402** November 23, 2010  
*Chair: Haruichi KANAYA (Kushu University)*

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**T8-2.1** 11:20-11:40  
**A High Throughput Digital Rank Order Filter in 0.18 $\mu$ m CMOS Technology** (,  
George John TOSCANO, \*Pran Kanai SAHA  
*American International University-Bangladesh,*  
*\*Bangladesh University of Engineering and Technology*

**T8-2.2** 11:40-12:00  
**System-Level Simulation and Analysis of a WiMAX Direct-Conversion Receiver in 90nm CMOS** (,  
Lendl Israel M. ALUNAN,  
Maria Theresa G. DE LEON,  
Christian Raymund K. ROQUE  
*University of the Philippines*

**T8-2.3** 12:00-12:20  
**Novel Design Concept and Technologies of the Switching Mode Circuit Based on the Electromagnetic Wave Theory and the Nonlinear Undulation Theory** (,  
Hirokazu TOHYA, Noritaka TOYA  
*ICAST, Inc.*

**T8-2.4** 12:20-12:40  
**A Nanopower Single-Trim Voltage Reference in a 0.13 $\mu$ m Digital CMOS Process** (,  
Yueming SUN, Jiana LOU, Xiaobo WU  
*Zhejiang University*

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### **T8-3: LSI Design (2)**

**Room 402** November 23, 2010  
*Chairs: Xiaoqing WEN (Kyushu Institute of Technology) and Yusuke MATSUNAGA (Kyushu University)*

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**T8-3.1** 14:10-14:30  
**A Statistical Error-Compensated Booth Multipliers and Its DCT Applications** (,  
Yuan-Ho CHEN, Tsin-Yuan CHANG,  
Ruei-Yuan JOU  
*National Tsing Hua University*

**T8-3.2** 14:30-14:50  
**Critical Search Delay Measurement in Embedded Content Addressable Memories with BIST** (,  
P. MANIKANDAN, Bjørn B. LARSEN, Einar J. AAS  
*Norwegian University of Science and Technology*

**T8-3.3** 14:50-15:10  
**Active Balun Circuits for WiMAX Receiver Front-End** (,  
Frederick Ray I. GOMEZ,  
Maria Theresa G. DE LEON,  
Christian Raymund K. ROQUE  
*University of the Philippines*

**T8-3.4** 15:10-15:30  
**A 1.2V 246 $\mu$ W CMOS Latched Comparator with Neutralization Technique for Reducing Kickback Noise** (,  
Ghazal A. FAHMY, R. K. POKHAREL,  
H. KANAYA, K. YOSHIDA  
*Kyushu University*

**T8-3.5** 15:30-15:50  
**A High Precision, Low Power DLL for Memory Interfaces** (,  
Gudipati KALYAN, \*M.B. SRINIVAS  
*Centre for VLSI & Embedded Systems IIIT Hyderabad, \*Electronics and Communication Engineering BITS-Pilani*

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### **T8-4: Analog Circuit Design and Analysis**

**Room 402** November 23, 2010  
*Chair: Yasuaki Inoue (Waseda University)*

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**T8-4.1** 16:20-16:40  
**Analysis and Effects of D.C Motor Parameters Variations of the Transistor Controlled H-Bridge Motor Driver Circuit Using MATLAB Simulink<sup>®</sup> Modeling** (,  
Vibhor GUPTA  
*Panjab University*

**T8-4.2** 16:40-17:00  
**Accuracy of Circuit Analysis Method Using Wavelet Transform with Adaptive Resolutions** (,  
Masanori OISHI, Seiichiro MORO,  
\*Tadashi MATSUMOTO  
*University of Fukui, \*Fukui University of Technology*

**T8-4.3** 17:00-17:20  
**The Implementation of an Adaptive Bandwidth All-Digital Phase-Locked Loop** (,  
Chen-Feng CHEN, Yawgeng A. CHAU  
*Yuan-Ze University*

**T8-4.4** 17:20-17:40  
Consideration on Efficiency and Distortion in a Power-Factor-Corrected Constant-Voltage Constant-Current AC Power Supply Having Variable Capacitance Devices  
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  
Damrong AMORNDECHAPHON,  
\*Suttichai PREMRUDEEPREECHACHARN,  
\*\*Kohji HIGUCHI  
Phayao University, \*Chiangmai University,  
\*\*The University of Electro-Communications

**T8-4.6** 18:00-18:20  
FPGA Implementation of a Time Domain Reflectometry (TDR) System for Slope Monitoring Applications  
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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#### 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  
Yumiko UENO, Minoru WATANABE  
Shizuoka University

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

**WIE-4.3** 09:40-10:00  
Model of Tie-Breaking Metric and Performance Evaluation of BGP  
Ting LU, Jie ZHU  
Shanghai Jiao Tong University

**WIE-4.4** 10:00-10:20  
Power Performance Measurement for 2-D Mesh for Network on Chip  
Vijay LAXMI, Varsha SHARMA, Rekha AGARWAL, M. S. GAUR, V. VINEETHA  
Malaviya National Institute of Technology

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#### WIE-5: Devices and Antennas

**Room 412** November 23, 2010  
Chair: Naho ITAGAKI (Kyushu University, Japan)

**WIE-5.1** 11:20-11:40  
AlGaIn/GaN MOS-HEMTs with ZnO Gate Insulator and Chlorine Surface Treatment  
Ya-Lan CHIOU, Ching-Ting LEE  
National Cheng Kung University

**WIE-5.2** 11:40-12:00  
Double Layer Patch Antenna Array Using Novel EBG Structure for Reducing Mutual Coupling Losses  
B. BHUVANESWARI, \*K. MALATHI  
Meenakshi College of Engineering,  
\*Anna University

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#### T1-8: Power Electronics (IV)

**Room 411** November 24, 2010  
Chair: Seiya ABE (The International Centre for the Study of East Asian Development)

**T1-8.1** 09:00-09:20  
Variable Structure Control with Grey Prediction of PWM Inverters  
En-Chih CHANG, \*Fu-Juay CHANG,  
\*\*Jiann-Fuh CHEN, \*\*Tsorng-Juu LIANG  
I-Shou University, \*National United University,  
\*\*National Cheng Kung University

**T1-8.2** 09:20-09:40  
Modified Adaptive Variable Step-Size MPPT Based-on Single Current Sensor  
Emad M. AHMED, Masahito SHOYAMA  
Kyushu University

**T1-8.3** 09:40-10:00  
An Analysis of Bidirectional Superposed Dual Active Bridge DC-DC Converter with Synchronous Rectifier  
Toshiro HIROSE, \*Takayuki KIMURA,  
\*\*Kosuke HARADA, \*Hirofumi MATSUO  
Nishimu Electronics Industries Co., Ltd.,  
\*Nagasaki University, \*\*Sojo University

**T1-8.4** 10:00-10:20  
Low Temperature Evaluation of Commercial DC/DC Converters for Military Applications  
E. J. YOO, T. Y. LEE, W. Y. CHOI, Y. W. PARK  
Chungnam National University

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#### T1-9: Power Electronics (V)

**Room 411** November 24, 2010  
Chair: Masahito SHOYAMA (Kyushu University)

**T1-9.1** 11:10-11:30  
Improvement of Start-up and Transient Characteristics of Digital-Controlled DC-DC Converter Using Switching-Timing Predictive PWM Control  
Takeshi USUDA, Takeshi TAKAYANAGI,  
Yasuhiro MASUYA, \*Yoshiki MATSUO  
COSEL Co., Ltd., \*Tokyo University of Technology

**T1-9.2** 11:30-11:50  
Discrete-Time Fuzzy Sliding Mode Control of a UPS Inverter Feeding Nonlinear Loads  
En-Chih CHANG, Li-Peng YIN, \*Fu-Juay CHANG,  
\*\*Tsorng-Juu LIANG, \*\*Jiann-Fuh CHEN  
I-Shou University, \*National United University,  
\*\*National Cheng Kung University

**T1-9.3** 11:50-12:10  
Control and Simulation Analysis of Bidirectional Converter for Discharge and Charge Applications  
B.L. NARASIMHARAJU, Dubey SATYA PRAKASH,  
S. P. SINGH  
Indian Institute of Technology

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#### T1-17: Electric Power System Analysis (V)

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

**T1-17.1** 09:00-09:20  
Generalized Sagittal Diagram for Fault Equipment Identification within a Transmission System  
Ngoc TRAN-HUYNH, Naebboon HOONCHAREON  
Chulalongkorn University

**T1-17.2** **09:20-09:40**  
**A Comparison between Silicone Rubber and EPDM under Polluted Dust with Ozone, UV and Temperature**  
Apsit CHAISAEANGSUKKUL, Vijit KINARES,  
Norasage PATTANADECH  
*King Mongkut's Institute of Technology*

**T1-17.3** **09:40-10:00**  
**Malfunction Suppression of Semiconductor Circuit Breaker in High Voltage DC Power Supply System**  
Seiya ABE, \*Sihun YANG, \*Mariko OGAWA,  
\*Masahito SHOYAMA, \*\*Tamotsu NINOMIYA,  
\*\*\*Akira MATSUMOTO, \*\*\*Akiyoshi FUKUI,  
\*\*\*Mikio YAMASAKI  
*ICSEAD, \*Kyushu University, \*\*Nagasaki University, \*\*\*NTT Facilities*

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## **T1-18: Power Electronics (VI)**

**Room 406** **November 24, 2010**  
*Chair: Seiya ABE (The International Centre for the Study of East Asian Development)*

**T1-18.1** **11:10-11:30**  
**Controller Design for DFIG-Based Wind Power Generation Using Zakian's Framework**  
Pisitpol CHIRAPONGSANANURAK,  
Naebboon HOONCHAREON,  
Suchin ARUNSAWATWONG  
*Chulalongkorn University*

**T1-18.2** **11:30-11:50**  
**1st Report of a Study on Gyroscopic Power Generator - Prototype and Its Fundamental Characteristics**  
Yohei KAMIYA, Hiroshi HOSAKA,  
Manabu KASAHARA  
*The University of Tokyo*

**T1-18.3** **11:50-12:10**  
**Maximum Power Point Tracking of Wind Power Generator Using Inverter Excited Induction Machine**  
Noriyuki KIMURA, Kenichi NAKATANI,  
Toshimitsu MORIZANE  
*Osaka Institute of Technology*

**T1-18.4** **12:10-12:30**  
**Design of Low-Profile LLC Resonant Converter for Low Transformer Loss**  
Sihun YANG, Masahito SHOYAMA, \*Seiya ABE  
*Kyushu University,*  
*\*The International Centre for the Study of East Asian Development*

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## **T3-8: Signal Processing (II)**

**Room 413** **November 24, 2010**  
*Chair: Naoyuki TSURUTA (Fukuoka University)*

**T3-8.1** **09:00-09:20**  
**Parameterization of Perfect Sequences**  
Takao MAEDA, Takafumi HAYASHI  
*University of Aizu*

**T3-8.2** **09:20-09:40**  
**Performance Analysis of Monopulse Estimation Based on PD System**  
Jun WANG, Peng GUO, Peng LEI, Shaoming WEI  
*Beihang University*

**T3-8.3** **09:40-10:00**  
**Noise Analysis in Mobile Radio Environments Using Pathlets and Symlet 2 Wavelets**  
Olusegun A. ABOABA  
*Curtin University*

**T3-8.4** **10:00-10:20**  
**Low Noise-Low Power Digital Phase-Locked Loop**  
M. SABER, Y. JITSUMATSU, \*M.T.A. KHAN  
*Kyushu University,*  
*\*Ritsumeikan Asia Pacific University*

**T3-8.5** **10:20-10:40**  
**Blind Carrier Frequency Offset and Channel Estimation Using ICA in QAM-OFDM Systems**  
Hiroshi SHIRATSUCHI, \*Nobuo IWASAKI,  
Hironori TANAKA, \*\*Takaaki ISHIBASHI,  
Naomi HARATANI, Yosimasa NAKANO,  
Hiromu GOTANDA  
*Kinki University, \*Kyushu Institute of Technology, \*\*Kumamoto National College of Technology*

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## **T3-9: Network Communications**

**Room 413** **November 24, 2010**  
*Chair: Jian ZHANG (Waseda University)*

**T3-9.1** **11:10-11:30**  
**A Modified ML Decision for the Relay-Based Cooperative Communication System Using Complex Field Network Coding**  
Young Il MIN, Jun Hee JANG, Hyung Jin CHOI  
*Sungkyunkwan University*

**T3-9.2** **11:50-12:10**  
**Speech Enhancement Method Based on Spectral Filtering Utilizing Asynchronous Signals with Embedded Timecode over TCP/IP Based Network**  
Tomohisa MASMIMA, Yoshifumi CHISAKI,  
Tsuoyoshi USAGAWA  
*Kumamoto University*

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## **T4-7: Wireless (2)**

**Room 414** **November 24, 2010**  
*Chair: Hendra SETIAWAN (Kyushu Institute of Technology)*

**T4-7.1** **09:00-09:20**  
**A Study on DSSS Transceivers Using OQPSK Modulation by IEEE 802.15.4 in AWGN and Flat Rayleigh Fading Channels**  
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**  
Jongman GIM, Seoungduk CHOI, \*Changsoo EUN  
*Pinetelecom, \*Chungnam National University*

**T4-7.3** **09:40-10:00**  
**Doppler Estimation Based on Signal Phase Matching Principle in Wideband OFDM**  
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**  
Hendra SETIAWAN, Masayuki KUROSAKI,  
Hiroshi OCHI  
*Kyushu Institute of Technology*



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**T4-8: Wireless (3)**

Room 414 November 24, 2010  
Chair: Hendra SETIAWAN (Kyushu Institute of Technology)

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**T4-8.1** 11:10-11:30  
Software Defined Radio for RFID Signal in Rayleigh Fading Channel  
M. ISLAM, M. A. HANNAN, S. A. SAMAD, A. HUSSAIN  
Universiti Kebangsaan Malaysia

**T4-8.2** 11:30-11:50  
Performance Analysis of RCPC V-BLAST MIMO Using Equivalent Convolutional Codes  
Gunawan WIBISONO, Dadang GUNAWAN, Lydia SARI  
University of Indonesia

**T4-8.3** 11:50-12:10  
Criteria on Ordering in Closed-Loop MIMO-SIC Receiver  
Won Seok PARK, Jin Whan KANG, Sang-Hyo KIM, \*Sung-Soo KIM  
Sungkyunkwan University, \*Samsung Electronics

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**T5-3: Soft Computing**

Room 405 November 24, 2010  
Chair: Cesar ORTEGA-SANCHEZ (Curtin University of Technology)

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**T5-3.1** 09:00-09:20  
A Neural Network Based Speed Control of a Linear Induction Motor Drive  
A.A. HASSAN, Yehia S. MOHAMED, Adel. A. ELBASET, \*T. HIYAMA, \*T. H. MOHAMED  
Minia University, \*Kumamoto University

**T5-3.2** 09:20-09:40  
Small-Scale Helicopter System Identification Model Using Recurrent Neural Networks  
Zahari. TAHA, Abdelhakim DEBOUCHA, Mahidzal Bin DAHARI  
University of Malaya

**T5-3.3** 09:40-10:00  
Probabilistic Model Building Genetic Network Programming Using Multiple Probability Vectors  
Xianneng LI, Shingo MABU, Manoj K. MAINALI, Kotaro HIRASAWA  
Waseda University

**T5-3.4** 10:00-10:20  
Genetic Network Programming with Route Nodes  
Fengming YE, Shingo MABU, Lutao WANG, Kotaro HIRASAWA  
Waseda University

**T5-3.5** 10:20-10:40  
Optimized Particle Filter with Genetic Algorithm  
Zahidul ISLAM, Chi-Min OH, Chil-Woo LEE  
Chonnam National University

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**T5-4: Intelligent Data Analysis**

Room 405 November 24, 2010  
Chair: Seiichi UCHIDA (Kyushu University)

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**T5-4.1** 11:10-11:30  
Bluetooth-Based Indoor Positioning with Fuzzy Based Dynamic Calibration  
Ehad AKEILA, Zoran SALCIC, Akshya SWAIN, Aaron CROFT, Jeremy STOTT  
University of Auckland

**T5-4.2** 11:30-11:50  
Improving the Accuracy of Indoor User Location Using IEEE 802.11 Signals  
Teddy MANTORO, Media A. AYU  
International Islamic University Malaysia (IIUM)

**T5-4.3** 11:50-12:10  
Demand Forecasting Model of Service Parts with Different Failure Rate  
Satoshi MUNAKATA, Masaru TEZUKA, Shinji IIZUKA, Shintarou URABE  
Hitachi East Japan Solutions, Ltd.

**T5-4.4** 12:10-12:30  
Web-Based on Mobile Phone for Automatic Classification of Power Quality Disturbance Using the S-Transform and Support Vector Machines  
Alex WENDA, A. HUSSAIN, S. A. SAMAD, R. MOHAMED, M A HANNAN  
Universiti Kebangsaan

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**T4-9: Internet & Application (1)**

Room 404 November 24, 2010  
Chair: Takeshi IKENAGA (Kyushu Institute of Technology)

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**T4-9.1** 09:00-09:20  
Distributed Storage VOD System Using XDMS: Implementation and Performance Evaluation  
Yoshihiro NOMOTO, \*Tomonori KUZUKAWA, \*Yutaka ISHIBASHI  
NTT Corporation, \*Nagoya Institute of Technology

**T4-9.2** 09:20-09:40  
The Effect of Audio-Video Quality on Learning Effectiveness in Distance Learning over IP Networks  
Kazuyoshi FUKAYA, \*Koichiro NODA, \*Shuji TASAKA, \*Toshiro NUNOME  
Sugiyama Jogakuen University, \*Nagoya Institute of Technology

**T4-9.3** 09:40-10:00  
The Effects of Camera Arrangements and Contents on QoE in Multi-View Video and Audio IP Transmission  
Makoto YAMAMOTO, Toshiro NUNOME, Shuji TASAKA  
Nagoya Institute of Technology

**T4-9.4** 10:00-10:20  
Implementation of TinyOS on FPGA System  
Dai-Hai TON-THAT, Anh-Vu DINH-DUC, Khoi PHAN-DINH  
Univresity of Technology

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**T4-10: Internet & Application (2)**

Room 404 November 24, 2010  
Chair: Toshiro NUNOME (Nagoya Institute of Technology)

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**T4-10.1** 11:10-11:30  
An Effective Simple Method to Reduce Bandwidth Usage Over an Access Link in IPTV Multicast Delivery Services  
Masao IKEZAKI, Takeshige SUGAHARA, Masayoshi SHIMAMURA, Takeshi IKENAGA  
Kyushu Institute of Technology

**T4-10.2** 11:30-11:50  
An Advanced Ship Guidance System Using Grid Mapping Technique  
C. K. DAS, N. K. DAS, Mahabub HASSAN, \*S. K. BISWAS, \*\*M. Mofazzal HOSSAIN  
Chittagong University of Engineering and Technology, \*Premier University, \*\*East West University

**T4-10.3** 11:50-12:10  
Performance Evaluation of a Request Cluster Allocation Scheme for Multi-Channel DOCSIS\*\*  
Tomoya SAITO, \*Shinsuke SATAKE, \*\*Hiroshi INAI  
Shimane University, \*OkayamaDengyo Inc.,  
\*\*Okayama Prefectural University

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#### **T9-4: Biomedical Engineering (IV)**

**Room 403** November 24, 2010  
Chair: Yoshinori KATAYAMA (Kyushu University)

**T9-4.1** 09:00-09:20  
Spectroscopic Imaging of Oxygen Saturation Level in Retinal Capillary Vessels Area\*\*&  
K. TATSUGUCHI, S. SIBASATO, D. NAKAMURA, T. OKADA, Y. YOSHINAGA, \*H. ENAIDA, T. ISHIBASHI  
Kyushu University, \*Kyushu Medical Center

**T9-4.2** 09:20-09:40  
Kepler-Based Collaborative Workflow System for Metabolic Syndrome Estimation\*\*+)  
Chan-Hyun YOUN, Dong Hyun KIM,  
\*Eun Bo SHIM, \*\*Yeon Shik CHOI,  
\*\*Hyo-Derk PARK, \*\*\*Soo LIM, \*\*\*Hak Chul JANG,  
\*\*\*\*Hong Kyu LEE  
Korea Advanced Institute of Science and Technology, \*Kangwon National University,  
\*\*Korea Electronic Technology Institute (KETI),  
\*\*\*Seoul National University, \*\*\*\*Eulji University

**T9-4.3** 09:40-10:00  
Radio Frequency Plasma Enhanced Synthesis of Antifouling Polymeric Coatings from Monoterpene Alcohols\*\*%, \$  
Kateryna BAZAKA, Mohan V. JACOB,  
\*Elena P. IVANOVA, \*Vi Khanh TRUONG  
James Cook University,  
\*Swinburne University of Technology

**T9-4.4** 10:00-10:20  
Optimal Design and Control of a Thumb Exoskeleton\*\*%, \*  
M. F. ORLANDO, H. AKOLKAR, A. DUTTA,  
A. SAXENA, L. BEHERA  
IIT Kanpur

**T9-4.5** 10:20-10:40  
Motions Obtaining of Multi-Degree-Freedom Underwater Robot by Using Reinforcement Learning Algorithms\*\*% - &  
Youkun HAN, Hajime KIMURA  
Kyushu University

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#### **T8-5: RF Circuit Design**

**Room 402** November 24, 2010  
Chair: Toshihiko YOSHIMASU (Waseda University)

**T8-5.1** 09:00-09:20  
Design and Implementation of Passive RF-DC Converters for RF Power Harvesting Systems\*\*% - +  
Sherlyn dela CRUZ, Mark Gerard delos REYES,  
Anastacia ALVAREZ, Maria Theresa de LEON,  
Christian Raymond ROQUE  
University of the Philippines

**T8-5.2** 09:20-09:40  
High Linearity 5.2 GHz CMOS Up-Conversion Mixer Using Derivative Superposition Method\*\*% \$  
S.A.Z MURAD, R.K POKHAREL,  
M.A. ABDELGHANY, H. KANAYA, K. YOSHIDA,  
\*S.A.Z MURAD  
Kyushu University, \*Universiti Malaysia Perlis

**T8-5.3** 09:40-10:00  
Design of High-Throughput MIMO Detectors Using Sort-Free and Early-Pruned Techniques\*\*% \$+  
Jing-Shiun LIN, Shih-Hao FANG, Yi-Hsuan JEN,  
Ming-Der SHIEH  
National Cheng-Kung University

**T8-5.4** 10:00-10:20  
A Low Power Low Flicker Noise Merged Balun LNA and Mixer for 5.2GHz Wireless LAN Receivers\*\*% %  
A. I. A. GALAL, M. A. ABDELGHANY,  
R. K. POKHAREL, H. KANAYA, K. YOSHIDA  
Kyushu University

**T8-5.5** 10:20-10:40  
A 1 GHz CMOS Analog Equalizer for Perpendicular Magnetic Recording\*\*% %  
Sukarasut MEKSIRI, Kasin VICHENCHOM,  
\*Decha WILAIRAT  
King Mongkut's Institute of Technology Ladkrabang,  
\*Mahidol University

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#### **T8-6: LSI CAD**

**Room 402** November 24, 2010  
Chairs: Yasuhiro TAKASHIMA (Univ. of Kitakyushu) and Chen SONG (Waseda University)

**T8-6.1** 11:10-11:30  
An Efficient Hardware Routing Algorithms for NoC\*\*% %  
Yiping DONG, Zhen LIN, Takahiro WATANABE  
Waseda University

**T8-6.2** 11:30-11:50  
Efficient Partitioning of Parameterized 45-Degree Polygons with Mixed ILP\*\*% &  
I-Lun TSENG, Che-I LEE, Huan-Wen CHEN  
Yuan Ze University

**T8-6.3** 11:50-12:10  
Path-Based Cell Flipping Optimization for Wirelength Reduction and Routability\*\*% &  
Ying-An SHIH, \*Tu-Hsiung TSAI,  
\*Hung-Ming CHEN  
RDC Semiconductor Co., Ltd.,  
\*National Chiao Tung University

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

**Room 412** November 24, 2010  
Chair: Taeko MATSUNAGA (Waseda University, Japan)

**WIE-6.1** 09:00-09:20  
Survey of MPI Implementations Delimited by Java\*\*% ' (   
Mehnaz HAFEEZ, Naveed RIAZ, \*Sajjad ASGHAR,  
\*Usman A. MALIK, \*Adeel-ur- REHMAN  
Shaheed Zulfikar Ali Bhutto Institute of Science and Technology, \*National Centre for Physics

**WIE-6.2** 09:20-09:40  
Analysis of Pulsed Laser Diode Driver System for Multistate Quantum Key Distribution\*\*% ' -  
M.S ABDULLAH, M.Z. JAMALUDIN,  
\*G. WITJAKSONO, \*M.H.H MOKHTAR  
Universiti Tenaga Nasional (UNITEN),  
\*MIMOS Berhad

**WIE-6.3** 09:40-10:00  
An Improved Integrated Lossless Self-Matched Current-Sensing Circuit Based on Gm-C Filter for 4-Switch Buck-Boost Topology\*\*% ( &  
Lou JIANA, Wu XIOBO  
Zhejiang University

**WIE-6.4** 10:00-10:20  
**Optimization of Circuit Partitioning in VLSI through Classification Algorithms** ( ,  
K.A. SUMITHRADEVI, M.N. VIJAYALAKSHMI  
*R.V.College of Engineering*

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**WIE-7: Biomedical Engineering and Others**  
**Room 412** November 24, 2010  
*Chairs: Basabi CHAKRABORTY (Iwate Prefectural University, Japan) and Takako HASHIMOTO (Chiba University of Commerce, Japan)*

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**WIE-7.1** 11:10-11:30  
**Multi-Step QBE Approach for Querying Electronic Health Records System** ) &  
Shelly SACHDEVA, Subhash BHALLA  
*University of Aizu*

**WIE-7.2** 11:30-11:50  
**Development of an Intelligent System for Control of Blood Glucose Level in Critically Ill Patients** ) ,  
J. Samson ISAAC, \*K. PORKUMARAN  
*Anna University, \*Dr.N.G.P Institute of Technology*

**WIE-7.3** 11:50-12:10  
**Hardening Fingerprint Fuzzy Vault Using Cancelable Template with Password** ) \* &  
Nianlong XU, Ying YANG, Keiichi KOYANAGI  
*Waseda University*

**WIE-7.4** 12:10-12:30  
**Wireless Automatic Saline Low Control System** ) \* ,  
Vasudha S. CHATTANAVAR,  
Vidlalaxmi L DANIL  
*Basavaeshwar Engineering College*

## Poster Presentation

**15:10-16:10**  
**Monday, November 22, 2010**

**T5-1.P1**  
**Modular Autonomous Robotics Platform for Educational Use** ) +%  
James LUMSDEN, Cesar ORTEGA-SANCHEZ  
*Curtin University*

**T5-2.P1**  
**Simulation Platform for the Evaluation of Robotic Swarm Algorithms** ) ++  
Michael HAMER, Cesar ORTEGA-SANCHEZ  
*Curtin University*

**T5-3.P1**  
**Image Registration Using B-Splines for Contralateral Subtraction of Chest Radiographs** ) , '  
Tsuyoshi KAWAGUCHI, Ryoichi NAGATA,  
Yoshitomi HARADA, Hidetoshi MIYAKE  
*Oita University*

**T5-4.P1**  
**A Neural Network Based Human Identification Framework Using Ear Images** ) , -  
Maen ALARAJ, \*Jingyu HOU, Tadanori FUKAMI  
*Yamagata University, \*Deakin University*

**T5-5.P1**  
**Migration Effects on Tree Topology of Parallel Evolutionary Computation** ) - )  
Hayato MIYAGI, \*Takeshi TENGAN,  
Said MOHAMED, Morikazu NAKAMURA  
*University of the Ryukyus, \*Meio University*

**T5-6.P1**  
**Document Layout Analysis and Reading Order Determination for a Reading Robot** ) % \$ %  
Yucun PAN, Qunfei ZHAO, \*Seiichiro KAMATA  
*Shanghai Jiao Tong University, \*Waseda University*

**T5-7.P1**  
**3D Reconstruction from a Single Image for a Chinese Talking Face** ) % \$ +  
Ning LIU, Ning FANG, \*Seiichiro KAMATA  
*Shanghai Jiao Tong University, \*Waseda University*

**T5-8.P1**  
**Introduction of SVM into Personal Authentication Using Intra-Body Propagation Signals** ) % % %  
Yuuta SODANI, Isao NAKANISHI  
*Tottori University*

**T10-1.P1**  
**Measurements of Mode Field Diameter and Effective Area for Photonic Crystal Fibers by Far Field Scanning Technique** ) % %  
Kazuya MIYAGI, Yoshinori NAMIHIRA  
*University of the Ryukyus*

**T10-2.P1**  
**Spatial Arrangement of Speckle-Multiplexed Holograms Using Directional Control of Shift Selectivity with Holographic Diffuser** ) % %  
Shuji TAKAHASHI, Masatoshi BUNSEN,  
Hirosuke FURUTA, \*Atsushi OKAMOTO  
*Fukuoka University, \*Hokkaido University*

**T10-3.P1**

**A Bifurcated Fractal Rectangular Curve Dielectric Resonator Antenna for Body Area Network and IEEE 802.11a Application**

Rowdra GHATAK, \*Dipali SOREN, ~~ÁÁ~~ GH

\*\*Swapan GHOSAL, \*\*\*R K MISHRA,

\*\*\*\*D R PODDAR

*National Institute of Technology Durgapur,*

*\*M.P.C C of Engineering & Technology,*

*\*\*Bengal Institute of Technology,*

*\*\*\*Berhampur University, \*\*\*\*Jadavpur University*

**T10-4.P1**

**Calculation of Characteristic Impedance of Transmission Lines with Substrate Integrated Artificial Dielectric Structures**

Jongsik LIM, Jun LEE, Jaehoon LEE,

\*Yongchae JEONG, Sang-Min HAN,

Kwan-Sun CHOI, Dal AHN

*SoonChunHyang Univiersity,*

*\*Chonbuk National University*

**T3-1.P1**

**Extensive Pixel-Based Fast Direction Detection Algorithm for H.264/AVC Intra Mode Decision**

Chen-Hsien MIAO, Chih-Peng FAN

*National Chung Hsing University*

**T3-2.P1**

**Window Mode Filter for Image Denoising**

Chang JIAN, Kiichi URAHAMA

*Kyushu University*

**T3-3.P1**

**Optimal Feature Selection for SVM Based Weed Classification via Visual Analysis**

S. SHAHBUDIN, A. HUSSAIN, S. A. SAMAD,

M. M. MUSTAFA, A.J. ISHAK

*Universiti Kebangsaan*

**T3-4.P1**

**Cartesian Resizing of Image and Video for Data Compression**

Tao WANG, Kiichi URAHAMA

*Kyushu University*

**T3-5.P1**

**Local MAP Estimation for Quality Improvement of Compressed Color Images**

Hideki NODA, Shun HARAGUCHI, Michiharu NIIMI

*Kyushu Institute of Technology*

**T3-6.P1**

**Detection of Unusual Human Activity Based on Sequence of Actions with MHI and CDP**

Hiroki MURAYAMA, Keiichi YAMADA

*Meijo University*

**T3-7.P1**

**Image and Video Clipping by Weighted Histogram Intersection Minimization**

Kohei INOUE, Kenji HARA, Kiichi URAHAMA

*Kyushu University*

**T3-8.P1**

**Image Resizing by Row/Column Removal and Addition Based on Hierarchical Clustering**

Kohei INOUE, Kenji HARA, Kiichi URAHAMA

*Kyushu University*

**T3-9.P1**

**Denoising X-Ray CT Images Based on Product Gaussian Mixture Distribution Models for Original and Noise Images**

Motohiro TABUCHI, \*Nobumoto YAMANE

*Konko Hospital, \*Okayama University*

**T3-10.P1**

**Development of Color Models to Improve the Data Capacity of Color Two Dimensional Barcode**

Hiroko KATO

*Edith Cowan University*

**T6-1.P1**

**On the Design and Analysis of Quaternary Serial and Parallel Adders**

Andinya DAS, Ifat JAHANGIR, Masud HASAN,

\*Shahera HOSSAIN

*Bangladesh University of Engineering and Technology, \*Kyushu Institute of Technology*

**T6-2.P1**

**High-Level Implementation of the 5-Stage Pipelined ARM9TDM Core**

Christiensen C. ARANDILLA,

Joseph Bernard A. CONSTANTINO,

Alvin Oliver M. GLOVA,

Anastacia P. BALLESil-ALVAREZ,

Joy Alinda P. REYES

*University of the Philippines*

**T6-3.P1**

**Simulation of Large-Scale Dynamic Programming Networks on 3D Implementation Platform**

K.P. LAM, \*Terrence S.T. MAK, \*\*C.-S. POON

*The Chinese University of Hong Kong,*

*\*Imperial College, \*\*MIT, Cambridge*

**T9-1.P1**

**Independent Component Analysis Hard-IP Integration System on Programmable Chip (SOPC) Platform**

Shao-Hang HUNG, Chih-Feng CHAO,

Yu-Chun YAN, Bor-Shyh LIN, Chin-Teng LIN

*National Chiao Tung University*

**T9-2.P1**

**Performance Optimized of the Novel Dry EEG Electrodes by using the Non-Dominated Sorting Genetic Algorithms (NSGA-II)**

Ming-Feng HAN, Lun-De LIAO, Yu-Hang LIU,

Wan-Ru WANG, Bor-Shyh LIN, Chin-Teng LIN

*National Chiao Tung University*

**T9-3.P1**

**Methods for Performing Video Quality Evaluations in the Field of Medicine**

Isao NAKAJIMA, Kaoru NAKADA,

Yasumitsu TOMIOKA, Hiroshi JUZOJI,

Toshihiko KITANO

*Tokai University*

**T9-4.P1**

**The 920 Fire Departments Expect Reliable Wideband Circuit to Support Telemedicine**

Yasumitsu TOMIOKA, Sadaki INOKUCHI,

Hiroshi JUZOJI, Isao NAKAJIMA

*Tokai University*

**T9-5.P1**

**CT Image-Based Training System for Positioning in Radiography**

Toshinori MARUYAMA, \*Hideki YAMAMOTO

*Okayama University, \*Kibikogen Rehabilitation*

*Center for Employment Injuries*

**T9-6.P1**

**Adaptive Bilateral Filtering for Despeckling of Medical Ultrasound Images**

E. FARZANA, M. TANZID, K. M. MOHSIN,

M. I. H. BHUIYAN, \*Shahera HOSSAIN

*Bangladesh University of Engineering and*

*Technology, \*Kyushu Institute of Technology*

**T9-7.P1**

**Blood Glucose Level Prediction Using Intelligent Based Modeling Techniques**

A. M. AIBINU, M. J. E. SALAMI, A. A. SHAFIE

*International Islamic University Malaysia (IIUM)*

- T9-8.P1**  
Reduction of Baseline Fluctuation in Electrocardiogram Measurement for a Car Driver &  
Yuta KONDO, Ken SASAKI, \*Yasuhiko NAKANO,  
\*Satoshi SANNO, \*Hideki TOMIMORI  
*The University of Tokyo, \*Fujitsu Laboratories Ltd.*
- T9-9.P1**  
A Basic Study on the Quadrant Detector to Pursuit a Noise-Level Beacon of a Wild Bird \*  
I. NAKAJIMA, H. JUZOJI, \*M. KATAYAMA  
*Tokai University, \*Nagoya University*
- T9-10.P1**  
Development of a Bidirectional Data Communication System Using Ultra High Frequency Radio Wave for Implantable Artificial Hearts (\$  
Shinichi TSUJIMURA, Hiroto YAMAGISHI,  
Yoshiyuki SANKAI  
*University of Tsukuba*
- T9-11.P1**  
Visualization of Information Flows in a Brain Stemming from Alpha Waves - Using Multidimensional Directed Information -  
Osamu SAKATA, Yutaka SUZUKI,  
*University of Yamanashi*
- T9-12.P1**  
The Effect of TMS to Supramarginal Gyrus on Event-Related Potential P300 (%)  
A. MATSUNAGA, K. NOJIMA, M. IWAHASHI,  
Y. KATAYAMA, K. IRAMINA  
*Kyushu University*
- T9-13.P1**  
Noncontact Respiration Measurement under Pedaling Motion with Upright Bicycle Ergometer Using Dot-Matrix Pattern Light Projection (%)  
Hirooki AOKI, Masamichi SAKAGUCHI,  
Hideo FUJIMOTO, \*Keishi TSUZUKI,  
\*Hidetoshi NAKAMURA  
*Nagoya Institute of Technology, \*Keio University*
- T1-1.P1**  
Distribution Feeder Bus Load Estimations by Measurement Matching \$  
Shi-Jaw CHEN, Rung-Fang CHANG,  
\*Huang-Ren LAI, \*\*Chan-Nan LU  
*Kao Yuan University,  
Institute for Information Industry,  
\*\*National Sun Yet-sen University*
- T1-2.P1**  
Power Dissipation at MOSFET Gate Port of Class D RF Power Amplifier \*\*  
Takuya KUDO, Toru UMEKI, Akito KIRI,  
Tadashi SUETSUGU  
*Fukuoka University*
- T1-3.P1**  
Simulation Analysis of Transient Behavior of RF Class D Power Amplifier Due to Fluctuation in Load Impedance \$+\$  
Hiroki MURAKAMI, Yoshimichi YAMASHITA,  
Tadashi SUETSUGU  
*Fukuoka University*
- T1-4.P1**  
Consideration of Impact of GaN HEMT for Class E Amplifier \$+(\$  
Hiroyuki UCHIYAMA, Ryuta YAMAMOTO,  
Yusuke ISHIKAWA, Tadashi SUETSUGU  
*Fukuoka University*
- T1-5.P1**  
Gate Power Loss of Class E Amplifier with Rectangular Wave Gate Drive \$+,  
Takaaki TATSUTA, Yuki ISHITANI,  
Tadashi SUETSUGU  
*Fukuoka University*
- T1-6.P1**  
Influence of Multi-Frequency Coupling to Operation of Parallel Connected Class E Amplifiers \$, &  
Yasuhiro JITSUFUJI, Yasutaka YOSHIMATSU,  
Tadashi SUETSUGU  
*Fukuoka University*
- T1-7.P1**  
Effect of Third Harmonic Peaking in Gate Drive of Class E Amplifier \$, \*  
Shoko YANO, Kouta SHUTOU,  
Tadashi SUETSUGU  
*Fukuoka University*
- T1-8.P1**  
Modified Particle Swarm Optimization for Solving Distribution Feeder Reconfiguration Problem with Distributed Generation \$- \$  
Rung-Fang CHANG, Shi-Jaw CHEN,  
\*Ya-Chin CHANG, \*\*Chan-Nan LU  
*Kao Yuan University, \*Cheng Shiu University,  
\*\*National Sun-Yet-Sen University*
- T1-9.P1**  
Ramping Particle Current Power Supply \$- \*  
Chen-Yao LIU, \*Yao-Ching HSIEH,  
\*\*Chin-Sien MOO  
*National Synchrotron Radiation Research Center,  
\*National Dong Hwa University,  
\*\*National Sun Yat-sen University*
- T1-10.P1**  
Influence of Stator Winding Structure on the Relation between PD Value and Maximum Discharge Quantity in Deterioration Diagnosis of Hydro-Generators \$% \$  
Osamu HATTORI, Takahiko YAMASHITA  
*Nagasaki University*
- T1-11.P1**  
Simulation Analysis of Transient Behavior of Class E Amplifier Due to Fluctuations in Load Impedance and DC Supply \$% \$\*  
Yuichi TANAKA, Akito KIRI, Takeshi YAUKOUCHI,  
Tadashi SUETSUGU  
*Fukuoka University*
- T1-12.P1**  
Interleaved Sepic Converter with Low Switching Loss \$% %  
Bor-Ren LIN, Po-Li CHEN, Jun-Ji CHEN  
*National Yunlin University of Science and  
Technology*
- T1-13.P1**  
Series Resonant Converter with Output Voltage Doubler \$% \$+  
Bor-Ren LIN, Li-An LIN, Yen-Ju CHIANG,  
Po-Li CHEN  
*National Yunlin University of Science and  
Technology*
- T1-14.P1**  
Parallel ZVS Converter with Series Connected Transformers \$% &  
Bor-Ren LIN, Huann-Keng CHIANG, Po-Li CHEN,  
Chih-Yuan CHENG  
*National Yunlin University of Science and  
Technology*

- T1-15.P1**  
**Analysis and Implementation of a Novel Dual Resonant Converter** &  
 Bor-Ren LIN, Jian-Yao JHONG, Jyun-Ji CHEN,  
 Huann-Keng CHIANG  
*National Yunlin University of Science and Technology*
- T1-16.P1**  
**Efficiency Improvement of Converter for Switched Reluctance Motor Drives by Mixed Parallel Operation of IGBT and MOSFET** (%)  
 Sakhon WOOTHIPATANAPAN,  
 Anuwat JANGWANITLERT,  
 Phop CHANCHAROENSOOK  
*King Mongkut's Institute of Technology*
- T1-17.P1**  
**A Technique of Collecting Online Data for Forecasting the Output Capacity of a Remotely Located WTG** (%) ( %  
 Taif Hossain ROCKY, \*Sumit Mazumder AMI, \*\*Q AHSAN  
*Innovative Renewable Energy, \*Axiata Bangladesh Limited, \*\*BRAC University*
- T1-18.P1**  
**Isolated Class-E Switching Converter with High-Frequency High-Efficiency Operation for Low-Voltage/High-Current Output Applications** (%) ( )  
 Natsumi SAGAWA, Hiroo SEKIYA  
*Chiba University*
- T1-19.P1**  
**Output Electric Power Increase of a DC-AC Converter Utilizing Magnetic Oscillation** (%) ) %  
 Shinichi OKANUMA, Puskar KHATIWADA  
*Fukushima University*
- T1-20.P1**  
**New Multilevel Inverter Topology with Minimum Number of Switches** (%) ) \*  
 Rokan Ali AHMED, S. MEKHILEF, Hew Wooi PING  
*University of Malaya*
- T2-1.P1**  
**Ferromagnetic  $\text{Co}_{3-x}\text{Fe}_x\text{Si}/\text{Si}(111)$  Contacts with High-Quality Heterointerfaces for Spin-Transistor Applications** (%) \* &  
 Shinya YAMADA, Tatsuhiko MURAKAMI,  
 Yuya MAEDA, Kohei HAMAYA, Masanobu MIYAO  
*Kyushu University*
- T2-2.P1**  
**High-Quality Ferromagnetic CoFe/Si Contacts for Si Spin-Transistor Applications** (%) \*\*  
 Yuya MAEDA, Shinya YAMADA,  
 Tatsuhiko MURAKAMI, Kazutaka YAMANE,  
 Kohei HAMAYA, Masanobu MIYAO  
*Kyushu University*
- T2-3.P1**  
**Magnetic Ripple in Permalloy Narrow Wires Investigated by Lorentz Microscopy** (%) \* -  
 Kazuya TAKAYANAGI, Shigeo MORI,  
 Yoshihiko TOGAWA  
*Osaka Prefecture University*
- T2-4.P1**  
**Control of Vortex Chirality in Polygonal Nanomagnets** (%) +&  
 M. MIYATA, S. YAKATA, \*M. HARA, H. WADA,  
 T. KIMURA  
*Kyushu University, \*Kumamoto University*
- T2-5.P1**  
**Spin Transport Properties in Polycrystalline Gd Film and Strip** (%) +)  
 S. NONOGUCHI, Y. ANDO, \*Y. TOGAWA,  
 \*T. KIMURA  
*Kyushu University, \*Osaka Prefecture University*
- T2-6.P1**  
**Magnetic Impurity Effect in Atomic Sized Conductor** (%) +  
 Koichiro IENAGA, Naoya NAKASHIMA,  
 Yuji INAGAKI, Tatsuya KAWAE, \*Hiroyuki TSUJII  
*Kyushu University, \*Kanazawa University*
- T2-7.P1**  
**Control of Nanosize Ferromagnetic Electrodes by Magnetostriction** (%) , &  
 Koichiro IENAGA, Naoya NAKASHIMA,  
 Yuji INAGAKI, Tatsuya KAWAE, \*Hiroyuki TSUJII  
*Kyushu University, \*Kanazawa University*
- T2-8.P1**  
**Magnetoresistance in Ballistic Ni Nanocontact at 4.2K** (%) , )  
 Koichiro IENAGA, Naoya NAKASHIMA,  
 Yuji INAGAKI, Tatsuya KAWAE, \*Hiroyuki TSUJII  
*Kyushu University, \*Kanazawa University*
- T2-9.P1**  
**Numerical Study on Inductive Detection of Magnetostatic Spin Wave Packet** (%) , ,  
 Yusuke NAKASHIMA, Keita NAGAI,  
 Terumitsu TANAKA, Kimihide MATSUYAMA,  
 \*Yukio NOZAKI  
*Kyushu University, \*Keio University*
- T2-10.P1**  
**Dependence of Magnetization Switching Property with Microwave Assistance on Anisotropy Field for ECC Nano-Pillar** (%) - &  
 Naoyuki NARITA, Terumitsu TANAKA,  
 Ayumu KATO, Kimihide MATSUYAMA,  
 \*Yukio NOZAKI  
*Kyushu University, \*Keio University*
- T2-11.P1**  
**Micromagnetism of Patterned Ferromagnetic Thin Films with Four-Fold Anisotropy** (%) - \*  
 M. HIGUCHI, Y. KOMAKI, K. NODA, T. TANAKA,  
 K. MATSUYAMA  
*Kyushu University*
- T2-12.P1**  
**Sub-Wavelength Micromachining of Silica Glass by Irradiation of Infrared Laser with Fresnel Diffraction** (%) - -  
 K. OKAZAKI, D. NAKAMURA, T. OKADA,  
 \*S. TORII, \*T. MAKIMURA, \*K. MURAKAMI,  
 \*\*H. NIINO, A. TAKAHASHI  
*Kyushu University, \*University of Tsukuba, \*\*National Institute of AIST*
- T2-13.P1**  
**Annealing and Texturing of a-Si Film Using  $\text{Nd}^{3+}$ :YAG Laser with Gaussian and Flat-Top Beam Profiles** (%) \$'  
 I.A. PALANI, G. RAJIV, N.J. VASA,  
 M. SINGAPERUMAL  
*Indian Institute of Technology Madras*
- T2-14.P1**  
**Optical Characterization of a Chalcogenide Glass Nanophotonic Device** (%) \$-  
 Dihan Md. Nuruddin HASAN,  
 Muhammad Nazmul HOSSAIN, K.M. MOHSIN,  
 M. Shah ALAM  
*Bangladesh University of Engineering and Technology*
- T2-15.P1**  
**Scalability and RF Performance of Nanoscale Dopant Segregated Schottky Barrier SOI MOSFET** (%) %  
 Ganesh C. PATIL, S. QURESHI  
*Indian Institute of Technology Kanpur*

- T2-16.P1**  
**Ballistic Current-Voltage Model in Depletion All Around Operation of the SOI Four-Gate Transistor**  
 Shafat JAHANGIR, Ifat JAHANGIR,  
 Quazi D. M. KHOSRU, \*Shahera HOSSAIN  
*Bangladesh University of Engineering and Technology, \*Kyushu Institute of Technology*
- T2-17.P1**  
**A Novel Approach of Modeling Channel Potential for Gate All Around Nanowire Transistor**  
 Gaffar MD., Mushfiqul ALAM,  
 Sayed Ashraf MAMUN, Mohammad Asif ZAMAN,  
 \*Anwarul Kabir BHUIYA  
*Bangladesh University of Engineering and Technology, \*Kyushu University*
- T2-18.P1**  
**FTIR Study of Methylene Blue Plasma Degradation Products through Plasma Treatment on Water**  
 Tatsuru SHIRAFUJI, Junko HIEDA, Osamu TAKAI,  
 Nagahiro SAITO, \*Tadasuke MORITA,  
 \*Osamu SAKAI, \*\*Kunihide TACHIBANA  
*Nagoya University, \*Kyoto University, \*\*Ehime University*
- T2-19.P1**  
**Effects of Amplitude Modulation of rf Discharge Voltage on Growth of Nano-Particles in Reactive Plasmas**  
 Kunihiro KAMATAKI, Hiroshi MIYATA,  
 Kazunori KOGA, Giichiro UCHIDA, Naho ITAGAKI,  
 Daisuke YAMASHITA, Hidefumi MATSUZAKI,  
 Masaharu SHIRATANI  
*Kyushu University*
- T2-20.P1**  
**Infrared Spectroscopic Study on Hydrogen Plasma Induced Surface Reaction**  
 Masanori SHINOHARA, Taka-aki KAWAKAMI,  
 Kojiro HARA, Hiroshi FUJIYAMA,  
 Yoshinobu MATSUDA  
*Nagasaki University*
- T2-21.P1**  
**Design and Analysis of a Cantilever Biosensor Based on a Boron Nitride Nanotube**  
 M.S. ISLAM, A.Z. KOUZANI, X.J. DAI,  
 \*W.P. MICHALSKI  
*Deakin University, \*CSIRO Livestock Industries*
- T2-22.P1**  
**Redox Characteristics of Amino Acids Using Low Pressure Water Vapor RF Plasma**  
 Yusuke AKIYOSHI, Akari NAKAHIGASHI,  
 Nobuya HAYASHI, \*Satoshi KITAZAKI,  
 \*Takuro IWAO, \*Kazunori KOGA,  
 \*Masaharu SHIRATANI  
*Saga University, \*Kyushu University*
- T2-23.P1**  
**Growth Stimulation of Radish Sprouts Using Discharge Plasmas**  
 Satoshi KITAZAKI, Daisuke YAMASHITA,  
 Hidefumi MATSUZAKI, Giichirou UCHIDA,  
 Kazunori KOGA, Masaharu SHIRATANI,  
 \*Nobuya HAYASHI  
*Kyushu University, \*Saga University*
- T4-1.P1**  
**An Integrated Ant Colony Optimization Based Synchronization Scheme for Wireless Sensor Networks**  
 Liang-Teh LEE, Ching-Wei CHEN  
*Tatung University*
- T4-2.P1**  
**Study of SVC Traffic Multicast over WiMAX Network**  
 I-Hsuan PENG, \*Yen-Wen CHEN, \*Chia-Han LEE,  
 \*Chang-Wu CHEN  
*Minghsin University of Science and Technology, \*National Central University*
- T4-3.P1**  
**Joint Base Station Selection and Linear Precoding for Cellular Networks with Multi-Cell Processing**  
 Yong ZENG, Erry GUNAWAN, Yong Liang GUAN,  
 Jin LIU  
*Nanyang Technological University*
- T4-4.P1**  
**A Multiple Ballots Election Scheme Using Anonymous Distribution**  
 Manabu OKAMOTO  
*Kanagawa Institute of Technology*
- T4-5.P1**  
**A Four-Way-Polling QoS Scheduler for IEEE 802.11e HCCA**  
 Jeng-Ji HUANG, Yeh-Horng CHEN,  
 \*David SHIUNG  
*National Taiwan Normal University, \*National Changhua University of Education*
- T4-6.P1**  
**Adaptive Minimum Filter that Achieves Precise Time Synchronization on IP Networks**  
 Satoru OHTA, \*Kan TOYOSHIMA,  
 \*Hitoshi UEMATSU, \*Kenji HISADOME,  
 \*Mitsuhiro TESHIMA  
*Toyama Prefectural University, \*NTT Corporation*
- T4-7.P1**  
**Maximum Capability System Design of Optical Access Network**  
 Tatsuya KOSAKA, Koji KIKUSHIMA  
*University of Toyama*
- T4-8.P1**  
**A Novel Method for Enhanced Precision Approach**  
 Peng ZHANG, Liang QIAN, Feng YANG  
*Shanghai Jiaotong University*
- T4-9.P1**  
**Comparative Analysis of the Polarization Properties between a Conventional Side-Hole Fiber and a Novel Design of Elliptical Core Fiber**  
 Shama Naz ISLAM, Arunodoy SAHA,  
 M. Shah ALAM, Shamima NAJNIN  
*Bangladesh University of Engineering and Technology*
- T4-10.P1**  
**Performance Analysis of CSMA/CA Algorithm for Wireless Sensor Network**  
 Saeed Ur REHMAN, Stevan BERBER,  
 Akshya SWAIN  
*University of Auckland*
- T4-11.P1**  
**Design, Development, and Evaluation of a Simple Wireless Sensor Network for Indoor Microclimate Monitoring**  
 I.M. TOLENTINO, R.S. JUSON, B.U. TAN,  
 M.R. TALAMPAS  
*University of the Philippines*
- T4-12.P1**  
**Person Wide Web: Active Location Based Web Service Architecture Using Wireless Infrastructure**  
 Seungjae SHIN, Pyung KIM, Yeojeong YOON,  
 \*Seongbea EUN, Hyunsoo YOON  
*Korea Advanced Institute of Science and Technology, \*Hannam University*

**T4-13.P1****A Rearrangement Algorithm for Scheduled Automatic Power Save Delivery of Wireless LANs**

Tsern-Huei LEE, Jing-Rong HSIEH,  
Hsiao-Wei CHEN  
*National Chiao Tung University*

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Tuesday, November 23, 2010

**T10-1.P2****Inverse Filtering Operation for Reconstruction of Distorted GPR Response**

Masahiko NISHIMOTO, Kousuke TOMURA  
*Kumamoto University*

**T10-2.P2****Detailed High Frequency Transmission Characteristics of Human Body for Body Area Network**

Tomohito TAKAHASHI, Katushi IWASHITA  
*Kochi University of Technology*

**T10-3.P2****3-10GHz CMOS Distributed Amplifier Low-Power and Low-Noise and High-Gain Low Noise Amplifier for UWB Systems**

I-Chuan CHEN, Jeng-Rern YANG  
*Yuan Ze University*

**T10-4.P2****Dielectric Resonator Bandpass Filter for X-Band Application**

M. F. AIN, Z. A. AHMAD, M.A. OTHMAN,  
I. A. ZUBIR, S. D. HUTAGALUNG,  
\*A. A. SULAIMAN, \*A. OTHMAN  
*USM, \*UiTM*

**T10-5.P2****Low Loss Analog Phase Shifters Based on BST Thin Film Ferroelectric Material on a Coplanar Waveguide**

B. NATARAJ, \*K. PORKUMARAN  
*Sri Ramakrishna Engineering College,  
\*Dr. NGP Institute of Technology*

**T3-1.P2****An Improved Minimum Word Error Approach to Lattice Rescoring and System Combination**

Haihua XU, Jie ZHU, Xulei BAO  
*Shanghai Jiao Tong University*

**T3-2.P2****Efficient Mode Decision for H.264/AVC Frame-Skipping Transcoding**

Jhong-Hau JIANG, Yinyi LIN  
*National Central University*

**T3-3.P2****Evaluation Method for Quality Losses Generated by Miscellaneous Audio Signal Processings Using MIDI Encoder Tool "Auto-F"**

Toshio MODEGI  
*Dai Nippon Printing Co., Ltd.*

**T3-4.P2****Pre-Processing Scheme to Effectively Compensate Environment and Equipment Factors for Sound Source Separation**

Yi-Hsiang CHENG, Chun-Hung CHIU,  
Oscal T.-C. CHEN, \*Wen-Chih WU  
*National Chung Cheng University,  
\*WuFeng University*

**T3-5.P2****Measurement of QT Interval Prolongation: a Comparative Evaluation of Six Algorithms Using Simulated Electrocardiograms**

Xiaolin ZHOU, Xin ZHU, Hui WANG, Daming WEI  
*The University of Aizu*

**T3-6.P2****Modeling and Simulation of Space-Time Reverberation for Active Sonar Array**

Jian-guo HUANG, Xiao-dong CUI, Ru-hang WANG  
*Northwestern Polytechnical University*

**T3-7.P2****Fast Parallel Processing Using GPU in Computing L1-PCA Bases**

Nobuhiro FUNATSU, Yoshimitsu KUROKI  
*Kurume National College of Technology*

**T3-8.P2****A Novel Alamouti-Coded Decode-and-Forward Protocol for Cooperative Communications**

Wanakorn SWASDIO, Chaiyod PIRAK  
*King Mongkut's University of Technology*

**T1-1.P2****Hardware Design of Fuzzy Controller for Biomass Downdraft Gasifier with LabVIEW**

A. Sanjeevi GANDHI, T. KANNADASAN,  
\*R. SURESH  
*Anna University Coimbatore,  
\*Visveswaraiyah Tech University*

**T1-2.P2****Facility-Level DC vs. Typical AC Distribution for Data Centers - A Comparative Reliability Study**

V. SITHIMOLADA, P. W. SAUER  
*University of Illinois at Urbana-Champaign*

**T1-3.P2****Development of a New Chemical Synthesis Method with Pulsed Discharge Plasma in Sub- and Supercritical Fluids**

Mitsuru SASAKI, Wahyu DIONO, Tsuyoshi KIYAN,  
Hidenori AKIYAMA, Motonobu GOTO,  
\*Yousuke SUGA, \*Toshiyuki WATANABE  
*Kumamoto University,  
\*Tokyo University of Agriculture and Technology*

**T1-4.P2****Correlation between Electric Demand and Floor Area of the Residential Consumers**

Nahid-AI- MASOOD, Shohana Rahman DEEBA,  
Muhammad Abdullah ARAFAT,  
\*Radwan H. SIDDIQUE, \*Apurba SAHA,  
\*Rumana RAHMAN  
*Bangladesh University of Engineering and  
Technology, \*BRAC University*

**T1-5.P2****Effect of Divided Electrode of Screw-Type Ozonizer for Ozone Generation and Basic Study of Ozone Sterilization Effect against Bacteria in Soil**

Bunpei UEDA, Tomoyuki FUJISHIMA,  
Takahiko YAMASHITA  
*Nagasaki University*

**T1-6.P2****Study of Charge and Recharge Characteristics of LiFePO4 Battery and Lead-Acid Battery**

Chih-Chiang HUA, Zong-Wei SYUE  
*National Yunlin University of Science & Technology*



**T1-7.P2****A Solution of Preventive Control by Means of Transient Stability Constrained OPF**

Lukmanul HAKIM, \*Junji KUBOKAWA,  
 \*\*Yue YUAN, \*\*\*Rony Seto WIBOWO,  
 \*\*\*Tomohiro TAKAYAMA, \*\*\*Naoto YORINO,  
 \*\*\*Yoshifumi ZOKA, \*\*\*Yutaka SASAKI,  
 \*\*\*\*Yusra SABRI  
*Universitas Lampung,  
 \*Hiroshima Institute of Technology,  
 \*\*Hohai University, \*\*\*Hiroshima University,  
 \*\*\*\*Institut Teknologi Bandung*

**T1-8.P2****Effects of TiO<sub>2</sub> Blocking Layer Formation by Sol-Gel Method on Conversion Efficiency of Dye-Sensitized Solar Cell**

Chi-Hwan HAN, Tae-Yeon CHO, Sang-Hoon BAE,  
 \*Youl-Moon SUNG, \*Min-Woo PARK  
*Korea Institute of Energy Research,  
 \*Kyungsoong University*

**T1-9.P2****A Study of Digital Filter for Rotor Speed Detection with Slot Harmonic Current for Induction Motor**

Kichiro YAMAMOTO, Kenichi IIMORI,  
 Hiroshi MORITA  
*Kagoshima University*

**T1-10.P2****Single-Switch Dual-Source Tri-Port DC-to-DC Converter**

Kong-Soon NG, Tsung-Hsi WU, Wen-Ching YANG,  
 Chin-Sien MOO  
*National Sun Yat-Sen University*

**T1-11.P2****Fault Detection Using ANN for Three-Level NPC Inverter Fed Induction Motor Drive**

Hong Hee LEE, \*Phan Quoc DZUNG,  
 \*Truong Phuoc HOA, \*Le Minh PHUONG,  
 \*Nguyen Xuan BAC  
*University of Ulsan,  
 \*HCMC University of Technology*

**T1-12.P2****New Direct Torque Control of DFIG under Balanced and Unbalanced Grid Voltage**

B. B. PIMPLE, V. Y. VEKHANDE,  
 B. G. FERNANDES  
*Indian Institute of Technology Bombay*

**T1-13.P2****Fast Response Digital PID Control Circuit for DC-DC Converter**

Fujio KUROKAWA, Yuki MAEDA,  
 Yuichiro SHIBATA, Hidenori MARUTA,  
 \*Tsukasa TAKAHASHI, \*Kouta BANSHO,  
 \*Toru TANAKA, \*Keiichi HIROSE  
*Nagasaki University, \*NTT Facilities, Inc.*

**T1-14.P2****Analysis and Design of a Phase-Shifted Full-Bridge Series-Resonant DC-DC Converter**

Yu-Kang LO, Chung-Yi LIN, Chien-Yu LIN,  
 Chao-Fu WANG  
*National Taiwan University of Science and Technology*

**T1-15.P2****Discrimination of Moving Status for Logistic Tracking Systems Using Mahalanobis Distance of Acceleration Record**

Satoshi KAWASAKI, Hiroshi YOSHIDA,  
 Hiroshi HOSAKA, \*Yasuhiro KAWAHARA  
*The University of Tokyo, \*Kobe University*

**T1-16.P2****A Digitally Wireless Dimmable Lighting System for Two-Area Fluorescent Lamps**

Chun-An CHENG, Hung-Liang CHENG,  
 Kun-Jheng LIN, Kuan-Lin CHU, Chun-Hsien YEN  
*I-Shou University*

**T1-17.P2****The New Maximum Power Point Tracking Algorithm Using ANN-Based Solar PV Systems**

Hong Hee LEE, \*Phan Quoc DZUNG,  
 \*Le Dinh KHOA, \*Le Minh PHUONG,  
 \*Nguyen Truong DAN VU  
*University of Ulsan,  
 \*HCMC University of Technology*

**T1-18.P2****Development of Power Supply System for Aircraft Warning Lights**

K. ADACHI, H. FUJITA, S. TANIGUCHI,  
 T. NOGUCHI  
*Kyushu Electric Power Co., Inc.*

**T1-19.P2****Verification of a Microgrid System in a Small Isolated Island**

T. NOGUCHI, K. TAKANO, T. IMASYOSHI,  
 K. ISHIDA, Y. SHIMOGAWA, T. YAMADA,  
 H. HAYASHI, T. MOUNAI, T. KOJIMA  
*Kyushu Electric Power Co., Inc, Ltd.*

**T2-1.P2****High-Frequency Signal Transmission Characteristics of Coplanar Waveguides with Cone Bump Interconnections**

A. IKEDA, K. KAJIWARA, N. WATANABE,  
 T. ASANO  
*Kyushu University*

**T2-2.P2****Low-Temperature ( $\leq 250^\circ\text{C}$ ) Crystallization of Si on Insulating Substrate by Gold-Induced Layer-Exchange Technique**

Jong-Hyeok PARK, Masashi KUROSAWA,  
 Naoyuki KAWABATA, Masanobu MIYAO,  
 Taizoh SADOH  
*Kyushu University*

**T2-3.P2****Effects of Ar Addition on Breakdown Voltage in a Si(CH<sub>3</sub>)<sub>2</sub>(OCH<sub>3</sub>)<sub>2</sub> RF Discharge**

Giichiro UCHIDA, \*Shota NUNOMUTRA,  
 Hiroshi MIYATA, Shinya IWASHITA,  
 Daisuke YAMASHITA, Hidefumi MATSUZAKI,  
 Kunihiro KAMATAKI, Naho ITAGAKI,  
 Kazunori KOGA, Masaharu SHIRATANI  
*Kyushu University, \*National Institute of Advanced Industrial Science and Technology*

**T2-4.P2****Ion Mobility Sensor Based on Photo-Ionization Light Source for Trace Gas Sensing**

M SURESH, Nilesh J VASA, \*S SASEENDRAN,  
 \*\*Vivek AGARWAL  
*Indian Institute of Technology Madras,  
 \*Fluid Control Research Institute,  
 \*\*Indian Institute of Technology Bombay*

**T2-5.P2****Thermal Probe Measurements of Energy Flux onto a Substrate during ICP Assisted Sputter-Deposition**

Hiroaki KITAGAWA, Ryoji KAN, Kenji MINE,  
 Masanori SHINOHARA, Yoshinobu MATSUDA  
*Nagasaki University*

**T2-6.P2****Substrate Temperature Dependence of Feature Profile of Carbon Films on Substrate with Submicron Trenches**

Takuya NOMURA, Tatsuya URAKAWA,  
Yuki KORENAGA, Daisuke YAMASHITA,  
Hidefumi MATSUZAKI, Kazunori KOGA,  
Masaharu SHIRATANI, \*Yuichi SETSUHARA,  
\*\*Makoto SEKINE, \*\*Masaru HORI  
*Kyushu University, \*Osaka University,  
\*\*Nagoya University*

**T2-7.P2****Cluster-Free B-Doped a-Si:H Films Deposited Using SiH<sub>4</sub> + B<sub>10</sub>H<sub>14</sub> Multi-Hollow Discharges**

Kenta NAKAHARA, Yuki KAWASHIMA,  
Muneharu SATO, Takeaki MATSUNAGA,  
Kousuke YAMAMOTO,  
William Makoto NAKAMURA,  
Daisuke YAMASHITA,  
Hidefumi MATSUZAKI, Giichiro UCHIDA,  
Naho ITAGAKI, Kazunori KOGA,  
Masaharu SHIRATANI  
*Kyushu University*

**T2-8.P2****Deposition Profiles of Microcrystalline Silicon Films Using Multi-Hollow Discharge Plasma CVD**

Takeaki MATSUNAGA, Yuki KAWASHIMA,  
Kazunori KOGA, Kenta NAKAHARA,  
William Makoto NAKAMURA, Giichiro UCHIDA,  
Naho ITAGAKI, Daisuke YAMASHITA,  
Hidefumi MATSUZAKI, Masaharu SHIRATANI  
*Kyushu University*

**T2-9.P2****Photoluminescence of Si Nanoparticles Synthesized Using Multi-Hollow Discharge Plasma CVD**

Yuki KAWASHIMA, Kousuke YAMAMOTO,  
Muneharu SATO, Takeaki MATSUNAGA,  
Kenta NAKAHARA, Daisuke YAMASHITA,  
Hidefumi MATSUZAKI, Giichiro UCHIDA,  
Kazunori KOGA, Masaharu SHIRATANI,  
\*Michio KONDO  
*Kyushu University, \*National Institute of Advanced  
Industrial Science and Technology*

**T2-10.P2****Fabrication of n-Type β-FeSi<sub>2</sub>/p-Type Si Heterojunctions by Pulsed Laser Deposition and Their Application to NIR Photodiodes**

Chen LI, Wataru YOKOYAMA, Shota IZUMI,  
Promros NATHAPORN, Tsuyoshi YOSHITAKE  
*Kyushu University*

**T2-11.P2****Plasma CVD Treatment for Titanium Dioxides to Approach the High Performance of Photocatalysts by Visible Light Irradiation**

Kazuya YAMAMOTO, Yuki MATSUURA,  
Ayako NAKAMURA, Tatsuhiko SONODA,  
Shigenori MATSUSHIMA, Kenji YAMADA  
*Kitakyushu National College of Technology*

**T2-12.P2****Preparation of Alq<sub>3</sub> Thin Films for Organic Electro-Luminescence Using Plasma Ablation Method**

Hiroharu KAWASAKI, Yoshiaki SUDA,  
Tamiko OHSHIMA, Yoshihito YAGYU  
*Sasebo National College of Technology*

**T2-14.P2****Patterned Growth of ZnO Nanowires Using NAPLD with Nano-Imprint**

K. TOYA, K. KUBO, K. TSUTA, A. KUMEDA,  
D. NAKAMURA, M. HIGASHIHATA, T. OKADA,  
T. ASANO  
*Kyushu University*

**WIE-1.P2****A Study on Edge Detection Techniques in Retinex Based Adaptive Filter**

P. SWARNALATHA  
*VIT University*

**WIE-2.P2****Precise CBIR System Using Relevance Feed Back Based on Color and Texture Feature**

B. JYOTHI, Y.Madhav LATHA, V.S.K. REDDY  
*MRCET*

**WIE-3.P2****Robust Digital Video Watermarking in an Orthogonal Parametric Space**

M. OMIDYEGANEH, H. KHALILIAN,  
S. GHAEMMAGHAMI, \*S. SHIRMOHAMMADI  
*Sarif University of Technology,  
\*University of Ottawa*

**WIE-4.P2****A DCT Based Permuted Image Digital Watermarking Method**

Reena GUNJAN, Saurabh MAHESHWARI,  
Vijay LAXMI, Manoj S. GAUR  
*Malaviya National Institute of Technology,  
\*The International Centre for the Study of East  
Asian Development*

**WIE-5.P2****n-Gram Modeling for Visual Speech Recognition**

Preeti SINGH, V. LAXMI, Ramprasad JAT,  
M.S. GAUR  
*Malaviya National Institute of Technology*

**WIE-6.P2****Audio Signal Classification Using Mel-Spectrum Teager Energy Coefficients**

Deepti SINGH, \*Darren F. KAVANAGH,  
\*Francis BOLAND  
*BITS, \*Trinity College Dublin*

**WIE-7.P2****RSS-Based Sybil Attack Detection in VANETs**

Jyoti GROVER, M.S. GAUR, Nitesh PRAJAPATI,  
Vijay LAXMI  
*Malaviya National Institute of Technology*

**WIE-8.P2****An Internet Based Interactive Embedded Data Acquisition System for Vehicle Collision Detection-Review**

Vaishali U. PATIL, \*Avichal R. KAPUR  
*Lokmanya Tilak College of Engineering,  
\*NYSS, Meghe Group*

**WIE-9.P2****A Study on Dirty Paper Coding with a Maximum Beam in Multiuser MIMO Downlinks**

Cong LI, Yasunori IWANAMI, Eiji OKAMOTO  
*Nagoya Institute of Technology*

- WIE-10.P2**  
**Adaptive Routing Protocol Selection in MANET Using Regression Model** && &  
 S.B.M. PRIYA, M. RAMAKRISHNAN,  
 \*S. SHANMUGAVEL  
*SSN College of Engineering, \*Anna University*
- WIE-11.P2**  
**Design and Implementation of Automatic Water Heating System** && +  
 P RAVIBABU, A. PRAVEEN, B.Susheel KUMAR,  
 Ch.Vikas CHANDRA  
*HYD*
- WIE-12.P2**  
**Infrastructure ENUM Implementation in Australia** && &  
 Ananda Tapasvi JAMMULAMADAKA,  
 Mark A. GREGORY  
*RMIT University*
- WIE-13.P2**  
**A Novel Approach to Take Telemedicine to Rural India** && ,  
 Praveen Kumar KANNOJU, K.V. SRIDHAR,  
 K.S.R. Krishna PRASAD  
*National Institute of Technology, Warangal*
- WIE-14.P2**  
**A High Efficiency Driver for High-Brightness White LED Lamp**  
 Yu-Jen CHEN, Wen-Ching YANG, Chin-Sien MOO,  
 \*Yao-Ching HSIEH  
*National Sun Yat-Sen University,  
 \*National Dong Hwa University*
- WIE-15.P2**  
**Automated Inventory Management and Security Surveillance System Using Image Processing Techniques** & \*\$  
 S. JYOTHSNAA, Adwait GANDHE,  
 Apoorvaa DESHPANDE, \*Sourabh BODAS  
*BITS Pilani, \*Université de Bourgogne*
- WIE-16.P2**  
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 Karl Yung-Ta HUANG, Yawgeng A. CHAU  
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 You-Sun YOUN, Dongwoo KIM  
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**T7-2.P2****A Self-Recovery Technique for Highly-Available Stream Processing over Local Area Networks**

Fuyuan XIAO, \*Kyoko NAGANO,  
\*Tsuyoshi ITOKAWA, \*Teruaki KITASUKA,  
\*Masayoshi ARITSUGI  
*Guilin University of Technology,  
\*Kumamoto University*

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Koji KONDO, Kunihiko KANEKO  
*Kyushu University*

**T7-4.P2****Extending Mobile Service Middleware with Support for Context-Aware Service Processing**

Andrew MEADS, Ian WARREN  
*University of Auckland*

**T7-5.P2****A Newly Developed Automated Acquisition System of AMCOS for Acquiring Chromatography Data in XML Format**

M.S. HAPEEZ, N.R. HAMZAH, H. HASHIM,  
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*Universiti Teknologi MARA*

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Sally E. GOLDIN,  
Thanachao LUENGWITAYAKORN,  
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Shen JIANJING, Guo XIAOFENG, Lin NAN  
*Zhengzhou Institute of Information Science and Technology*

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Kazuhide DOUGOME, \*Keijiro ARAKI  
*Kagoshima National College of Technology,  
\*Kyushu University*

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Yasumasa NAKATSUGAWA, Taro KURITA,  
\*Keijiro ARAKI  
*SONY Corporation, \*Kyushu University*

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Shinya YAMADA, Keijiro ARAKI,  
Shigeru KUSAKABE, Yoichi OMORI  
*Kyushu University*

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Keiju MATSU, Takanori ASABA,  
Masaru HASEGAWA  
*Chubu University*

**T8-2.P2****A 2.5-Gb/s Clock and Data Recovery Circuit with  $\Delta\Sigma$ -Modulated Fractional Frequency Compensation**

Ching-Yuan YANG, Wei-Shuo LIN, \*Jung-Mao LIN,  
Hsin-Ming WU  
*National Chung Hsing University,  
\*Industrial Technology Research Institute*

**T8-3.P2****Low Leakage and Low Power of CMOS SRAM Peripheral Circuit**

T. BHUVANESWARI, C. SENTHILPARI,  
Hii Ming TAT  
*Multimedia University*

**T8-4.P2****A Three-Dimensional Binocular Range Sensor LSI with a 106 dB Wide Dynamic Range Pixel**

Masatomo KAWANO, Yukari HIRATA,  
\*Yutaka ARIMA  
*Fukuoka Industry, Science and Technology Foundation, \*Kyushu Institute of Technology*

**T8-5.P2****A High Gain Low Power Up-Conversion Mixer for IFWA WiMax System**

Wen-Shan HXIAO, Zhi-Ming LIN  
*National Changhua University of Education*

**T8-6.P2****A 1V Wide-Tuning Back-Gate Coupling Quadrature VCO**

You-Yi HSIEH, Zhi-Ming LIN  
*National Changhua University of Education*