Table of Contents

Welcome Message i

Conference Organization iv

Conference Information vii

Sponsors xi

Table of Contents xv

WA01: Control Theory and Applications I

WA01-1 Constrained Robust Model Predictive Control with Enlarged Stabilizable Region
Prof. Lee Young Il 1

WA01-2 Pole Assignment for Structural Active Control
Sanguan Vongchavalitkul 5

WA01-3 A New Design Tool for PID and First Order Controllers in Parameter Space
Kim, KeunSik, Cho, Taehsin, Choi, Sunwook and Kim, Youngchol 8

WA01-4 Digital Control of UPS Inverter with Time Response Specifications
Young-Tae Woo and Young-Chol Kim 14

WA02: Communications Control Systems I

WA02-1 The Study of Scintillation On C-Band Low Elevation Angle at Sri-racha Satellite Earth Station
P. Theerapatpaiboon, S. Sukkaewthanom, N. Leelaruji and N. Hemmakorn 20

WA02-2 Remote Control of Autonomous Robots via Internet
Masanori Sugisaka and Mohd Rizon M Johari 24

WA02-3 Active Microstrip Antenna for Mobile Communication
J. Nakasuwan, P. Rakluea and N. Songthanapituk 28

WA03: Electrical Impedance Tomography

WA03-1 Modified Quasi Newton algorithm for boundary estimation in Electrical Impedance Tomography
S. Rodtook, Hae-Jin Jeon, Jae-Hyong Kim, Seung-Ha Lee, Bong-Yeol Choi, Min-Chan Kim, Sin Kim and Kyung-Youn Kim 32

WA03-2 Design 2-Dimensional Digital Filter In Reconstruction Of EIT
Dong-Hoon Kang, Byung-Chae Kang, Ji-Hoon Kim, Sang-Pil Hwang, Jin Yeop Kim, Jae-Duck Jang, Seung-Ha Lee and Bong-Yeol Choi 36

WA03-3 Boundary estimation in electrical impedance tomography with multi-layer neural networks
Jae-Hyong Kim, Hae-Jin Jeon, Bong-Yeol Choi, Seung-Ha Lee, Min-Chan Kim, Sin Kim and Kyung Youn Kim 40

WA04: Adaptive and Learning Control Systems

WA04-1 Robust Adaptive Control Simulation of Wire-Suspended Parallel Manipulator
Hossein S.Farahani, Bohyun Kim and Jeha Ryu 46

WA04-2 Design and Implementation of UAV’s Autopilot Controller
Jeong-Hwan Lee, Ki-Sung Lee and Tae-Won Jeong 52

WA04-3 Robust Adaptive Nonlinear Control for Tilt-Rotor UAV
Hansoo Yun, Cheolkuen Ha and Byoungsoo Kim 57

WA04-4 Adaptive Control of Permanent Magnet Linear Synchronous Motor using Wavelet Transform
June Lee, Jin Woo Lee, Jin Ho Suh, Young Jin Lee and Kwon Soon Lee 63

WA05: Control Devices and Instruments I

WA05-1 Effects of Reynolds Number and Shape of Manifold on Flow Rate in Separator for Polymer Electrolyte Fuel Cell
Chaïi Huang, Yoshikuni Ozawa, Hisayuki Ennoji and Toshio Iijima 68
WA05-2  Improving Finger-click Recognition of a Wearable Input Device
   Byung Seok Soh, Yoon Sang Kim and Sang-Goog Lee  
   72

WA05-3  Intelligent Switching Control of the Pneumatic Artificial Muscle Manipulators
   Kyoung Kwan Ahn and TU Diep Cong Thanh  
   76

WA05-4  Fuzzy rule-based Hand Motion Estimation for A 6 Dimensional Spatial Tracker
   Sanghoon Lee, Hyun Seok Kim, Il Hong Suh and Myung Kwan Park  
   82

WA06: Biometrics and Biomedical Engineering Systems I

WA06-1  Measurement Method of Posture and Movement for the Aged Person using an Accelerometer
   Takao Sugimoto and Kentarou Mori  
   87

WA06-2  A Study on the Multi-Joint Rehabilitation System of an Industrial Robot
   Yong-Seok Lee, Jae-ho Jang, Hyung-Joon Sim, Chang-Soo Han and Jung-Soo Han  
   92

WA06-3  Improved controllability of a fully dehydrated Seleneion actuator
   Hirohsa Tamagawa and Fumio Nogata  
   96

WA06-4  Blood Vessel Enhancement by Directed Diffusion
   S. Intajag and V. Tipsuwanporn  
   101

WA08: Poster 1

WA08-01  The Study of Efficiency of Train Control System Using Communication
   Jong-Hyen Baek and Yong-Kyu Kim  
   107

WA08-02  A Hybrid Fault Diagnosis Method based on SDG and PLS: Tennessee Eastman Challenge Process
   Gibaek Lee  
   110

WA08-03  Development of Monitoring and Control System of Utility-Pipe Conduit (Power Tunnel) using PLC
   Tae-Young Lee, Byung-Seok Park, Seong-Ho Ju, Dong-Hee You, Yong-Hoon Lim and Seok-Young Song  
   116

WA08-04  A Study on Rolling Mill Dynamics Model and Automatic Gauge Control System
   Tae-Young Kim, Dae-Hyun Kwon and Won-Ho Choi  
   120

WA08-05  A Study on an Inspection System of Repeated Pattern in PDP panel
   Ji-Hun Jung, Sang-woon Nam, Yongha Hwang, YongJune Park, Teakyu Kang and Dealkwa Jeong  
   126

WA08-06  Self-Diagnostic Signal Monitoring System of KWP2000 Vehicle ECU using Bluetooth
   Kwang-Hun Choi, Hyun-Ho Lee, Young-Choon Lee, Tae-Kyu Kwon and Seong-Cheol Lee  
   132

WA08-07  Web-based Measurement of ECU Signals on Vehicle using Embedded Linux
   Kwang-Hun Choi, Hyun-Ho Lee, Young-Choon Lee, Tae-Kyu Kwon and Seong-Cheol Lee  
   138

WA08-08  Two Mode Maximum Power Point Tracking for Photovoltaic System
   Chaman Limaskul, Prapas Uakakimaphun, Cherdchai Prapanavarat and Dhirayut Chenvidhya  
   143

WA08-09  Support-vector-machine Based Sensorless Control of Permanent Magnet Synchronous Motor
   Woon Jae Back, Dong Chang Han, Jong Mu Kim, Jung Il Park and Suk Gyu Lee  
   149

WA08-10  Boundary Control of Container Crane: Two-Stage Control of a Container Crane as Nonflexible and Flexible Cable
   Hahn Park and Keum-Shik Hong  
   153

WA08-11  EIT Image Reconstruction by Simultaneous Perturbation Method
   Ho-Chan Kim, Chang-Jin Boo and Yoon-Joon Lee  
   159

WA08-12  Enhancement of Mass Transfer Using Piezoelectric Material in Fluid Flow System
   Gi-Beum Kim, Woo-Suk Chong, Tae-Kyu Kwon, Chul-Un Hong, Nam-Gyun Kim and Gyeong-Rak Jheong  
   165

WA08-13  Fabrication and Evaluation of Tactile Stimulator Array Using Stacked PZT
   Myoung-Jong Yoon, Tae-Kyu Kwon, Kee-Ho Yu and Nam-Gyun Kim  
   171

WA08-14  Realtime Wireless Monitoring of Abnormal ST in ECG Using PC Based System
   Ge-Young Jeong, Kee-Ho Yu, Nam-Gyun Kim and Hikaru Inooka  
   176

WA08-15  Effect of cellular phone on fetal heart rate patterns
   Mina Jafarabadi and Ladan Jafarabadi  
   181

WA08-16  Multi-Face Detection on static image using Principle Component Analysis
   Hyun-Chul Choi and Se-Young Oh  
   185

WA08-17  Negative Selection Algorithm for DNA Pattern Classification
   Dong-Youk Lee and Kwee-Bo Sim  
   190

WA08-18  Optimal Fuzzy Sliding-Mode Control for Microcontroller-based Microfluidic Manipulation in Biochip System
   Yang-Chiung Chung and Bor-Jiunn Wen  
   196

WA08-19  Human's Spatial Cognition Using Auditory Stimulation
   202

2004. 8. 25~27, Bangkok, Thailand  

ICCAS 2004  

xvi
### WP02: Communications Control Systems II

| WP02-1 | Wideband Microstrip Slot Array Antenna for Radar Applications |
| WP02-2 | Design of the Pseudolite Pulsing Scheme |
| WP02-3 | Characterization of Body Shadowing Effects on Ultra-Wideband Propagation Channel |
| WP02-4 | Accuracy of Free Space Path Loss and Matched Filter Gain Approximated by Using Passband Rectangular Pulse for Ultra Wideband Radio Systems |
| WP02-5 | Sliding Mode Active Queue Management Algorithm |

### WP03: Agricultural and Industrial Control Applications I

| WP03-1 | Design of Robust DC-DC Converter by High-Order Approximate 2-Degree-of-Freedom Digital Controller |
| WP03-2 | Automatic frequency Control Current-Source Inverter for Forging Application |
| WP03-3 | Development of the Dynamometer Control System for Medium Speed Diesel Engines |
| WP03-4 | Stability Analysis of the Optimal Semi-Trailer Vehicles |
| WP03-5 | New Technique to Generate the PWM Signal |

### WP04: Process Control and Instrumentation I

| WP04-1 | Simple Two-Degree of Freedom PID Controllers Tuning Table Based on CDM |
| WP04-2 | Two-Degree-of-Freedom Controller Designed by Coefficient Diagram Method |
| WP04-3 | Fuzzy-based PID Controller for Cascade Process Control |
| WP04-4 | Self-Tuning PID Controller Based on PLC |
| WP04-5 | Adjustable Phase, Discrete Time Sinewave Generator |
| WP04-6 | Characterization of High Bandwidth Digitizers |

### WP05: Control Devices and Instruments II

| WP05-1 | Computation of Tipping over Stability Criterion using ZMP algorithm for Hydraulic Excavator having Crane Function |
| WP05-2 | Responsibility of Control System of Engine Intake Valve with Linear Electromagnetic Actuator |
| WP05-3 | A study on the novel linear actuator using MR fluid |
| WP05-4 | Design of a VCM actuator for dual servo system |
| WP05-5 | A study on the Hydraulic Pump/Motor Control in the Flywheel Hybrid Vehicle |
WP06: Biometrics and Biomedical Engineering Systems II

WP06-1 Infant Retinal Images Optic Disk Detection Using Active Contours
Thammanoon Charmjuree, Bunyarit Uyyanonvara and Stanislav S. Makhanov

WP06-2 Tuning the Parameters for the Decision Making System in Order to Define Athlete's Aerobic and Anaerobic Thresholds
Jaakko Ketola, Kalle Saastamoinen and Esko Turunen

WP06-3 Automated Vessels Detection on Infant Retinal Images
Lassada Sukkaew, Bunyarit Uyyanonvara, Sarah A Barman and Jaruwat Jareanjit

WP06-4 Automatic Blood Pressure Control Using PI Controller with H∞ Loop-Shaping
Jeong-Yup Han, Sang-Kyung Lee and Hong-Bae Park

WP06-5 Application of Control Theory in Modelling Cancer Chemotherapy
Urszula Ledzewicz and Heinz Schattler

WP08: Poster 2

WP08-01 A stabilizing control technique for bilateral teleoperation system with time delay
H. W. Kim and I. H. Suh

WP08-02 Efficient Hybrid ARQ schemes for Wireless Communication Systems
Sunheui Ryoo and Sooyoung Kim

WP08-03 An OS Platform Independent Architecture of Web-based Teleoperation for mobile robot
Deok-Hyeon Ko and Soon-Geul Lee

WP08-04 Development of a Real-time Communication Service over Random Medium Access Scheme Networks
Young-yeol Choo and Jang-woo Kwon

WP08-05 Formal Verification Network-based Protocol for Railway Signaling Systems
Jong-Gyu Hwang and Jae-Ho Lee

WP08-06 Development of Verification and Conformance Test Generation of Communication Protocol for Railway Signaling Systems
Jae-Ho Lee, Jong-Gyu Hwang, Mi-Seon Seo, Sung-Um Kim and Gwi-Tae Park

WP08-07 Application of the Digital Mockup to Preliminary Analysis the Remote Maintainability of ACP
Taigil Song, SungHyon Kim, ByungSuk Park, JiSup Yoon and SangHo Lee

WP08-08 Development of Low-Cost Automatic Flight Control System for Unmanned Target Drone
Jang-Ho Lee, Hyeok Ryu, Jae-Eun Kim and Iee-Ki Ahn

WP08-09 Design and Control of Clutch-by-wire System for Automated Manual Transmissions
Sung-Ho Hwang, Hyeonsoo Kim, Sangeun Moon and Kwansoo Han

WP08-10 Modeling and Optimization of The Air and Gas-Supplying Network of a Chemical Plant
IN-SU HAN, CHONGHUN HAN and CHANG-BOCK CHUNG

WP08-11 System Identification of Aerodynamic Coefficients of F-16XL
In-Yong Seo and Allan E. Pearson

WP08-12 The Design and Simulation of a Fuzzy Logic Sliding Mode Controller (FLSMC) and Application to an Uninterruptible Power System Control
Phongsak Phakamach and Chumphol Akkaraphong

WP08-13 Input Time-Delay Compensation for a Nonlinear Control System
Yong-Ho Choi and Kil-To Chong

WP08-14 Adaptive Predistortion for High Power Amplifier by Exact Model Matching Approach
Yuanming Ding, Bingnan Pei, Ithisek Nilkhamhang and Akira Sano

WP08-15 H∞ Composite Control for Singularity Perturbed Nonlinear Systems via Successive Galerkin Approximation
Young-Joong Kim, Beom-So Kim, Eun-Chul Shin, Ji-Yoon Yoo and Myo-Taeg Lim

WP08-16 A Study on the Tracking Antenna System for Satellite Communication Using Embedded Controller
Jongkwon Kim, Kyewumrae Cho, Daewoo Lee and Cheolsoon Jang

WP08-17 A study on the autonomous control system for an unmanned surface vessel
Soohong Park, Jongkwon Kim and Cheolsoon Jang

WP08-18 A Note on Schur Stability of Real Weighted Diamond Polynomials
Naohisa Otsuka, Koichi Ichige and Rokuya Ishii

WP08-19 Discretization Behaviors of Equivalent Control Based Sliding-Mode Systems
Sung-Han Son, Byung-Sun Cho, So-Hee Han and Kang-Bak Park

WP08-20 The Guaranteed Bound of Horizon Size for the Stabilizing Receding Horizon Control
Zhonghua Quan, SooHee Han and WookHyun Kwon

WE01: Linear and Nonlinear Control

WE01-1 Control of Age-Dependent Population Systems
A. Mimura, S. Kubo and Prof N. Kunimatsu
WE01-2 Advanced Sorting Conditions Modeling of Frictional Force
Yong-Hee Cho, Jeong-Wook Lee, Yong-Hoon Chang and Jung-Ha Kim

WE01-3 A Computational Modification on EDMC Control Algorithm
Mohammad Haeri and Hossein Zadehmorshed Beik

WE01-4 Decentralized Nonlinear Voltage Control of Multi-machine Power Systems with Nonlinear Interconnections
Jae-Won Lee, Tae-Woong Yoon and Sun Im

WE01-5 An Orbit Robust Control Based on Linear Matrix Inequalities
D. Prieto and B. Bona

WE01-6 Some Properties on Receding Horizon H∞ Control for Nonlinear Discrete-time Systems
Choon Ki Ahn, Soo Hee Han and Wook Hyun Kwon

WE02: Communications Control Systems III

WE02-1 Optimum Return Loss of Right-Angle Triangular Slot Antenna
K. Tangkaphiphop, N. Anantrasirichai and T. Wakabayashi

WE02-2 Small Loop Antenna for EMI Controlled and Monitoring
A. Khemchan, P. Khampakhdi, Junichiro Urabe and W. Khan-ngern

WE02-3 A Window-Based Congestion Control Algorithm for Wireless TCP in Heterogeneous Networks
Hee-Jung Byun and Jong-Tae Lim

WE02-4 Outage Probability Analysis of OC-CDMA system with imperfect power control under different velocity users
Panya Muangruen, Somyot Junnapiya, Amnouy Techochawan, Pongjai Kidakorn and Somchai Omsin

WE02-5 Measurement and Analysis of Loss in Optical Directional Couplers
R. Leepila, R. Jangsilp and S. Noppanakeepong

WE03: Agricultural and Industrial Control Applications II

WE03-1 Design of Sliding-mode Observer for Robust Speed Sensorless Induction Motor Drive
Young-Dae Son and Jong-nyun Lee

WE03-2 Two Switches Balanced Buck Converter for Common-Mode Noise Reduction
Warong Kanjanasopa and Yothin Prempraneerach

WE03-3 Application of the Laser Vision Sensor for Corrugated Type Workpiece
Ji Hyoun Lee, Jae Gwon Kim, Jem Gu Kim, In Wan Park and Hyung Shik Kim

WE03-4 Investigation the Relationship Between Common Mode Current and Radiated Field of Buck Converter
Mr. Anake Meemoosor, Mr. Kraisorn Aunchaleevarapan and Assoc. Prof. Dr. Yothin Prempraneerach

WE03-5 Fuzzy Technique based Chopper Control for Slip Energy Recovery System with Twelve-Pulse Converter
S. Tunyasrirut, J. Ngamwiwit, T. Furuya and Y. Yamamoto

WE04: Process Control and Instrumentation II

WE04-1 Computer-Interfacing Development for Propeller-Anemometer
Nor Hayati Saad, Zuriati Janin and Ruhaidawati Mohd Ali Piah

WE04-2 Application of LQR for Phase-Locked Loop Control Systems
Somyos Khumma, Taworn Benjanarasuth, Don Isarakorn, Jongkol Ngamwiwit, Somsak Wanchana and Noriyuki Komine

WE04-3 Development of Optimal Control System for Air Separation Unit
Daehyun Ji, Sangmoon Lee, Sangun Kim, Sunjang Kim and Sangchul Won

WE04-4 State set estimation based MPC for LPV systems with input constraint
Seung Cheol Jeong, Sung Hyun Kim and PooGyeon Park

WE04-5 Study on the I-PD Position Controller Design for Step Motor Drives
Ryo Yoshida, Yoshinori Hirata and Yasuumi Oschii

WE04-6 Time Delay Control of Sway and Skew of the Spreader Suspended by Four Flexible Cables
Jeong-Woo Lee, Doo-Hyeong Kim and Kyeong-Taik Park

WE04-7 Neuro-Fuzzy Controller Design for Level Controls
S. Intajag, V. Tipsuwanporn, N. Koetsam-ang and K. Witheephanich

WE05: Control Devices and Instruments III

WE05-1 Trajectory Control of a Hydraulic Excavator using Disturbance Observer in H∞ Framework
Jong-Hwan Choi, Seung-Soo Kim, Hyun-Cheol Cho, Tae-Kyu Ahn, Buiquang Duoc and Soon-Yong Yang
WE05-2 Development of the Controlled Switching Device for a Circuit Breaker
Ik-Mo Kim, Myung-Chan Kim, Young-Chan Choi and Sung-Sic Ryu

WE05-3 Speed Sensorless DC Motor Using Kalman Filter
Naramit Whamook, Surapan Yimman, Manoon Puangpool, Sorawat Chivapreecha and Kobchai Dejhan

WE05-4 Development of Electronic Opening and Shutting Device for One-Ton Wing-Body Truck
Jong-Soo Han and Chang-Jun Seo

WE05-5 Distributed RC Sinusoidal Oscillator Control Frequency by One Pole Amplifier
Virote Pirajnanchai, Numyoot Songthanapitak and Kanok Janchitrapongvej

WE06: Sensors and Signal Processing I

WE06-1 Stochastic Analysis of Self-sustained Oscillation Loop for a Resonant
Chul Hyun, Jung-Gyu Lee, Tae Sam Kang and Sung-Kyung Sung

WE06-2 A proposal of new electronics device: micro-total analysis system for capillary electrophoresis
Seiho Oshige, T. Aoyama, J. Kambe and U. Nagashima

WE06-3 Simultaneous and Multi-frequency Driving System of Ultrasonic Sensor Array for Object Recognition
S. C. Park, B. J. Choi, Y.-J. Lee and S. R. Lee

WE06-4 Ground Plane Detection Method using monocular color camera
H-Hyun Park, Jae-Hong Oh, Hoon Kang

WE06-5 Development of a single-structured MEMS gyro-accelerometer
Woon-Taeh Sung, Jang Gyu Lee and Tae Sam Kang

WE06-6 Factors Affecting Discrimination of Surface Property
Using an Integrated Tactile Display: Roughness and Vibration
Young-Ju Jeong, Gi-Hun Yang, Ki-Uk Kyung, Dong-Soo Kwon and Sung Chul Kang

WE08: Poster 3

WE08-01 Actuator Control of Throttle Valve of An Automobile
Kyung-Moon Lee, Jung-Yong Lee, Gun-Tae Kim and Jang-Myung Lee

WE08-02 The PID Controller for Predictive control Algorithm
Sang Joo Kim, Sang Wook Seo, Gi Du Kim and Jang Myung Lee

WE08-03 Robust Sliding Mode Controller Design for the Line-of-Sight Stabilization
Moon-Sik Kim, Jung-Joo Yun, Gi-Sung Yoo and Min-Cheol Lee

WE08-04 Control of pH Neutralization Process using Simulation Based Dynamic Programming in Simulation and Experiment
Dong Kyu Kim, Kwang Soon Lee and Dae Ryook Yang

WE08-05 Design of a Fuzzy P+ID controller for brushless DC motor speed control
Young-Sik Kim and Sung-Joong Kim

WE08-06 Bayesian Neural Network with Recurrent Architecture for Time Series Prediction
Chang-Young Hong, Jung-Hun Park, Tae-Sung Yoon and Jin-Bae Park

WE08-07 The Modeling of Chaotic Nonlinear System Using Wavelet Based Fuzzy Neural Network
Joon Seop Oh, Sung Jin You, Jin Bae Park and Yoon Ho Choi

WE08-08 Self-Recuurent Wavelet Neural Network Based Direct Adaptive Control for Stable Path Tracking of Mobile Robots
Sung Jin You, Joon Seop Oh, Jin Bae Park and Yoon Ho Choi

WE08-09 A New Approach to the Design of a Fuzzy Sliding Mode Controller for Uncertain Nonlinear Systems
Sam Jun Seo, Dong Sik Kim, Dong Won Kim, Ji Yoon Yoo and Gwi Tae Park

WE08-10 System Identification of Internet transmission rate control factors
Sung Goo Yoo, Young-Seok Kim and Kiil-To Chong

WE08-11 Design of Controller for Affine Takagi-Sugeno Fuzzy System with Parametric Uncertainties via BMI
Sang In Lee, Young Hoon Joo and Jin Bae Park

WE08-12 Pruning and Learning Fuzzy Rule-Based Classifier
Do Wan Kim, Jin Bae Park and Young Hoon Joo

WE08-13 Vision Sensor and Ultrasonic Sensor Fusion Using Neural Network
Sanghoon Baek and Se-Young Oh

WE08-14 Multirate Control of Takagi-Sugeno Fuzzy System
Do Wan Kim, Jin Bae Park and Young Hoon Joo

WE08-15 Efficient Tracking of a Moving Object Using Representative Blocks Algorithm
Sung-Yug Choi, Hwa-Ra Hur and Jang Myung Lee

WE08-16 Classification of Emotional States of Interest and Neutral Using Features from Pulse Wave Signal
Sukanya Phongsuphap and Akara Sopharak

WE08-17 A modified Genetic Algorithm using SVM for PID Gain Optimization
Byungsun Cho, Sohee Han, Sung-Han Son, Jinsu Kim, Kang-bak Park and Teruo Tsuji

2004. 8. 25~27, Bangkok, Thailand

ICCAS 2004
<table>
<thead>
<tr>
<th>WE08-18</th>
<th>Mobile Robot navigation using an Multi-resolution Electrostatic Potential Filed</th>
<th>690</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Cheol-Taek Kim and Ju-Jang Lee</td>
<td></td>
</tr>
<tr>
<td>WE08-19</td>
<td>Hierarchical Associative Frame with Learning and Episode memory for the intelligent Knowledge Retrieval</td>
<td>694</td>
</tr>
<tr>
<td></td>
<td>JeonYon Shim</td>
<td></td>
</tr>
<tr>
<td>WE08-20</td>
<td>Design the Autopilot System of using GA Algorithm</td>
<td>699</td>
</tr>
<tr>
<td></td>
<td>Sang-Min Lee , Yeon-Gyu Choo and Young-Do Lim</td>
<td></td>
</tr>
</tbody>
</table>

**TA02: Manufacturing Control Systems I**

<table>
<thead>
<tr>
<th>TA02-1</th>
<th>Application of Regression Analysis for Quality Control In Suspension Manufacturing</th>
<th>704</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Thammasak Ritthidetch , Ruedee Masuchun , Amphawan Chaikla , Prasit Julserewong, Kittir Tirasest</td>
<td></td>
</tr>
<tr>
<td>TA02-2</td>
<td>A novel approach for the design of multi-class reentrant manufacturing systems</td>
<td>710</td>
</tr>
<tr>
<td></td>
<td>Dong Joon Yoo , Jae Hak Jung , In-Beum Lee , Euy Soo Lee and Gyeongbeom Yi</td>
<td></td>
</tr>
<tr>
<td>TA02-3</td>
<td>The Implementation of Agile SFFS using 5DOF Robot</td>
<td>716</td>
</tr>
<tr>
<td></td>
<td>Seungwoo Kim and Yongrae Jung</td>
<td></td>
</tr>
<tr>
<td>TA02-4</td>
<td>Determining Items to be Inventory in a Manufacturing Process</td>
<td>722</td>
</tr>
<tr>
<td></td>
<td>Ruedee Masuchun</td>
<td></td>
</tr>
<tr>
<td>TA02-5</td>
<td>Development of a Multi-purpose Test Device for Measuring Mechanical Properties of Shoes</td>
<td>726</td>
</tr>
<tr>
<td></td>
<td>Jong-nyun Lee , Young-Dae Son and Dong-joon Lee</td>
<td></td>
</tr>
<tr>
<td>TA02-6</td>
<td>Improving Cooling System for Energy Saving in Composite Plant</td>
<td>730</td>
</tr>
<tr>
<td></td>
<td>Pissanu Promwong , Amphawan Chaikla , Ruedee Masuchun , Dumri Chansangsuk and Prasit Julserewong</td>
<td></td>
</tr>
</tbody>
</table>

**TA03: Real-time Systems Control**

<table>
<thead>
<tr>
<th>TA03-1</th>
<th>The Effect Assessment Method of Control and Protection Systems on Transient Stability of Power Systems</th>
<th>736</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Tetsushi Miki , Ryuzaburo Sugino and Yoshiyuki Kono</td>
<td></td>
</tr>
<tr>
<td>TA03-2</td>
<td>Design of a Adaptive Controller of Industrial Robot with Eight Joint Based on Digital Signal Processor</td>
<td>741</td>
</tr>
<tr>
<td></td>
<td>Sung-Hyun Han , Dong-Yean Jung and Hong-Rae Kim</td>
<td></td>
</tr>
<tr>
<td>TA03-3</td>
<td>Scheduling of Sporadic and Periodic Tasks and Messages with End-to-End Constraints</td>
<td>747</td>
</tr>
<tr>
<td></td>
<td>Hyoun Yuk Kim , Sang Yong Kim , Hoon Oh and Hong Seong Park</td>
<td></td>
</tr>
<tr>
<td>TA03-4</td>
<td>Development of a Distributed Multi-rate Motion Control System Using USB</td>
<td>753</td>
</tr>
<tr>
<td></td>
<td>Sungsoo Rhim and Soon-Geul Lee</td>
<td></td>
</tr>
<tr>
<td>TA03-5</td>
<td>Multiplierless Digital PID Controller Using FPGA</td>
<td>758</td>
</tr>
<tr>
<td></td>
<td>Sorawat Chivapreeecha , Narison Ronnarongrit , Surapan Yimman , Chusit Pradabpet and Kobchai Dejhan</td>
<td></td>
</tr>
</tbody>
</table>

**TA04: Information and Networking Systems I**

<table>
<thead>
<tr>
<th>TA04-1</th>
<th>A Testbed for the Security Issues of Limited-resource Internet Appliances</th>
<th>762</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>S. Vorapojpisut</td>
<td></td>
</tr>
<tr>
<td>TA04-2</td>
<td>Improvement and Comparative Study of Control Theory-based AQM Methods for Networks with Realistic Traffic</td>
<td>767</td>
</tr>
<tr>
<td></td>
<td>N. Bigdeli , M. Haeri and M.R. Pakravan</td>
<td></td>
</tr>
<tr>
<td>TA04-3</td>
<td>A Possible Path per Link CBR Algorithm for Interference Avoidance in MPLS Networks</td>
<td>772</td>
</tr>
<tr>
<td></td>
<td>Wisitsak Sa-Ngiam sak and Ruttikorn Varakulsiripunth</td>
<td></td>
</tr>
<tr>
<td>TA04-4</td>
<td>A Tunable Transmitter - Tunable Receiver Algorithm for Accessing the Multichannel Slotted-Ring</td>
<td>777</td>
</tr>
<tr>
<td></td>
<td>WDM Metropolitan Network under Self-Similar Traffic</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ekanun Sombatsakulkit , Wisitsak Sa-Ngiam sak and Suvepol Sittichevapak</td>
<td></td>
</tr>
<tr>
<td>TA04-5</td>
<td>Performance Improvement on RED Based Gateway in TCP Communication Network</td>
<td>782</td>
</tr>
<tr>
<td></td>
<td>Sumer Prabhavat and Ruttikorn Varakulsiripunth</td>
<td></td>
</tr>
<tr>
<td>TA04-6</td>
<td>Privacy Negotiation Algorithm for Digital Rights Management</td>
<td>788</td>
</tr>
<tr>
<td></td>
<td>Jurairat Phuttharuk and Chanboon Sathitwiriyawong</td>
<td></td>
</tr>
</tbody>
</table>

**TA05: Multimedia Systems I**

<table>
<thead>
<tr>
<th>TA05-1</th>
<th>Tangible Media based on Interactive Technology: iT_Media</th>
<th>794</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Joongsun Yoon , Myeungsook Yoh and Hyewon Lee</td>
<td></td>
</tr>
<tr>
<td>TA05-2</td>
<td>Wavelet-Based Digital Watermarking Using Human Visual System for Copyright Protection</td>
<td>800</td>
</tr>
<tr>
<td></td>
<td>Anuwat Sombun , Quen Pinngern and Chom Kimpan</td>
<td></td>
</tr>
<tr>
<td>TA05-3</td>
<td>Emotional Robotics based on iT_Media</td>
<td>804</td>
</tr>
<tr>
<td></td>
<td>Joongsun Yoon , Myeungsook Yoh and Bongkug Cho</td>
<td></td>
</tr>
</tbody>
</table>

---

2004. 8. 25~27, Bangkok, Thailand

ICCAS 2004
TA05-4  Color Image Query Using Hierarchical Search by Region of Interest with Color Indexing
   Rattikorn Sombutkaew and Orachat Chitsobhuk

TA05-5  Robotics Projects at Pusan National University
   Seungchul Kwak, Jihoon Sung, Inbo Shim and Joongsun Yoon

TA06: Robotics Engineering Systems I

TA06-1  Design for Supporting Interoperation between Heterogeneous Networks in Personal Robot System
   Seongho Choo, Vitaly Li, Ik-gyu Jang, Tae-kyu Park, Ki-duk Jung, Dong-hee Choi and Hongseong Park

TA06-2  Complete Parameter Identification of Gough-Stewart platform with partial pose measurements using a new measurement device
   Abdul Rauf and Jeha Ryu

TA06-3  Obstacle Avoidance Algorithm for a Network-based Autonomous Mobile Robot
   Sookyung Sohn, Hongryeol Kim, Daewon Kim, Hongseok Kim and Hogil Lee

TA06-4  Optimal Base Position and Joint Configuration of a Wheeled Mobile Manipulator
   Sangbok Kim and Hyounggi Kim

TA06-5  Analysis of Remote Operation involved in Spent Nuclear Fuel Conditioning Process using its Virtual Mockup
   Ji Sup Yoon, Sung Hyun Kim and Tai Gil Song

TA06-6  Global Ultrasonic System for Autonomous Navigation of Indoor Mobile Robots
   Seonghoon Park, Sooyeong Yi, Sangyoon Jin and Jinwon Kim

TA07: Nonlinear Optimization Theory and Applications

TA07-1  On-load Parameter Identification of an Induction Motor Using Univariate Dynamic Encoding Algorithm for Searches
   Jong-Wook Kim, Nam Gun Kim, Seong-Chul Choi and Sang Woo Kim

TA07-2  A Study for Global Optimization Using Dynamic Encoding Algorithm for Searches
   Nam Geun Kim, Jong-Wook Kim and Sang Woo Kim

TA07-3  A Billet Heat Transfer Modeling during Reheating Furnace Operation
   Yu Jin Jang and Sang Woo Kim

TA07-4  Angle Correction for Five-Axis Milling Near Singularities
   M. Munlin and S.S. Makhanov

TA08: Poster 4

TA08-01  Detecting and Segmenting Text from Images for a Mobile Translator System
   Thanarat H. Chalidabhongse and Poonsak Jeeraboon

TA08-02  Development of a Synthetic Multi-Agent System: The KMITL Cadence 2003 Robotic Soccer Simulation Team, Intelligent and AI Based Control
   Thunyawat Chitipalungsri, Chawit Jirawatsiwaporn, Thanapon Tangchupong and Surin Kittitornkun

TA08-03  Intelligent Tuning of PID Controller With Disturbance Rejection Using Immune Algorithm
   Dong Hwa Kim and Jae Hoon Cho

TA08-04  Optimal nonlinear Parameter Estimation of Steady-State Induction Motor using Immune Algorithm
   Dong Hwa Kim, Jae Hoon Cho, Won Pyo Hong, Seung Hack Lee and Hwan Lee

TA08-05  Intelligent Hybrid Modular Architecture for Multi Agent System
   Dong-Hun Lee, Seung-Min Baek, Tae-Yong Kuc and Chae-Wook Chung

TA08-06  Development of LnCP based Home Network System by using high level message between heterogeneous application software
   Jong Hoon Chung, Dae Sung Wang, Sang Kyun Lee, Sun Mi Han, Young Hoon Roh and Min Seok Kang

TA08-07  Control of mobile robot system with wireless transmission of image information
   Sanghoon Jeong, Jaehyuk Kwak and Joonhong Lim

TA08-08  The Development of the Home Control System with the OSGi
   Hee-Sun Kim, Yong-Seok Kim and Chang-Goo Lee

TA08-09  Mailing List Characteristic from Electronic Mail
   N. Khaitiyakun and A. Khunkitti

TA08-10  Design of a bluetooth-based interactive control network
   Jaehyuk Kwak and Joonhong Lim

TA08-11  The Proposal of Security Management Architecture using Programmable Networks Technology
   Myung-eun Kim, Dong-il Seo and Sang-ho Lee
TA08-12  Design and Implementation of a Framework for Automatically Generating Control and Monitoring Software
Dae-Sung Yoo, Min-Suck Sim, Sung-Ghue Park, Jong-Hwan Kim and Myeong-Jae Yi

TA08-13  An Electrohydraulic Position Servo Control Systems Using the Optimal Feedforward Integral Variable Structure Controller
Phongsak Phakamuch

TA08-14  Delta-Operator-Based Digital Redesign of Linear Time-Invariant Systems
Ho Jae Lee, Jin Bae Park, Yeun Woo Lee and Young Hoon Joo

TA08-15  Development of PC-based PVC scheduling system connected with ERP system
Min-gu Kang, Sookil Kang, Ho-kyung Lee and Sunwon Park

TA08-16  Contactless Suspension and Propulsion of Glass Panels by Electrostatic Forces
Jong Up Jeon, Kyu Yeol Park and Toshiro Higuchi

TA08-17  Tool-Setup Monitoring of High Speed Precision Machining Tool
Kyoung Taik Park, Young Jae Shin and Byung Soo Kang

TA08-18  Continuous Migration Container System for Upgrading Object
N. Yoosanthiah and A. Khunkitti

TA08-19  Movement Authority Setting Algorithm for Moving Block System
Seung-yong Kim, Chang-goo Lee, Yong-gyu Kim and Jong-hyun Beak

TP01: Motion Control Systems I

TP01-1  Design of 6-DOF Attitude Controller of the UAV Simulator’s Hovering Model
Joongeup Keh, Malyoung Lee, Byeongil Kim, Yushin Chang and Manhyung Lee

TP01-2  Improvement of Practical Control Method for Positioning Systems in the Presence of Actuator Saturation by Incorporating Takagi-Sugeno(TSK) Fuzzy Anti-reset Windup
Tarig Faisal Ibrahim, Wahyudi, M.J.E. Salami and Abdulgani Albagal

TP01-3  Motor Control IP Design and Quality Evaluation from the Viewpoint of Reuse
Sang-Deok, Lee, Sung-Ho, Han, Min-Soo, Kim and Young-Jun, Park

TP01-4  Improved Switching Frequency in Delta Modulated Inverter for UPS Applications
C.Sodaban, V.Tipsuwanporn, P.Thepsatorn, W. Piyarat and K.Witheephanich

TP01-5  Transient Response of The Optimal Taper-Flat Head Slider in Magnetic Storage Devices
R.Arayavongkul and M.Mongkolvongrojn

TP01-6  Parameter Reduction in Digital Adaptive Flight Control System for Spaceplanes
Yoshihiro Togasaki, Yuo Shimada and Kenji Uchiyama

TP02: Manufacturing Control Systems II

TP02-1  Design of Automatic Warehouse and Inventory control under HMS concept
Taweepol Suesut, Sathit Intajag and Prapas Roengruen

TP02-2  Temperature Control of an Oil Cooler System For Machine Tools Using a Fuzzy- Logic-Based Algorithm
Sun-Chul Kim, Dae Sun Hong, Choon Man Lee and Gyu Tak Kim

TP02-3  A Study on Tool Path Error Control for Disk Cams in a Five-Axis CNC Machining Center
Soon-Man Kwon, Joong-Ho Shin and Geun-Jong Yoo

TP02-4  Energy Saving with Conversion Speed Drive of Cooling Tower Fans
Araya Burapanonthachai, Amphawan Chaikla, Thanit Trisuwannawat, Prasit Julsereewong and Dumri Chansungsak

TP02-5  Reduction of Noise and Vibration in SRM Using Current Shape Control
Kyung Suk Cho, Sung-Ha Kwon, Hong Bae Park, Jeong Yup Han and Eun Tae Jeung

TP02-6  A Study on the Feed Rate Optimization of a Ball Screw Driven Machine Tool Feed Slide for Minimum Vibrations
Yong Hyu Choi, Hoon Ki Choi, Soo Tae Kim and Eung Young Choi

TP03: Fuzzy and Neural Systems I

TP03-1  Recurrent Neural Network with Backpropagation Through Time Learning Algorithm for Arabic Phoneme Recognition
Saliza Ismail and Abdul Manan Ahmad

TP03-2  H∞ Fuzzy State-Feedback Control Design for Uncertain Nonlinear Descriptor Systems: An LMI Approach
W. Assawinchaichote and S. K. Nguang

TP03-3  Training an Artificial Neural Network (ANN) to Control the Tap Changer of Parallel Transformers for a Closed Primary Bus
Ailreza Sedaghati
Role of linking parameters in Pulse-Coupled Neural Network for face detection
Young Wan Lim, Jin Hee Na and Jin Young Choi

Similarity Classifier based on Schweizer & Sklars t-norms
P. Luukka and J. Sampo

Pattern Recognition with Rotation Invariant Multiresolution Features
S. Rodtook and S.S. Makhanov

Integration of CAD & PDM on web distributed environment using XML-based web service
Bernardo Nugroho Yahya and Jeoung Sung Cho

Impact of Voice Activity Detection on Channel Allocation in Cellular Networks
Wichan Limaksri, Sakchai Thipchaksurat and Ruttokorn Varakulsiriputh

Stability Analysis of a Multi-Link TCP Vegas Model
PooGyeon Park, Doo Jin Choi, Yoon Jong Choi and Jeong Wan Ko

Neural network analysis of water pollution for a main river, Tamagawa, in Tokyo metropolis
Yan Yuan, Junko Kambe, T. Aoyama and U. Nagashima

Replacement Algorithm Selection Mechanism Considering File Size for Web Cache Server
Tanason Sontisiri, Pawin Sopechoke, Sakchai Thipchaksurat and Ruttokorn Varakulsiriputh

Digital Watermarking Technique for Images with Perspective Distortion
Nopporn Chotikakamthorn and Wiyada Yawai

Preliminary programming for librarization of Haptic Primitives based on constructive solid geometry and god-object
Do-Hyung Jin, Ki-Uk Kyung and Dong-Soo Kwon

Multiresolution Wavelet-Based Disparity Estimation for Stereo Image Compression
Chompoomuch Tengcharoen and Ruttokorn Varakulsiriputh

A Fast Vision-based Head Tracking Method for Interactive Stereoscopic Viewing
Narongsak Putpuek and Nopporn Chotikakamthorn

Hybrid HMM for Transitional Gesture Classification in Thai Sign Language Translation
Arunee Jaruwanawat, Nopporn Chotikakamthorn and Worawit Werapan

Design and Control of a Six-degree of Freedom Autonomous Underwater Robot “CHALAWAN”
T. Chatchanayuenyong and M. Parnichkun

Automatic Inspection of Reactor Vessel Welds using an Underwater Mobile Robot guided by a Laser Pointer
Jae Hee Kim and Jae Cheol Lee

A Study on Infra-Technology of RCP Interaction System
Seungwoo Kim and Jaeil Choe

Autonomous Ground Vehicle Technologies Applied to the DARPA Grand Challenge
Carl D. Crane III, David G. Armstrong Jr, Mel W. Torrie and Sarah A. Gray

Force Display Based on Simultaneous Actuation of Motors and Brakes
Tae-Bum Kwon and Jae-Bok Song

Control of a Flexible Link with Time Delays
Hyoun-Chul Choi and Suk-Kyo Hong

Precise Position Control of a Linear Stage with I/Q heterodyne Interferometer Feedback
Chanwoo Moon, Sungho Lee and J.K Chung

Unity Power Factor Control of Sensorless Switched Reluctance Motor
Dr. A. Ebenezer Jeyakumar and K.J. Shanmuganandan

Mechanism and Scenario Design of an Intelligent Arm-Wrestling Machine System
Chul-Goo Kang, Ki-Seon. Ryu, Y.-W. Kim, I.-S. Sohn and E.-J. Park

Development for Tilting Train Dynamics Motion Base
Yong-Soo Song, Seung-Kwon Shin, Jung-Seok Kim and Seong-Ho

Internet Based Network Control using Fuzzy Modeling
Jongbae Lee, Chang-Woo Park, Hagyeong Sung and Joonhong Lim
TP08-06 An Adaptive Fuzzy Based Control applied to a Permanent Magnet Synchronous Motor under Parameter and Load Variations
Chung-Jin Kwon, Sung-Joong Kim and Kyoung-Min Won

TP08-07 Active Control of a High-Speed Pantograph using LQ-Servo Controller
Seung-Kwon Shin, Young-Soo Song, Ki-Young Eun and Dong-Hoe Koo

TP08-08 A Web-based Virtual Laboratory System for Electronic and Digital Circuit Experiments Using Multimedia
Kim Dongsik, Lee Sunheum, Choi Kwansun, Seo Samjun and Yoo Jiyoon

TP08-09 Development of character recognition system for the billet images in the steel plant
Jong-hak Lee, Sang-gug Park and Soo-joong Kim

TP08-10 Traveler Guidance System based on 3D Street Modeling
Seung-Jun Kim, Seong-Eun Eom, Sung-Cheal Byun, See-Moon Yang and Byung-Ha Ahn

TP08-11 An Interactive Aerobic Training System Using Vision and Multimedia Technologies
Thanarat H. Chalidabhongse and Alongkot Noichaiboon

TP08-12 Interactive Technology Education at Pusan National University
Sangjoon Park and Joongsun Yoon

TP08-13 DCS Model Calculation for Steam Temperature System
Jae Ho Hwang

TP08-14 Internet-Based Control and Monitoring System Using LonWorks Fieldbus for HVAC Application
Won-Pyo Hong

TP08-15 Active Surge Control with Variable Inlet Guide Vane
Wookjin Choi, Sangjun Kim and Sangchul Won

TP08-16 The Simulation and Control of the Reactive Distillation Process for Dimethylcarbonate (DMC) Production
Yong Hee Jung and Dae Ryook Yang

TP08-17 Development of PLC networking for communication with mobile phones
Jirawan Tasapark and Worapong Tangsrirat

TP08-18 Development of modeling and control methods for Multi-DOF dielectric polymer actuator
M. Y. Jung, K. M. Jung, J. C. Koo, H. R. Choi, J. D. Nam and Y. K. Lee

TP08-19 Development of Face Robot Actuated by Artificial Muscle

TP08-20 FPGA based Dynamic Thresholding Circuit

TE01: Motion Control Systems II

TE01-1 Design of a Model Reference Adaptive Control System with Dead Zone
Yukihiro Yokota, Kenji Uchiyama and Yuzo Shimada

TE01-2 Tool Path Analysis and Motion Control of 3D Engraving Machine
Krit Smerpitak, Sawai Pongsawat and Prapart Ukakimapurn

TE01-3 A Robust Input Modification Approach for High Tracking Control Performance of Flexible Joint Robot
Min-Kyu Park, Sang-Hun Lee, Jong-Sung Hur, Jong-Guk Yim and Jong-Hyeon Park

TE01-4 Implementation of Position Control of PMSM with FPGA
Chaermpol Reangeppatanawiwat, Nitipat Eawsakul, Napat Watjanatepin, Prasert Pinprathomrat and Phayung Desyoo

TE01-5 Position Estimation Using Neural Network for Navigation of Wheeled Mobile Robot (WMR) in a Corridor
Kyung-Jin Choi, Young-Hyun Lee and Chong-Kug Park

TE01-6 floated Wafer Motion Modeling of Clean Tube system
Dong Hun Shin, Chung Yong Yun, Kyoo sik Jeong and Chul Hwan Choi

TE01-7 Generalised Non Error-Accumulative Quantisation Algorithm with feedback loop
Kyoung Chul Koh and Byoung Wook Choi

TE02: Intelligent and AI Based Control I

TE02-1 Active Suspension System for a One-wheel Car Model Using Single Input Rule Modules Fuzzy Reasoning
Tosio YOSHIMURA and Itaru TERAMURA

TE02-2 Hybrid-Feature Extraction for the Facial Emotion Recognition
Kwang-Sub Byun, Chang-Hyun Park, Kwee-Bo Sim, In-Cheol Jeong and Ho-Sang Ham

TE02-3 Adaptive Distributed Autonomous Robotic System based on Artificial Immune Network and Classifier System
Chul-Min hwang and Kwee-Bo Sim
<table>
<thead>
<tr>
<th>TE02-4</th>
<th>A 3-Level Endpoint Detection Algorithm for Isolated Speech Using Time and Frequency-based Features</th>
</tr>
</thead>
<tbody>
<tr>
<td>TE02-5</td>
<td>Optimal Control of Induction Motor Using Immune Algorithm Based Fuzzy Neural Network</td>
</tr>
<tr>
<td>TE02-6</td>
<td>Intelligent information filtering using rough sets</td>
</tr>
<tr>
<td>TE02-7</td>
<td>Comparison Thai Word Sense Disambiguation Method</td>
</tr>
</tbody>
</table>

TE03: Fuzzy and Neural Systems II

<table>
<thead>
<tr>
<th>TE03-1</th>
<th>An Edge Detection Method by Using Fuzzy 2-Mean Classification and Template Matching</th>
</tr>
</thead>
<tbody>
<tr>
<td>TE03-2</td>
<td>Artificial Neural Network for Quantitative Posture Classification in Thai Sign Language Translation System</td>
</tr>
<tr>
<td>TE03-3</td>
<td>Stability of the classifier based on fuzzy similarity in generalized Lukasiewicz Structure</td>
</tr>
<tr>
<td>TE03-4</td>
<td>Applying Neural Networks to Model Monthly Energy Consumption of Commercial Buildings in Singapore</td>
</tr>
<tr>
<td>TE03-5</td>
<td>Speeding Up Neural Network-Based Face Detection Using Swarm Search</td>
</tr>
</tbody>
</table>

TE04: Information and Networking Systems III

<table>
<thead>
<tr>
<th>TE04-1</th>
<th>Routing Algorithm with Adaptive Weight Function based on Possible Available Wavelength in Optical WDM Networks</th>
</tr>
</thead>
<tbody>
<tr>
<td>TE04-2</td>
<td>Performance Analysis of CDMA System Integrated Voice And WWW Traffic With Different Velocity Users</td>
</tr>
<tr>
<td>TE04-3</td>
<td>Routing Decision with Link-weight Calculating Function in WDM Switching Networks</td>
</tr>
<tr>
<td>TE04-4</td>
<td>An Enhanced Role-Based Access Control Model using Static Separation of Duty Concept</td>
</tr>
<tr>
<td>TE04-5</td>
<td>Improved Method of Characteristics for Two way Subscriber Transmission Systems</td>
</tr>
<tr>
<td>TE04-6</td>
<td>Enhanced Role-Based Access Control Administration Tool</td>
</tr>
</tbody>
</table>

TE05: Control Theory and Applications II

<table>
<thead>
<tr>
<th>TE05-1</th>
<th>Anti-Sway Control of Container Cranes: Inclinometer, Observers, and State Feedback</th>
</tr>
</thead>
<tbody>
<tr>
<td>TE05-2</td>
<td>The 2-DOF Control system design for Quadruple-Tank process using Root Locus Technique</td>
</tr>
<tr>
<td>TE05-3</td>
<td>A Flight Control System design for an Unmanned Helicopter</td>
</tr>
<tr>
<td>TE05-4</td>
<td>Vibration Isolation Control using PSO Algorithm for Auto-tuning of PID Parameters</td>
</tr>
<tr>
<td>TE05-5</td>
<td>Automatic Flight Path Control of Small Unmanned Aircraft with Delta-wing</td>
</tr>
<tr>
<td>TE05-6</td>
<td>Thruster Loop Controller design of Sun Mode and Maneuver Mode for KOMPSAT-2</td>
</tr>
</tbody>
</table>

TE06: Robotics Engineering Systems III

<table>
<thead>
<tr>
<th>TE06-1</th>
<th>Design and Analysis for The Special Serial Manipulator</th>
</tr>
</thead>
<tbody>
<tr>
<td>TE06-2</td>
<td>Time optimal trajectory planning for a robot system Under torque and impulse constraints</td>
</tr>
</tbody>
</table>
Traversing a door for mobile robot using PCA in complex environment
Min-Wook Seo, Young-Joong Kim and Myo-Taeg Lim

A Voice Controlled Service Robot Using Support Vector Machine
Seong Rock Kim, Jae Suk Park, Ju Hyun Park and Suk Gyu Lee

The DLI-Based Image Processing Algorithm for Preceding Vehicle Detection
Hee-Jung Hwang, Kwang-Ryu Baek and Un-Kun Yi

Optimal path planning for the capturing of a moving object
Jin-Gu Kang, Sang-Hun Lee, Cheol-Ho Hwang and Jung-Myung Lee

Motion Analysis of Objects Carried by Multiple Cooperating Manipulators with Frictional Contacts
Jihong Lee and Wonhee Lee

An method for building 2D virtual environment for a remote controlled mobile robot
Woo-Kyoung Kim, Woong-Keun Hyun, Jea-Yong Park, In-Mo Yoon and Y.K.Jung

A Study on Infra-Technology of RCP Mobility System
Seungwoo Kim, Jaeil Choe and Chanyoung Im

A Study on The Implementation of Stable and High-speed Humanoid Robot
Seungwoo Kim, Yongrae Jung and Kyungjun Jung

A Development of Home Mess-Cleanup Robot with Entertainment Function
Seungwoo Kim and Hyunkoo cha

Absolute Positioning System for Mobile Robot Navigation in an Indoor Environment
Jae-mu Yun, Jin-woo Park, Ho-seok Choi and Jang-myung Lee

Defects Length Measurement using an Estimation Algorithm of the Camera Orientation and an Inclination Angle of a Laser Slit Beam
Young-Hwan Kim, Ji Sup Yoon and E-Sok Kang

3D Feature Based Tracking using SVM
Sehoon Kim, Seungjoon Choi, Sangjin Kim and Sangchul Won

A Learning Controller for Repetitive Gait Control of Biped Walking Robot
Jaewon Kho and Dongcheol Lim

A Study on Development of Off-Line Path Programming for Footwear Buffing Robot
Tae-Jung Lho, Dong-Joong Kang, Woo-Seung Che, Jin-Young Kim and Min-Sung Kim

Analysis of Effects of Time-Delay in an Inverted Pendulum System Using the Controller Area Network
Sung-Min Cho and Suk-Kyo Hong

Experiment of Concrete Floor Finishing Robot
Woo Kwang-Sik, Lee Ho Gil, Kim Jin-Young and Song Jae-Bok

A New 3D Active Camera System for Robust Face Recognition by Correcting Pose Variation
Young-Ok Kim, Sung-Ho Jang, Chang-Woo Park, Ha-Gyeong Sung, Ohyun Kwon and Joonki Paik

Evaluation of Wheel-based Mobile Robot Performance for Simple Environmental Obstacles
Ju-Pyo, Hong, Deok-Hyeon Ko, Sung Soo Rhim, Soon-Geul Lee and Kyu-Ro, Kim

Subgoal Generation Algorithm for Effective Composition of Path-Planning
Chan-Hoi Kim and Jong-Koo Park

Development and Control of a Small BLDC Motor for Entertainment Robots
Jongbae Lee, Chang-Woo Park, Seahyun Rhyu, Junhyuk Choi, Joongki Chung and Hagyeong Sung

Development of a Mobile Robot System for Visual Inspection under Hot Environment
Sangdeok Park, Ho-Gil Lee, Hong-Seok Kim and Woong-Hee Son

Development of Automotive Position Measuring Vision System
Chan-Ho Lee, Jong-Kyu Oh and Jong-Sung Hur

Camera Self-Calibration from Two Ellipse Contours in Pipes
Kyungmin Jeong, Yongchil Seo, Youngsoo Choi, Jaikwan Cho, Sung-uk Lee and Seungho Kim

Tele-robotic Application for Nozzle Dam Maintenance Operation in Nuclear Power Plants
Yongchil Seo, Chang-Hoi Kim, Jai-Won Cho and Seungho Kim

Development of a Bio-mimetic Entertainment Robot with Autonomous Feeding Functionality
Ik-Jin Cho, Byoung-Jun Choi, Kil-Woong Jeong and Yun-Jung Lee

Development of a Bio-mimetic Quadruped Walking Robot with Waist Joint
Dong-Sik Kim, Se-Hoon Park, Kyung Ho Kim and Yun-Jung Lee

Development of Intelligent Bed Robot System
Changmok Oh, Kap-Ho Seo and Ju-Jang Lee
| FA02-4 | Design and Walking Control of the Humanoid Robot, KHR-2(KAIST Humanoid Robot - 2) | Jung-Yup Kim, Ill-Woo Park and Jun-Ho Oh | 1539 |
| FA02-5 | A decentralized collision avoidance algorithm of two mobile robots using potential fields | Dong-Hoon Yang and Suk-Kyo Hong | 1544 |
| FA02-6 | Unmanned Vehicle System Configuration using All Terrain Vehicle | Hee Chang, Moon, Eun Young, Park and Jung Ha, Kim | 1550 |

### FA03: Sensors and Signal Processing II

| FA03-1 | Noninvasive measuring: Detections of materials and quantities on eddy current testing | Koji Obayashi, Muneyoshi Tamura, X. Zhang and T. Aoyama | 1555 |
| FA03-2 | A CMOS-based Electronically Tunable Capacitance Multipliers | Chonchalee Suwannapho, Amphawan Chaikla, Thawatchai Kamsri and Vanchai Riewruja | 1561 |
| FA03-3 | Bare Glass Inspection System using Line Scan Camera | GyeongHun Baek, SeogBin Cho, SungYoon Jung and KwangRyul Baek | 1565 |
| FA03-4 | A New Online Calibration Algorithm for Array Antenna using Independent Component Analysis | Mikiyung Suk, Jonghyun Lee, Joohwan Chun, Jinkyu Park and Yonghwan Kim | 1568 |
| FA03-5 | Implementation of IIR Notch Filter on FPGA | Sukunya Praesombool, Sawitree Klunium, Surapol Sriboonsong, Surapun Yimman and Kobchai Dejhan | 1573 |
| FA03-6 | Distributed Arithmetic Adaptive Digital Filter Using FPGA | Sorawat Chivapreecha, Satianpon Piyamahachot, Anekchai Namcharoenwattanakul, Deow Chaimanee and Kobchai Dejhan | 1577 |

### FA04: Control Theory and Applications V

| FA04-1 | Robust Sinusoidal Tracking of High Performance Torsional Plants | Hossein M. Oloomi | 1581 |
| FA04-2 | Zero states polynomial-like trajectory (ZSPOT) generation | Ki Tak Ahn, Wan Kyun Chung and Youngil Youn | 1587 |
| FA04-3 | Realization and Canonical Representation of Linear Systems through I/O Maps | M. Sami Fadali and Hossein M. Oloomi | 1593 |
| FA04-4 | Differential Geometric Approach to Sliding Mode Control of Spacecraft Attitude Tracking | Yee-Jin Cheon | 1599 |
| FA04-5 | On linear output feedback for uncertain nonlinear systems | Ho-Lim Choi, Min-Sung Koo and Jong-Tae Lim | 1604 |
| FA04-6 | Optimal Sliding Mode Control of Anti-Lock Braking System | H. Ebrahimirad, M. J. Yazdanpanah and R. Kazemi | 1608 |

### FA05: Modeling of Complex Systems I

| FA05-1 | An Efficient Method for the Mass Unbalance Analysis of a Rotor System Using FFT and Lissajous Diagram | Hua Su and Kil To Chong | 1612 |
| FA05-2 | Development of Linearly Interpolated PRC Regenerating Algorithm to Improve Navigation Solution using Multi-DGPS Reference Stations | Kyung Ryoon Oh, Jong Chul Kim and Gi Wook Nam | 1618 |
| FA05-3 | On the Dynamics of Multi-Dimensional Lotka-Volterra Equations | Jun Abe, Taiju Matsuoka and Noboru Kunimatsu | 1623 |

### FA06: Biometrics and Biomedical Engineering Systems III

| FA06-1 | Application of Vision Sensor to Communication Device for Person with Serious Disability | Motohiro Tanaka, Yuki Yamanaka, Shunji Moromugi, Youichi Shimomoto, Yasuhiko Ohgiya and Takakazu Ishimatsu | 1634 |
| FA06-2 | Development of advanced walking assist system employing stiffness sensor | Seok-Hwan Kim, Moromugi Shunji and Takakazu Ishimatsu | 1638 |
| FA06-3 | A development of the automated system for adjusting the 6 D.O.F circular fixator | Sang-Gil Jung, Bum-Seok Park, Hyung-Joon Sim, Jae-Ho Jang, Chang-Soo Han and Jung-Soo Han | 1642 |
| FA06-4 | Training machine for active rehabilitation/training of elderly people | Shunji Moromugi, Tsutomu Koujitan, Seok-Hwan Kim, Nobuou Matsuzaka and Takakazu Ishimatsu | 1648 |
FA08: Poster 7

FA08-01 Implementation of Real Time Visual Servoing Control for Robot Manipulator
Sung Hyun Han, Ding Yean Jung, Hong Rae Kim and Hideki Hashimoto

FA08-02 Web-based Servo Motor Controller Design with Real-time Micro Embedded Operating System
Ga-Gue Kim and Hyung-Seok Lee

FA08-03 Measurement of Crystal Formation Using a Quartz Crystal Sensor
Ok Jin Joung and Young Han Kim

FA08-04 Effects of JPEG Compression on Joint Transform Correlator
Joeowo Widjaja and Ubon Suripon

FA08-05 Error Check Algorithm in the Wireless Transmission of Digital Data by Water Level Measurement
Hiesik Kim, Daeveon Seol, Youngil Kim and Chul Nam

FA08-06 A Nonlinear Information Filter for Tracking Maneuvering Vehicles in an Adaptive Cruise Control Environment
Yong-Shik Kim and Keum-Shik Hong

FA08-07 Web Based Monitoring Systems for Multi-Axis Force/Torque Sensors Using Embedded Systems
Hyun-Do Nam, Hong-Sik Lim and Chul-Goo Kang

FA08-08 3D Spreader Position Information by the CCD Cameras and the Laser Distance Measuring Unit for ATC
Dong-Suk Bae, Jung-Jae Lee, Bong-Ki Lee and Jung-Myung Lee

FA08-09 A study on modeling and measuring method of tire weight imbalances and improving reliability
Ki-Seong Lee and Tae-Woon Jeong

FA08-10 A New Type of MR Sensor-Based Vehicle Detector with High Performance and Reliability
Moon-Ho Kang

FA08-11 An Accurate Estimation of a Modal System with Initial Conditions
In-Yong Seo and Allan E. Pearson

FA08-12 An Electromechanical Σ∆ Modulator for MEMS Gyroscope
Byung Su Chang, Woon-Tahk Sung, Jang Gyu Lee and Teasam Kang

FA08-13 Feedback Control for Expanding Range and Improving Linearity of Microaccelerometers
Yonghwa Park, Joonsub Shim, Sangjun Park, Donghun Kwak, Hyoungho Ko, Taeyong Song, Kunsoo Huh, Jahang-hyon Park and Dong-il "Dan" Cho

FA08-14 Neural Networks Based Identification and Control of a Large Flexible Antenna
Minoru Sasaki, Takuya Murase and Nobuharu Ukitu

FA08-15 Correlation-Based Watermarking Scheme Using Wavelet Transform and Extended Sequences
Ryota KANAI, Shozo KONDO and Kiyoaki ATSUTA

FA08-16 Hydraulically Actuated of Half Car Active Suspension System
Yahaya Md. Sam and Johari Halim Shah Osman

FA08-17 ART2 Neural Network Applications for Diagnosis of Sensor Fault in the Indoor Gas Monitoring System
In-Soo Lee, Jung-Hwan Cho, Chang-Hyun Shim, Duk-Dong Lee and Gi-Joon Jean

FA08-18 A Scheme on Internet-based Checking for Variant CNC Machines in Machine Shop
Dong-Hoon Kim, Sun-Ho Kim and Kwang-Sik Koh

FP01: Control Theory and Applications III

FP01-1 Traction Control of Automobiles using a Disturbance Observer with the Approach of Sliding Mode Control
M. Mubin, K. Moroda, M. Tashiro, S. Ouchi and M. Anabuki

FP01-2 Delay-dependent stabilization for time-delay systems: An LMI approach
H.I. Cho, Ju H. Park and S.G. Lee

FP01-3 Spacecraft Attitude Control with a Two-axis Variable Speed Control Momentum Gyro
Hyochoon Bang, Youngwoong Park and Jungshin Lee

FP01-4 Design of Reduced Order H2 Controller -Application to Anti-Sway-Control of a Traveling Crane-
Nariyuki Kodani, Shigeto Ouchi and Yuji Todaka

FP01-5 Robust H∞ State Feedback Congestion Control of ATM for linear discrete-time systems with Uncertain Time-Variant Delay
Lae-Chung Kang, Young-Joong Kim and Myo-Taeg Lim

FP02: Robotics Engineering Systems V

FP02-1 Intelligent Emotional Interface for Personal Robot and Its Application to a Humanoid Robot, AMIET
Yong-Ho Seo, Il-Woong Jeong, Hye-Won Jung and Hyun S. Yang

FP02-2 A New Method of Collision Mode Evolution for Three-Dimensional Rigid Body Impact With Friction
Jonghoon Park, Wan-Kyun Chung and Youngil Youm
<table>
<thead>
<tr>
<th>ID</th>
<th>Title</th>
<th>Authors</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>FP02-3</td>
<td>Robot behavior decision based on Motivation and Hierarchicalized Emotions</td>
<td>Hyoung Chul Ahn, Myoung Soo Park and Jin Young Choi</td>
<td>1779</td>
</tr>
<tr>
<td>FP02-4</td>
<td>Navigation algorithm of Mobile Robot for helping brain disease patient’s gait rehabilitation</td>
<td>Young-Chul Cho, Tong-Jin Park, Bum-Suk Park and Chang-Soo Han</td>
<td>1784</td>
</tr>
<tr>
<td>FP02-5</td>
<td>Experiments of Force Control Algorithms for Compliant Robot Motion</td>
<td>Dong Hee Kim, Jong Hyeon Park, Ji Hyuk Song and Jong Sung Hur</td>
<td>1789</td>
</tr>
<tr>
<td>FP02-6</td>
<td>Development of a system architecture for an advanced autonomous underwater vehicle, ORCA</td>
<td>Hyun-Taek Choi and Pan-Mook Lee</td>
<td>1794</td>
</tr>
<tr>
<td>FP03-1</td>
<td>Educational hardware and simulator development of Multifunction Array Radar</td>
<td>Jonghyun Lee, Taejun Kim, Joohwan Chun, Jinkyu Park and Yonghwan Kim</td>
<td>1800</td>
</tr>
<tr>
<td>FP03-2</td>
<td>Visual Measurement of Pile Movement for the Foundation Work using a High-Speed Line-Scan</td>
<td>Mee-Seub Lim and Joonghong Lim</td>
<td>1805</td>
</tr>
<tr>
<td>FP03-3</td>
<td>Representing Human Motions in an Eigenspace Based on Surrounding Cameras</td>
<td>Satoshi Houman, M. Masudur Rahman, Joo Kooi Tan and Seiji Ishikawa</td>
<td>1811</td>
</tr>
<tr>
<td>FP03-4</td>
<td>Robust Electric Compass to Dynamic Magnetic Field Interference</td>
<td>Jae-Pyung Ko, Yang-Hwan Kim, Woong-Ki Kang and Jang-Myung Lee</td>
<td>1817</td>
</tr>
<tr>
<td>FP03-5</td>
<td>Reliable Sound Source Localization for Human Robot Interaction</td>
<td>Hyun-Don Kim, Jong-Suk Choi, Chang-Hoon Lee and Mun-Sang Kim</td>
<td>1823</td>
</tr>
<tr>
<td>FP03-6</td>
<td>An Onboard Measurement System of Ultrasonic Velocity and Attenuation using the Wavelet Transform</td>
<td>Cho Seog-bin, Ha Sung-kil, Jung Sungyun and Baek Kwang-ryul</td>
<td>1829</td>
</tr>
<tr>
<td>FP04-1</td>
<td>Relaxing of the Sampling Time Requirement in Prove of the EDMC Stability</td>
<td>Mohammad Haeri and Hossein Zadehmoshedi Beik</td>
<td>1832</td>
</tr>
<tr>
<td>FP04-2</td>
<td>I-PDA Controller Designed by CDM Incorporating FFC for Two-Inertia System</td>
<td>Nopnarong Khuaonkorat, Taworn Benjanarasuth, Don Isarakorn, Jongkol Ngamwiwit, Noriyuki Komine</td>
<td>1836</td>
</tr>
<tr>
<td>FP04-3</td>
<td>Adjusting GPC Control Parameters Based on Gain and Phase Margins</td>
<td>Mohammad Haeri</td>
<td>1841</td>
</tr>
<tr>
<td>FP04-4</td>
<td>Robust observer-based $H\infty$ controller design for descriptor systems using an LMI</td>
<td>Jong Hae Kim, Joongjae Lee, Seong Jooh Ahn and Seung Jooh Ahn</td>
<td>1846</td>
</tr>
<tr>
<td>FP04-5</td>
<td>Feedback Control for Multidimensional Linear Systems and Interpolation Problems for Multivariable Holomorphic Functions</td>
<td>T. Malakorn</td>
<td>1850</td>
</tr>
<tr>
<td>FP04-6</td>
<td>A Full Order Sliding Mode Tracking Controller For A Class of Uncertain Dynamical System</td>
<td>M.N. AHMAD, S.W.NAWAWI and J.H.S. OSMAN</td>
<td>1856</td>
</tr>
<tr>
<td>FP05-1</td>
<td>Optimal Design of Batch-Storage Network Applicable to Supply Chain</td>
<td>Gyeongbeom Yi, Euy Soo Lee and In Beom Lee</td>
<td>1862</td>
</tr>
<tr>
<td>FP05-2</td>
<td>Adaptive Neuro-Fuzzy Inference Systems for Indoor Propagation Prediction</td>
<td>S. Phaiboon, P. Phokharatkul and S. Somkurnpanich</td>
<td>1868</td>
</tr>
<tr>
<td>FP05-3</td>
<td>A State Space Modeling and Evolutionary Programming Approach to Automatic Synthesis of Chemical Processes</td>
<td>Soo Hyong Choi, Bomsook Lee and Chang-Bock Chung</td>
<td>1873</td>
</tr>
<tr>
<td>FP05-4</td>
<td>A Study on the Dynamic and Control Performance of New Type EPS systems with Two Magnetic Clutches</td>
<td>Kwangsuck Boo, Jeonghoon Song and Jongil Lee</td>
<td>1877</td>
</tr>
<tr>
<td>FP06-1</td>
<td>Real-Time QRS Detection Using Wavelet Packet Transform</td>
<td>Wisarut Bholstithi, Surapun Yimman, Watcharapong Hinjit and Kobchai Dejhan</td>
<td>1883</td>
</tr>
<tr>
<td>FP06-2</td>
<td>Center Determination for Cone-Beam X-ray Tomography</td>
<td>W. Narkbuakaew, S. Ngamanekrat, W. Withayachumnankul, C. Pintavirooj and M. Sangworsail</td>
<td>1888</td>
</tr>
<tr>
<td>FP06-3</td>
<td>Classification of White Blood Cell Using Adaptive Active Contour</td>
<td>J. Theerapattanakul, J. Plodpai, S. Mooyen and C. Pintavirooj</td>
<td>1892</td>
</tr>
</tbody>
</table>
The Implementation of The Moxa-Pad Cauterizer for Knee Arthralgia
Jong-II Bae, Sung-Yeol Kwon and Bong-Kwan Jo

Implementation of The Moxibustion Cauterizer for Prostatism
Bong-Kwan Jo, Jong-II Bae, Sung-Yeol Kwon, Kyung-II Woo, Jong-Kyung Kim, Dong-Heol Lee, Do Ki, Young-Kyu Ko, Sang-Youl Jang, Bong-jo Jo and Ja-Sung Koo

FE01: Control Theory and Applications IV

FE01-1 A Study on Tracking Control for Networked Multi-Motor Systems
Hong-Hee Lee and Eui-Heon Jung

FE01-2 CDM Controller Incorporating Friction Compensation for Rotational Inverted Pendulum
Adha I. Cahyadi, Taworn Benjarasuth, Don Isarakorn, Jongkol Ngamwiwit and Noriyuki Komine

FE01-3 On Feedback Linearization of Nonlinear Time-Delay Systems
Hee-Sub. Shin and Jong-Tae. Lim

FE01-4 Stability Analysis of Decentralized PVFC Algorithm for Cooperative Mobile Robotic Systems
Jin-Ho Suh and Kwon Soon Lee

FE01-5 A Novel Discrete-Time Predictive Current Control for PMSM
Jung-Won Sun, Jin-Ho Suh, Young-Jin Lee, Kwon-Soon Lee, Dong-Young Lee and Ho-Jin Lee

FE02: Robotics Engineering Systems VI

FE02-1 Object Recognition Using Planar Surface Segmentation and Stereo Vision
Dowan Kim, Sungil Kim and Sangchul Won

FE02-2 Turning Gait Planning of a Quadruped Walking Robot with an Articulated Spine
Se-Hoon Park and Yun-Jung Lee

FE02-3 Self Localization of Mobile Robot Using Sonar Sensing and Map Building
Ji-Min Kim, Ki-Seong Lee and Tae-Won Jeong

FE02-4 Streaming Layer of Personal Robot's Middleware
Vitaly Li, Seongho Choo, Hyemin Shin and Hongsong Park

FE02-5 A Visual Inspection System for Monitoring Weld Quality in LNGC Ship Construction
Hyunki Lee, Simkeun Yuk, Min Young Kim, Youngjun Park, Jonghyung Kim and Hyungsuck Cho

FE02-6 Design of a Low-Cost Micro Robotic System for Developing and Validation Control Algorithms
Don Isarakorn, Chutchai Saksrimuang, Taworn Benjarasuth, Jongkol Ngamwiwit and Noriyuki Komine

FE03: Sensors and Signal Processing IV

FE03-1 Combining approach in Fault Detection and Isolation for GPS applications
Jaywon Chey, Gyu-In Jee and Jang Gyu Lee

FE03-2 A Study on Perception Method of The Marking Location for An Automation of Billet Marking Processes
Jin-Woo Park, Hyunho Yook, Kwangsuck Boo and Wooseong Che

FE03-3 Flexure Analysis of Inertial Navigation Systems
Kwangjin Kim, Chan-Gook Park and Jai-Yong Park

FE03-4 Optimization of Blind Adaptive Decorrelating PIC Detector Performance in DS-CDMA System
S. Sirijiamrat, C. Benjangkaprasert and O. Sangaroon

FE03-5 Simulation of Spacecraft Attitude Measurement Data by Modeling Physical Characteristics of Dynamics and Sensors
Hungu Lee, Jae-Cheol Yoon, Yee-Jin Cheon, Dongseok Shin, Hyunjae Lee, Young-Ran Lee, Hyo-Choo Bang and Sang-Ryool Lee

FE03-6 Active High pass filter with Notch Characteristic using Uniformly Distirbuted RC Line
Wasan Tancharoen, Nouanchanh Panyanouvong, Sorapong Wachiraratthanapornkul and Kanok Janchitrapongvej

FE04: Control Theory and Applications VII

FE04-1 Design and Implementation of an Active Power Filter Using Model Predictive Controller
Mohammad Haeri, and Mahdi Zeinali

FE04-2 Feedback Error Learning and H∞-Control for Motor Control
Sirisak Wongsura, Waree Kongpravechnon and Suthee Phojaruenuanchan

FE04-3 Variable Structure Model Reference Adaptive Control, for SIMO Systems
Ardeshir Karami mohammadi
FE04-4  Data-based Control for Linear Time-invariant Discrete-time Systems  1996
   U. S. Park and M. Ikeda
FE04-5  Near-Optimal Collision Avoidance Maneuvers for UAV  2002
   Su-Cheol Han and Hyochoong Bang

FE05: Intelligent and AI Based Control II

FE05-1  A new human-robot interaction method using semantic symbols  2008
   Sang-Hyun Park, Jung-Hoon Hwang and Dong-Soo Kwon
FE05-2  Probabilistic Neural Network Based Learning from Fuzzy Voice Commands for Controlling a Robot  2014
   Chandimal Jayawardena, Keigo Watanabe and Kiyotaka Iizumi
FE05-3  A Systematic and Efficient Approach for Data Association in Topological Maps for Mobile Robot using Wavelet Transformation  2020
   N.L. Doh, K. Lee and W. K. Chung
FE05-4  Multi-agent System based on Blackboard System for Soccer Robot Implementation  2026
   Sang-Hyun Park, Jung-Hoon Hwang and Dong-Soo Kwon
FE05-5  ICAIM: An Improved CAIM Algorithm for Knowledge Discovery  2032
   Piriya Yaowapane and Ouen Pinngern
FE05-6  Trajectory Estimation of a Moving Object using Kohonen Networks  2036
   Jin-Hwa Ju, Dong-Hui Lee, Jae-Ho Lee and Jang-Myung Lee
FE05-7  The classified method for overlapping data  2040
   Boonleee Kruatrachue, Kalwarun Warunsin and Kritawan Siriboon

FE06: Sensors and Signal Processing V

FE06-1  Fabrication and Characteristics of Pyroelectric Infrared Sensor Using PbTiO3/P(VDF-TrFE) Nanocomposites Thin Film  2044
   Sung Yeol Kwon, Jong Il Bae, Bong Kwan Jo, Do Kim and Doo Sung Ahn
FE06-2  Suboptimal Adaptive Filters for Stochastic Systems with Multisensor Environment  2048
   Vladimir Shin and Jun-Il Ahn
FE06-3  An Operating Frequency Independent Energy Measurement Technique for High Speed Microprocessors  2054
   Krerkchai Thongnoo and Kusumal Changtong
FE06-4  Gyroless Yaw Angle Compassing of Earth-Pointing Spacecraft Using Magnetic Sensor  2058
   Seon-Ho Lee, Hyo-Sung Ahn and Seung-Wu Rhee
FE06-5  Texture Analysis and Classification Using Wavelet Extension and Gray Level Co-occurrence Matrix for Defect Detection in Small Dimension Images  2062
   Nazori Agani, Syed Abd Rahman Al-Atas and Sheikh Hussain Sheikh Salleh
FE06-6  An Adaptive Equalization of Amplitude Chrominance Distortion by using the Variable Step-size Technique  2068
   Vanvisa Chutchavong, Kanok Janchitrapongvej, Chawalit Benjangkaprasert and Ornarp Sangaroong

Author Index

Errata