

TECHNICAL SESSIONS

Session A1 : Robotic, Control, Mechatronic, and Automation 1

**Chairpersons : Dr. Munir Zaman
: Dr. Mahfoozur Rehman**
Date : 29 November 2007
Time : 2:00pm

A1-1 Odometry Error Model for a Synchronous Drive Robot

Munir Zaman, John Illingworth

A1-2 Behavior-based System using Neural Network for Robot Control

Saufiah Abdul Rahim, Thomas Braunl

**A1-3 Robust State Feedback Controller for Interval System using
Kharitonov's Polynomials**

S.Neduncheliyan, M.Umapathy, R. Nagarajan

A1-4 Error Modelling of Odometry in a Mobile Robot

Peyman Moghadam, Mohammad Reza Zaheri

**A1-5 Contact Interaction based Navigation System for a Biped Humanoid
Robot**

Hanafiah Yussof, Masahiro Ohka, Mitsuhiro Yamano, Yasuo Nasu

**A1-6 A Portable DNA Strands Detection System Featuring 32-bit
ARM7TDMI Microcontroller and VGA-CMOS Digital Image Sensor**

Mohd Halim Mohd Noor, Mohd Zaid Abdullah

TECHNICAL SESSIONS

Session A2 : Power Systems and Industrial Applications 1

Chairpersons : Dr. Syafrudin Masri
: Dr. Syed Sahal Nazli Alhady
Date : 29 November 2007
Time : 2:00pm

A2-1 An Experimental Study on Load Current Ripple of Single and Multilevel DC-Chopper Under Various Loads

Anantharajah.D, Gobbi.R, M.K.Ahamed Khan, K.Anayet

A2-2 The Design of Built In Current Extractor Circuit for IDDQ Test

Muhamad Faisal Ibrahim, Izam Kamisian, Abu Khairi A'ain, Yuen Tat Lee, Terence Huat Hin Tan

A2-3 Development of No Deadtime DC/DC Converter for 300W Application

M.N.Mamat, S.Taib, M.F.Ain

A2-4 Minimizing Neutral Current in a 3 Phase 4 Wire Power Distribution System by Reducing Zero Sequence Harmonic Current Using a Zero-Passing / Zero-Blocking Transformer

Nizar Hassan, Syafrudin Masri

A2-5 Design of a Converter for Brushless DC Motor Drives Based on PIC Microcontroller

Norkharziana Mohd Nayan, Syafrudin Masri, Muhammad Nasiruddin Mahyuddin

A2-6 TEC System and its Potential for Cooling Applications

W.Salah, Soib Taib, A.Al-Mofleh

TECHNICAL SESSIONS

Session A3 : Telecommunication Systems and Applications 1

Chairpersons : Mr. Vino Vinodrai
: Prof. Syed Idris Syed Hassan
Date : 29 November 2007
Time : 2:00pm

A3-1 Development of an Non-linear Network Equalizer for Wireless Communication System
Halina Hassan, Farid Ghani

A3-2 Causes of Interference and its Mitigation in Satellite Communications
Avadha Nandra, Jivesh Govil, Jivika Govil

A3-3 Finding a Person with Amnesia's Disease by Mobile Phone
M.Hassan Shirali-Shahreza, Mohammad Shirali-Shahreza

A3-4 Performance Checking of the Transmission in the Direct Modulation's Radio Over Fiber System with an Amplifier at the Receiver Site
W.R.Wan Abdullah, S.Yaakob, M.A.Ismail, A.K.Zamzuri, R.Mohamad, M.R.Yahya, A.F.Awang

A3-5 Analysis of the Melting Layer from Metrological Radar Data in Malaysia
Nor Hisham Khamis, Omer Abdel Razag Sharif, Zakaria Hanzaz, Ameruddin Baharom

A3-6 Exploiting Clusters for Authentication in Ad hoc Networks
S.Nenduncheliyan, T.Sreedhar

TECHNICAL SESSIONS

Session A4 : Electronic Designs and Applications 1

Chairpersons : Dr. Hartono Siswono

: Mr. Arjuna Marzuki

Date : 29 November 2007

Time : 2:00pm

A4-1 Guidance Chip Soft IP Core for LEO Satellites

Muhammad Haris Afzal, Muhammaad Asif, Najeeb Ahmad, Muhammad Akhtar Khan, Naveed Akram

A4-2 Lab-on-a-Chip using an Enhanced CMOS Electric-Field Sensor Circuit for Cells Monitoring

Siti Noorjannah Ibrahim, S.M.Rezaul Hasan, Ani Liza Asnawi

A4-3 Using Xilinx ML310 Development Board as Test and Development Platform for FPGA-based Embedded Vision System

Azman M. Yusof, Thomas Braunl

A4-4 CMUT for Human and Humanoid Locomotion Measurement

Yufridin Wahab, Aladdin Zayegh, Rezaul K.Begg, Ronny Veljanovski

A4-5 Designing Vending Machine Control by Using XILINX Simulator

Hartono Siswono

A4-6 Comparative Study of the Folded-cascode, Current-reuse and the PCSNIM LNA Topologies for W-CDMA Direct-conversion Receiver

Norlaili Mohd. Noh, Tun Zainal Azni Zulkifli

TECHNICAL SESSIONS

Session A5 : Artificial Intelligence and Computer Applications 1

Chairpersons : Dr. Abdollah Homaifar
: Mr. Muhammad Nasiruddin Mahyuddin
Date : 29 November 2007
Time : 2:00pm

A5-1 Boolean Matrix Implementation with DNA Computing

Nordiana Rajae, Osamu Ono

A5-2 Variable Length Genetic Algorithm for Feature Selection in High Dimensional Domains

Anwar Ali Yahya, Ramlan Mahmud, Fatimah Dato Ahmad

A5-3 Sensor Fusion Analysis using Fuzzy Integral, Bayesian Network and Neural Network Techniques

Jamie M.Walls, Albert Esterline, Abdollah Homaifar

A5-4 Fuzzy Logic Based Efficient Airbag Controller Design

Nowshad Amin, Woon Wen Hui

A5-5 An Alternative Way of Data Structure Visualization by Hybridizing Unsupervised Vector Quantization (VQ) and Adaptive Coordinates (AC)

Md. Sarwar Zahan Tapan, Teh Chee Siong

A5-6 Recognition on the Facial Expression using Kohonen Neural Networks

Hiroki Kato, Taizo Umezaki, Mikio Danno, Masahiro Miyagi

TECHNICAL SESSIONS

Session A6 : Vision, Image and Signal Processing 1a

Chairpersons : Dr. Mujahid Fahmy Al-Azzo

: Dr. Umi Kalthum Ngah

Date : 29 November 2007

Time : 2:00pm

A6-1 Burg Method Based-Holographic Source Localization

Mujahid F. Al-Azzo

A6-2 Detecting Pickup Errors of Electronic Parts

Hirotake Esaki, Taizo Umezaki, Tetsumi Horikoshi

A6-3 Face Recognition using 3D Facial Data

Takuma Yamamoto, Taizo Umezaki, Yukio Sato

A6-4 Secure Medical Image Data System

H.V.Balachandran Achar, Jagadish Nayak

A6-5 Application of Image Processing Technique to Determine Normal Sperm

Zuraidi Saad, Mohd Fauzi Alias, Nor Ashidi Mat Isa, Kamal Zuhairi Zamli, Siti Amrah Sulaiman

A6-6 Multi-view Shape Matching and Retrieval

Kritsana Yawichai, Yutanna Kitjaidure

TECHNICAL SESSIONS

Session A7 : Vision, Image and Signal Processing 1b

**Chairpersons : Dr. Iman Yi Liao
: Dr. Shahrel Azmin Suandi**
Date : 29 November 2007
Time : 2:00pm

A7-1 The Evaluation of ECG Data Compression using Wavelet Transform and Average Beat Subtraction

S.Pathoumvanh, S.Airphaiboon, M.Sangworasil

A7-2 Combined Classifier versus Combined Feature Space in Scale Space Texture Classification

Mehrdad J.Gangeh, Bart M. ter Haar Romeny, C.Eswaran

A7-3 Linear One-Dimensional Color Feature for Starfruit Classification

Musa Mokji, S.A.R. Abu Bakar

A7-4 Efficient Fingerprint Matching using Principal Log-Gabor Filter Analysis

Thian Song Ong, Andrew B.J.Teoh

A7-5 Shape Representation based on Closed Curve Convex Hull

Musa Mokji, S.A.R. Abu Bakar

A7-6 Cortical Boundary Detection Using Gradient Based Genotype Genetic Algorithm

Norharyati Md Ariff, Noor Elaiza Abdul Khalid, Mazani Manaf

TECHNICAL SESSIONS

Session B1 : Robotic, Control, Mechatronic, and Automation 2

Chairpersons : Dr. Tu Duc Nguyen
: Prof. Lim Chee Peng
Date : 29 November 2007
Time : 4:00pm

- B1-1 Robust Chattering Free Adaptive Neura Sliding Mode Control for Robotic Manipulators**
Sabat Anwari, Dimitri Mahayana
- B1-2 Vergence Control for Robotic Distance Estimation Through Stereo Vision**
Swee Eng Khor, Chu Kiong Loo, Yen San Yong
- B1-3 Stabilization of Marine Structure**
Tu Duc Nguyen
- B1-4 Robust Motion Control of Human-Like Arm for Precise Trajectory Tracking Task**
Hosseini Jahan Abadi, Suhail Kazi, Musa Mailah, Mohd Zarhamdy Mohd Zain
- B1-5 A New LMI-based Sliding Mode Controller Design for an Active Magnetic Bearing System**
Abdul Rashid Husain, Mohamad Noh Ahmad, Abdul Halim Mohd Yatim

TECHNICAL SESSIONS

Session B2 : Power Systems and Industrial Applications 2

Chairpersons : Dr. Mounir Bouzguenda

: Dr. Dahaman Ishak

Date : 29 November 2007

Time : 4:00pm

B2-1 Energy Efficiency Improvement and Barriers: USM Practices

A.Al-Mofleh, Soib Taib, W.Salah, K.Ibrahim, B.Hashim

B2-2 Development of a Weighted Fuzzy Rule based Controller for Interior Permanent Magnet Synchronous Motor Drives

Muhammad Firoz Mridha, Liakot Ali, Md. Nasir Uddin

B2-3 Effect of Harmonic Current on the Power Cable

Mokhzaini Azizan, Syafrudin Masri, Soib Taib, Mohd Nazir Abdullah

B2-4 Allocation of Reactive Compensation Using Fast Decoupling Technique

A.Tami, M.Bouzguenda, J.Al-Khalaf Bani Younis, A.Ferrah

B2-5 Are We Prepared for the Global Energy Crisis 2050?

N.Khan, N.Marium, N. Abas

B2-6 Direct Torque Control of Five-Phase Permanent Magnet Synchronous Machines

Mukhtar Ahmad

B2-7 Design of High-Speed Permanent Magnet Brushless Machines

Dahaman Ishak, Soib Taib, Syafrudin Masri

TECHNICAL SESSIONS

Session B3 : Telecommunication Systems and Applications 2

Chairpersons : Mr. Johnson Tay
: Dr. Mohd Fadzli Mohd Salleh
Date : 29 November 2007
Time : 4:00pm

- B3-1 Low Cost Avonics Suite for Small Unnamed Aerial Vehicles**
Muhammad Haris Afzal
- B3-2 A Robust Video Coding Technique with Multistage Lattice Vector Quantization for Wireless Transmission**
Mohd Fadzli Mohd Salleh, Mohd Fadzil Ain, Syed Idris Syed Hassan, Mandeep Singh, Mohd Nazri Mahmud
- B3-3 Mobility Model based on Cellular Automata and the Effect of Transmission Range in Vehicular Ad hoc Network**
Zulkefli M. Yusof, James A. Flint, Sekharjit Datta
- B3-4 Excellent Design of Adaptive Noise Cancellation for Speech Signals using Grazing Estimation of Signal Method**
S.Manikandan, M.Madheswaran
- B3-5 Transmitter and Receiver Process Sharing in Synchronous Multi-user Communication**
Mohd Fadzil Ain, Farid Ghani, Mutamed Khalid, Syed Idris Syed Hassan, Mandeep Singh
- B3-6 EVM Measurement for the WLAN 802.11g Radio Over Fiber Downlink System with Electroabsorption Modulator at the RAU**
Syamsuri Yaakob, Mohd Azmi Ismail, Romli Mohamad, Mohamed Razman Yahya, Abd. Fatah Awang Mat, Mohd Ridzuan Mokhtar, Hairul Azhar Abdul Rashid
- B3-7 0.15 μ m Pseudomorphic HEMT Medium Power Amplifier for Wireless LAN Application**
Amiza Rasmi, Mohd Azmi Ismail, Ahmad Ismat Abd Rahim, Arjuna Marzuki, Mohamed Razman Yahya, Abdul Fatah Awang Mat

TECHNICAL SESSIONS

Session B4 : Electronic Designs and Applications 2

Chairpersons : Prof. Iqbal A. Khan

: Mr. Arjuna Marzuki

Date : 29 November 2007

Time : 4:00pm

B4-1 Embedded Cryptosystem for Strong Data Security in Telemedicine
Mohamed Khalil Hani, Illiasaak Ahmad, Norashikin M. Thamrin

B4-2 Size Minimization of High Sensitivity Microphone using Slotted Diaphragm
Bahram Azizollah Ganji, Burhanuddin Yeop Majlis

B4-3 FPGA Based 4-Channel Logic Analyzer
Nor Zaidi Haron, Amir Shah Abdul Aziz, Masrullizam Mat Ibrahim

B4-4 Digitally Programmable Four Phase Current Mode Quadrature Oscillator using MOCCIs
Iqbal A.Khan, M.T.Ahmed, Seema Tomar

B4-5 Design of a Reliable and High Performance Electronic Ballast Fluorescent Light
Y.H.Lee, Gobbi.R, M.K.Ahamed Khan, K.Anayet

B4-6 Measurement of Height and Distance of a Moving Object using Microcontroller for Security System
Mukter Zaman, Md. Shabiul Islam, K. Ramasami, Masuri Othman

TECHNICAL SESSIONS

Session B5 : Artificial Intelligence and Computer Applications 2

**Chairpersons : Prof. Wai-Kiang Yeap
: Dr. Kamal Zuhairi Zamli**
Date : 29 November 2007
Time : 4:00pm

- B5-1 Transforming Manual Braille to Computer Controlled Braille Printer**
Muhamad Lazim Talib, Zarina Shukur, Riza Sulaiman
- B5-2 Performance Assessment of SPEA2-CE-KR using Spacing and Coverage Metrics**
Tse Guan Tan, Jason Teo, Hui Keng Lau
- B5-3 Position Control of A Mitsubishi PA10-6CE Manipulator Using RBF Network for Inverse Kinematics Approximation**
Bach H.Dinh, Matthew W.Dunnigan, Donald S. Reay
- B5-4 Voice-based Access Control System for Building Security using Gaussian Mixture Model**
Wahyudi, Syazilawati Mohamed
- B5-5 Voltage Disturbances Recognition using Fuzzy-Wavelet**
Ahmad Farid Abidin, S. R. M. S. Baki
- B5-6 Improving the Prediction Capability of the Fuzzy Linear Regression Model with the Genetic Algorithm**
Hiaw San Kho, Chee Peng Lim, Zalina Abdul Aziz

TECHNICAL SESSIONS

Session B6 : Vision, Image and Signal Processing 2a

Chairpersons : Prof. Hiroki Imamura
: Dr. Anwar Hasni Abu Hassan
Date : 29 November 2007
Time : 4:00pm

B6-1 Probabilistic 2DPCA on Speaker Verification

Chong Lee Ying, Andrew Teoh Beng Jin, Leow Meng Chew

B6-2 Inspection of Parts Volume using the Shape from Focus Method

Naoto Yamamoto Tomoyasu Saigo, Taizo Umezaki

B6-3 Expansion of 3D Computer Graphics World of Photograph

Kenji Yamashita, Makoto Fujimura, Hiroki Imamura, Hideo Kuroda

B6-4 Fast Harmonic Synthesis Method for Sinusoidal Speech-Audio Model

Gyu-Jin Kim, Jong-Hark Kim, Gyu-Hyeok Jung, In-Sung Lee

B6-5 A Method of Super-Resolution based on Segmentation by using Histogram of Image Intensity

Hiroki Imamura, Makoto Fujimura, Hideo Kuroda

B6-6 Shape from Terrain Image using Windowed Fourier Transform

Iman Yi Liao

TECHNICAL SESSIONS

Session B7 : Vision, Image and Signal Processing 2b

Chairpersons : Dr. Sharifah Mumtazah Syed Ahmad

: Dr. Harsa Amylia Mat Sakim

Date : 29 November 2007

Time : 4:00pm

B7-1 3D CAD Models Shape Representation for Pose Estimation
Abu Bakar Elmi, Tetsuo Miyake, Zhang Zhong, Takashi Imamura

B7-2 Automatic Fish Recognition and Classification: a Framework
Humera Farooq, Rosalina Abdul Salam

B7-3 Application of Machine Learning for Fish Recognition
Ali Salem Samma, Rosalina Abdul Salam

B7-4 FPGA Implementation of Lifting Based 2-D Forward Discrete Wavelet Transform
M.S.Bhuyan, Md. Shabiul Islam, Md. Azrul Hasni Madesa, Masuri Othman

B7-5 Implementation of Intonation and Emotion using PSOLA for Malay Text-to-Speech System
Tan Tian Swee, A.K. Ariff, Sheikh Hussain Sheikh Salleh, Cheong Chye Li, Kong Pui Wan

B7-6 Malay Alphabet Sign Language Recognition
Tan Tian Swee, A.K.Ariff, Sh-Hussain Salleh, Wang Wee Sern

TECHNICAL SESSIONS

Session C1 : Robotic, Control, Mechatronic, and Automation 3

Chairpersons : Dr. Sim Kok Swee
: Prof. Lim Chee Peng
Date : 30 November 2007
Time : 10:30am

- C1-1 Design and Implementation of Temperature Controller Hardware System on Proportional-Integral Algorithm using Microcontroller**
Md. Shahibul Islam, Mukter Zaman, Kazi Ashique Ahmad Rafi, Masuri Othman
- C1-2 Hexapod Insect Robot System Hardware Design**
Sim Kok Swee, Yong Gee Sern, Lim Wee Kuan
- C1-3 Production Monitoring System**
Siva Kumar Subramaniam, Siti Huzaimah Husin, Yusmarnita Yusop , Abdul Hamid Hamidon
- C1-4 Matlab-based Graphical user Interface Development for Real-Time Signal Monitoring**
Muhammad Sharfi Najib, Mohd Shawal Jadin, Mohd Razali Daud, Soib Taib
- C1-5 Bucket Brigade Algorithm Enhancement for Robot Behaviors**
Saeed Mohammed Baneamoon, Rosalina Abdul Salam

TECHNICAL SESSIONS

Session C2 : Telecommunication Systems and Applications 3

Chairpersons : Prof. Tharek Abdul Rahman

: Dr. Mohd. Anzor Yusof

Date : 30 November 2007

Time : 10:30am

C2-1 A New Approach for Designing High Frequency Low Noise Amplifiers

Mohamed Elhefnawy, Widad Ismail, Farid Ghani

C2-2 Radio Frequency Identification Technology in Farming Management System

Ayob Johari, Nurul Shazwani Bakry, Danial Md.Nor, Mohd Helmy Abd Wahab, Mohd Erdi Ayob, Nik Shahidah Afifi Mohd Taujuddin

C2-3 Modified Koch Fractal Dipole Antenna for Multiband Application

Shipun Anuar Hamzah

C2-4 Cross Layer Design for Video Transmission Over Wireless using H.264/AVC

Yakubu S.Baguda, Norsheila Fisal, Sharifah Hafizah Syed, Sharifah Kamilah Yusof, Rozeha Rashid

C2-5 Embedded Design of Wireless Data Acquisition System using 32bit Single Board Computer

W.M.Azmi Mamat, R.Badlishah Ahmad, M.Rizon M.Juhari, A.Nasir Che Rosli, A.H. Abdul Aziz

C2-6 An Indoor Tracking System based on Square Grid RFID Reader Network

Ahmed Wasif Reza, Tan Kim Geok

TECHNICAL SESSIONS

Session C3 : Electronic Designs and Applications 3

Chairpersons : Dr. George Coghill
: Mr. Zulfiqar Ali Abdul Aziz
Date : 30 November 2007
Time : 10:30am

- C3-1 Realization of Four Phase Sinusoidal Quadrature Oscillator from KHN Filter**
Iqbal A.Khan, Parveen Beg, Muslim T.Ahmed
- C3-2 A Novel High Precision Rectifier Using DVCCs**
Iqbal A.Khan, Parveen Beg
- C3-3 Multiphase VCO using CCCIs**
Iqbal A.Khan, Mohd. S.Ansari
- C3-4 A Simple Adaptive Tracking Control for Nonlinear Chua's Circuit**
Hamid. R. Koofigar, Saeed Hosseinnia, Farid Sheikholeslam
- C3-5 System Level Modelling of Compressed Memory Architecture using SystemC**
Zulkifli Md Yusof, Mohamed Khalil Hani
- C3-6 Overall Equipment Effectiveness the best practice for equipment efficiency**
Siva Kumar Subramaniam, Siti Huzaimah Husin, Yusmarnita Yusop, Abdul Hamid Hamidon

TECHNICAL SESSIONS

Session C4 : Artificial Intelligence and Computer Applications 3

Chairpersons : Dr. Hua Nong Ting

: Mr. Ng Theam Foo

Date : 30 November 2007

Time : 10:30am

C4-1 Integrated Billing System through GSM Network

Mohd Helmy Abdul Wahab, Siti Zarina Mohd Muji, Fazliza Md. Nazir

C4-2 One Round Anonymous Auction Protocol

Tham Chuan Siong, Chang Yu Cheng, Ng Wei Shean

C4-3 Design and Simulation of Encryption System based on Pseudo Random Number and Tompkins-Paige Permutation Algorithm using VHDL

Shahram Etemadi Borujeni, Mohammad Eshghi

C4-4 Children Speech Recognition of Malay Affricate Sounds using Neural Networks

Hua Nong Ting, Jasmy Yunus

C4-5 Combination of Multiple Neural Networks for Improving Nonlinear Process Modelling based on Clustering Analysis

Zainal Ahmad, Rabiatal 'Adawiah Mat Noor

C4-6 A Comparative Study using Different Classifier for Face Verification

Shahrin Azuan Nazeer, Marzuki Khalid, Nazaruddin Omar, Mat Kamil Awang

TECHNICAL SESSIONS

Session C5 : Vision, Image and Signal Processing 3a

Chairpersons : Dr. Mani Maran Ratnam

: Dr. Zalina Abdul Aziz

Date : 30 November 2007

Time : 10:30am

C5-1 A New Method of Correcting Uneven Illumination Problem in Fundus Image

Aibinu A.M, M.I. Iqbal, M. Nilson, M.J.E. Salami

C5-2 Contrast Limited Adaptive Histogram Equalization and 8-bit Quantization for Breast Mass Pre-processing and Segmentation

Azlindawaty Mohd Khuzi, Rosli Besar, Wan Mimi Diyana Wan Zaki

C5-3 Permutation-Based Image Encryption using Pseudo Random Number Generator and Tompkins-Paige Algorithm

Shahram Etemadi Borujeni, Ali Zakerolhoseini

C5-4 Automatic Diagnosis of Diabetic Retinopathy from Fundus Images Using Digital Signal and Image Processing Techniques

A.M. Aibinu, M.I. Iqbal, M. Nilson, M.J.E. Salami

C5-5 Blood Vessel Detection using RGB Components for Early Diagnosis of Diabetic Retinopathy

Ahmed Wasif Reza, C.Eswaran, Subhas Hati

C5-6 A Novel Gradient Extraction and Polynomial Fitting Approach for the Detection of Notch Defects in Cutting Tools Using Machine Vision

T.H.Low, H.H. Shahabi, Mani Maran Ratnam

TECHNICAL SESSIONS

Session C6 : Vision, Image and Signal Processing 3b

**Chairpersons : Dr. M. Sujaritha
: Dr. Haidi Ibrahim**

Date : 30 November 2007

Time : 10:30am

C6-1 Face Recognition by Applying Wavelet Packet Representation and Locally Discriminating Projection

M.Sujaritha, S.Annadurai

C6-2 Characterizing Seizure from EEG Data using UMACE Filter

Rosniwati Ghafar, Aini Hussain, Salina Abdul Samad, Nooritawati Md Tahir

C6-3 Canny Optimization Colorization Method for Medical Images

Sim Kok Swee, Thong Li Wah, Tso Chih Ping, Eng Jiing Taur

C6-4 Accurate Skin Regions Detection Using Segmentation Approach

Liang Kim Meng, Lai Weng Kin

C6-5 A New Class of Digital Crossover Filters with Flat Magnitude and Constant Group Delay Characteristics

Dolchai Sookcharoenphol

C6-6 Study on the Effect of Microbial Inactivation of Escherichia coli using Negative Pulsed Electric Field

Nik Zainal Abidin Nik Yusoff, Mohd Zaid Abdullah

TECHNICAL SESSIONS

Session C7 : Vision, Image and Signal Processing 3c

Chairpersons : Prof. Ali Eydgahi

: Dr. Khoo Bee Ee

Date : 30 November 2007

Time : 10:30am

C7-1 Design of an Automatic Speech Recognition System Using a Texas Instruments DSP Board

Jamel Price, Ali Eydgahi

C7-2 Face Reader for Biometric Identification using Single Board Computer and GNU/Linux

Ahmad Nasir Che Rosli, Ali Yeon Md Shakaff, R.Badlishah Ahmad, Mohamed Rizon, Wan Muhammad Azmi Mamat

C7-3 Defining and Managing Instabilities in the Signing Patterns of a Signature Biometrics User Population

Sharifah M. Syed Ahmad

C7-4 The Utilization of Spectral and Time-Frequency Estimation Techniques in the Detection of Heart Block Problems

Norhashimah Mohd Saad, Abdul Rahim Abdullah, Syafeeza Ahmad Radzi

C7-5 Vision-based Advanced Driver Assistance System

Abdulhakam.A.M.Assidiq, Othman O.Khalifa, Mohd Rafiqul Islam, Sheroz Khan

TECHNICAL SESSIONS

Session D1 : Robotic, Control, Mechatronic and Automation 4

**Chairpersons : Dr. Mohd Rizal Arshad
: Ms. Noramalina Abdullah**
Date : 30 November 2007
Time : 2:45pm

- D1-1 Supplementary Feedforward Design based on Pade Approximated Plant Model in Direct Model Reference Adaptive Control Algorithm**
Muhammad Nasiruddin Mahyuddin, Mohd Rizal Arshad
- D1-2 Portable Rehabilitation Robot Monitor System using Biofeedback Sensor Wireless Network**
Xuhui Chen, Jun Lu, Dongbo Liu
- D1-3 Multi-team Robot System (MTRS) with ZigBee Communication Technology**
Lim Cheng Siong, Rosbi Mamat
- D1-4 Remote Measurement of Current using Thermo-Optic Technique**
Mahfoozur Rehman, Basem Abdel Jalel
- D1-5 Development of Human Mimicking Sensory System**
A.H.Adom, A.Y. Md. Shakaff, M.N. Ahmad, M.H.Fazalul Rahiman, A.H.Abdullah, S.F. Khan, N. Ahmad Fikri, M.A.Markom

TECHNICAL SESSIONS

Session D2 : Telecommunication Systems and Applications 4

**Chairpersons : Dr. Razali Ngah
: Dr. Mandeep Singh**
Date : 30 November 2007
Time : 2:45pm

D2-1 Industrial Communication Networking: An Ethernet based Implementation

Hairulazwan Hashim, Zainal Alam Haron, Tee Kian Sek

D2-2 A WSN Augmented Hybrid Architecture for Industrial Process Monitoring and Control

Tarique Haider, Mariam Yusuf

D2-3 Empirical Study of Sigmoid Increasing Inertia Weight in Particle Swarm Optimization

Reza Firsandaya Malik, Tharek Abdul Rahman, Siti Zaiton Mohd Hashim, Razali Ngah

D2-4 Study the Wet Antenna Attenuation due to Simulated Rain on the Parabolic Antenna at Ku-Band

Khaled S. Bin Sahaq, Syed Idris, Mohd Fadzil Ain, Mandeep Singh, Mostafa Hussien

D2-5 2.5 GHz BaTiO₃ Dielectric Antenna

Mohd Fadzil Ain, Syed Idris Syed Hassan, Mandeep Singh, M.A. Othman, B.M. Nawang, S. Sreekantan, S.D. Hutagalung, Z.A. Ahmad

D2-6 Wireless Heart Sound Data Acquisition Using Bluetooth

I.Kamarulafizam, Sh-Hussain Saleh, Y. Zuraimi, J.M. Najeb

TECHNICAL SESSIONS

Session D3 : Electronic Designs and Applications 4

Chairpersons : Dr. Md. Liakot Ali
: Dr. Bakhtiar Affendi
Date : 30 November 2007
Time : 2:45pm

- D3-1 Inductive Degeneration 0.13 μ m CMOS Low Noise Amplifier Utilizing On-Chip Inductors at 2.4GHz**
Tun Zainal Azni Zulkifli, Norlaili Mohd Noh, Shahrolhafiz Sayed Ibrahim, Albert V Kordesch
- D3-2 Design of a High Performance IC Test Processor using GLFSR based Mixed-mode Technique**
Mohammad Akhbar Kabir, Liakot Ali
- D3-3 Introduction of Free Level Threshold Zone (FLTZ) Logic for Analog Circuits Controlled by Microcontrollers**
Alireza Nazem, Mohd Rizal Arshad
- D3-4 Transforming AND/OR-Networks into AND/OR-Graphs**
I.Abd El-Salam, W.A.El-Haweet, H.H.El-Meligy
- D3-5 FPGA Implementation on Temperature Data Logger using STH75 Temperature Sensor**
Z.Abdul Halim, L.C.Chaw

TECHNICAL SESSIONS

Session D4 : Artificial Intelligence and Applications 4a

**Chairpersons : Dr. Widad Ismail
: Dr. Junita Mohamad Saleh**
Date : 30 November 2007
Time : 2:45pm

D4-1 Neuro-Fuzzy Wavelet Packets for Text Independent Speaker Identification

M. Sujaritha, S. Annadurai

D4-2 Intranet-based Quality Control Tool

Tan Poh Choo, Iznora Aini Zolkifly

D4-3 Separation of Aspects: A Flowchart based Approach

Hasan Md. Hamidur Rahman, Md. Liakot Ali

D4-4 Loss of Self-Similarity Detection with Second Order Statistical Model and Multi-Level Sampling Approach

Mohd Fo'ad Rohani, Mohd Aizaini Maarof, Ali Selamat, Houssain Kettani

D4-5 A Training Model of an Auto Storage/Retrieval System

Tee Kian Sek, Zainal Alam Haron, Hairulazwan Hashim

D4-6 SFITGenerator: Development of Combinatorial Algorithms for Automatic Test Case Generation

Kamal Zuhairi Zamli, Abd. Salim Daw Ahsinni, Nor Ashidi Mat Isa, Mohammad Fadel Jamil Klaib, Zainal Hisham Che Soh, Che Zalina Zulkifli

TECHNICAL SESSIONS

Session D5 : Artificial Intelligence and Applications 4b

**Chairpersons : Dr. Nowshad Amin
: Dr. Mohd Fadzli Mohd Salleh**
Date : 30 November 2007
Time : 2:45pm

- D5-1 Detection for Spot Weld Defect by Neural Networks**
Akihiro Ando, Tomoyasu Saigo, Taizo Umezaki
- D5-2 A Web-based Program Understanding System for Teaching and Learning Programming**
Teh Noranis Mohd Aris, Md. Jan Nordin
- D5-3 Analysis and Design Solutions for Multi-Round Anonymous Electronic Auction Protocol**
Tham Chuan Siong, Chang Yu Cheng, Ng Wei Shean
- D5-4 Analysis of Ultrasonic Transceivers Sensing Method in Ultrasonic Tomography**
Ruzairi Abdul Rahim, Mohd Hafiz Fazalul Rahiman, Zulkarnay Zakaria, Ahmad Faizal Salleh
- D5-5 Implementation of Genetic Algorithm in the Digital Structure Design**
K.H. Chong, I. B. Aris, S. M. Bashi, S.P. Koh

TECHNICAL SESSIONS

Session D6 : Vision, Image, and Signal Processing 4a

Chairpersons : Prof. Mohd Zaid Abdullah

: Dr. Dahaman Ishak

Date : 30 November 2007

Time : 2:45pm

D6-1 Fish Target Strength using Sonar

Sunardi, Raja Bidin Raja Hasan, Nadzri Seman, Adil Mohd, Jafri Din

D6-2 Electronically Controlled Translinear-C Chaos Generator

Shahnaz Hasan, Iqbal A.Khan

D6-3 Speaker Dependent Malay Phone Recognition using Continuous Density Hidden Markov Model

Chee-Ming Ting, Sh-Hussain Salleh, Rubita Sudirman

D6-4 A Robust and Transparent Compression Domain Watermarking Scheme

Mohammad Athar Ali, Ekram Khan, Farid Ghani

D6-5 Development of Real Time Machine Vision System for Automated Weeding Strategy in Oil Palm Plantation

Kamarul Hawari Ghazali, Mohd. Marzuki Mustafa, Aini Hussain, Slamet Riyadi, Syafrudin Razali

TECHNICAL SESSIONS

Session D7 : Vision, Image, and Signal Processing 4b

Chairpersons : Prof. Azizah Abdul Manaf

: Dr. Zuraini Dahari

Date : 30 November 2007

Time : 2:45pm

D7-1 Detection and Classification of Moving Objects with Slit Images for a Surveillance System

Masahiro Hoguro, Yuki Inoue, Taizo Umezaki, Takefumi Setta

D7-2 Visemes Shapes Similarity Evaluation

Siti Salwa Salleh, Rahmita Wirza Rahmat, Ramlan Mahmud, Fatimah Ahmad

D7-3 Optically Watermarked Variable Data Microholograms for Anti-Counterfeiting

M.K. Sheeja, P.T. Ajith Kumar, S. Nair Achuthsankar

D7-4 Improving Capacity of Digital Watermarking Images

Akram M.Zeki, Azizah A.Manaf

D7-5 Implementation of Speech Technology for Smart House

Tan Tian Swee Tan, Sh-Hussain Salleh, A.K.Ariff, J.M.Najeb, Kamarulafizam, Zuraimi Y.

TECHNICAL SESSIONS

Session E1 : Robotic, Control, Mechatronic, and Automation 5

Chairpersons : Dr. Wahyudi Martono
: Mr. Muhammad Nasiruddin Mahyuddin
Date : 30 November 2007
Time : 4:30pm

- E1-1 Calibrating Compass for Mobile Robot and its Experimental Results on Arian Robot**
Mohammad Reza Zaheri, Peyman Moghadam, Alireza M. Shahri
- E1-2 Decentralized Sliding Mode Control of Time-varying Hydraulic Robot Manipulators**
H. Ishak, J. H. S Osman
- E1-3 Group Motion Detection and Tracking using Image Based Approach**
Umair Soori, Nadira Nordin, Mohd Rizal Arshad
- E1-4 Development of Hardware-in-the-Loop (HIL) System for Control Applications**
Hamdan Sayuti, Haszuraidah Ishak, Abdul Rashid Husain, Mohamad Noh Ahmad
- E1-5 Robust PID Anti-Windup Control of a Coupled Industrial Tank System**
Wahyudi, M. Fadhil, M. Shazri

TECHNICAL SESSIONS

Session E2 : Telecommunication Systems and Applications 5a

**Chairpersons : Dr. Othman Kalifa
: Dr. Mandeep Singh**
Date : 30 November 2007
Time : 4:30pm

- E2-1 Adaptive Beamforming with 8x8 Element Planar Array using MaxSIR Algorithms**
Md. Rafiqul Islam, Othman O. Khalifa, AHM Zahirul Alam, Fahmy Hafriz, Muhammad Norfauzi
- E2-2 Radio Over Fiber Receiver Configuration Employing an OEM as the Frequency Upconverter**
Hilman Harun, Sevia Mahdaliza Idrus, Abu Bakar Mohammad
- E2-3 Simulation and Performance Analysis of Wideband Code Division Multiple Access Radio Over Fiber System**
Hamim Nasoha, Sevia M. Idrus
- E2-4 Time Dynamics Investigation of Rainfall Intensities for the Design of Microwave Links in Malaysia**
Md. Rafiqul Islam, Sheroz Khan, Tharek Abdul Rahman, Syed Idris Syed Hassan
- E2-5 Comparative Analysis of Four Wave Mixing Effect in Conventional Optical Communication System and Radio Over System**
Razali Ngah, Reza Abdolee, Tharek Abd Rahman, Vida Vakilian
- E2-6 Modelling of MIM Capacitor and Its Effect on the Performance of Low Noise Amplifier for Wireless LAN Applications**
Rasidah Sanusi, Mohd Azmi Ismail, Ahmad Ismat Abdul Rahim, Arjuna Marzuki, Mohamed Razman Yahya, Abdul Fatah Awang Mat

TECHNICAL SESSIONS

Session E3 : Telecommunication Systems and Applications 5b

Chairpersons : Prof. Syed Idris Syed Hassan

: Dr. Mohd Fadzil Ain

Date : 30 November 2007

Time : 4:30pm

E3-1 Denial-of-Service Resistance and Delay Optimization in Multicast Authentication

S.Neduncheliyan, N.Senthil Selvan

E3-2 Characterization of Spiral Inductor based on 0.15 μ m GaAs pHEMT Technology for RF Applications

Norhapizin.K, Azmi Ismail, Ahmad Ismat Abd Rahim, Arjuna Marzuki, Mohamed Razman Yahya, Abdul Fatah Awang Mat

E3-3 Design of a Sierpinski Carpet Fractal Antenna for Multiband Application

Saidatul Norlyana Azemi, Azremi Abdullah Al-Hadi, Soh Ping Jack

E3-4 Communication Modules for Multi-Channel Wireless Photoplethysmography System

Ammar Younis Kadhim, Mohd Alaudin Mohd Ali, Edmond Zahedi

E3-5 Indoor Antenna for Multiple Bands

Anas Abas, Arny Adila, Kamalia Kamardin, Sherlene Thiagarajah, Mahamod Ismail

E3-6 Sub Carrier Multiplexed for Radio Over Fiber System Modeling and Performance Analysis

Mahyuddin Arsat, Sevia M. Idrus

TECHNICAL SESSIONS

Session E4 : Electronic Designs and Applications 5

Chairpersons : Dr. Tun Zainal Azni Zulkifli

: Ms. Norlaili Mohd Noh

Date : 30 November 2007

Time : 4:30pm

E4-1 0.15 μm GaAs pHEMT Cascode Low Noise Amplifier (LNA) for Wireless Applications

Mohd Azmi Ismail, A.I. Abd. Rahim, Norhapizin Kushairi, Amiza Rasmi, Rasidah Sanusi, A.Marzuki, Mohamed Razman Yahya, Abdul Fatah Awang Mat

E4-2 Optimal Routing Algorithm for Minimizing Interconnect Wire Delay in VLSI Layout Design

Nasir Shaikh-Husin, Mohamed Khalil Hani

E4-3 A Phenomenal Approach to Benefits of Nanotechnology

Jivika Govil

E4-4 Digitally Programmable Generalized Impedance Multiplier using CCII

Iqbal A.Khan, N.Afzal, M.R.Khan

E4-5 Electronic System Level (ESL) Design Methodology for IP-based System-on-Chip (SoC)

Mohamed Khalil, Hau Yuan-Wen, Illiasaak Ahmad

TECHNICAL SESSIONS

Session E5 : Artificial Intelligence and Computer Applications 5

**Chairpersons : Dr. Haidi Ibrahim
: Mr. Ng Theam Foo**
Date : 30 November 2007
Time : 4:30pm

E5-1 Development of an Automated Inspection System for Welding Defect Detection and Classification

Fong Thai Koay, Chee Peng Lim, Shanmuga Sundaram

E5-2 On Combinatorial Explosion Problem for Software Configuration Testing

Kamal Zuhairi Zamli, Nor Ashidi Mat Isa, Mohammad Fadel Jamil Klaib, Zainal Hisham Che Soh, Che Zalina Zulkifli

E5-3 A Study in Case-Based Reasoning to Software Cost Estimation

Yuhanim Hani Yahaya, Iznora Aini Zolkifly, Aminuddin Mohammed

E5-4 Structural Optimization of Second Neural Networks for Pose Estimation

Tomas Maul, Sapiyan Baba, Azwina Yusof

E5-5 Development of a Digital Circuit Design Simulator Based on Artificial Intelligent Approach

K. H. Chong, I. B. Aris, S. M. Bashi, S.P. Koh

TECHNICAL SESSIONS

Session E6 : Vision, Image and Signal Processing 5a

Chairpersons : Dr. Khoo Bee Ee
: Ms. Norizah Mohamad
Date : 30 November 2007
Time : 4:30pm

E6-1 Multiresolution Texture Analysis

M.Sujaritha, S.Annadurai

E6-2 Offline Handwritten Character Detection using Image Components

L.Basavaraj, R.D. Sudhaker Samuel

E6-3 Development of Progressive and Parallel Image Transmission Scheme Based on Block Truncating Coding

Md. Shabiul Islam, Mukter Zaman, K.Ramasami, Masuri Othman

E6-4 Hand Localization using Viola-Jones Object Detection Method and Accelerated with Skin Color Segmentation

Lih Yang Chan, Bee Ee Khoo

E6-5 Comparison of Threshold Methods in Ultrasound Image Segmentation

Bahbib Rahmatullah, Rosli Besar, Arfian Ibrahim

TECHNICAL SESSIONS

Session E7 : Vision, Image and Signal Processing 5b

Chairpersons : Dr. Shahrel Azmin Suandi

: Ms. Roslina Hussin

Date : 30 November 2007

Time : 4:30pm

E7-1 A Comparative Study on Speech Recognition Features: Case Study and Practical Results

Saeed Asadi, Alireza Yazdizadeh, Hooman Shagoshtasbi

E7-2 Overlap and Add Sinusoidal Synthesis Method of Speech Signal using Weighted Phase Error Function

Jong-Bae Park, Jong-Hark Kim, Gyu-Hyeok Jung, Gyu-Jin Kim, In-Sung Lee

E7-3 Detection of Eyes For Face Verification System

Kho Tong Choon, Shahrel Azmin Suandi

E7-4 Precise Pupils Detection using Separability Filter

Loy Cheng Ying, Shahrel A. Suandi

E7-5 The Handwriting Model Considering Patchy Expression Algorithm

Kyohei Morishita, Hiroki Imamura, Makoto Fujimura, Hideo Kuroda