Interactive Sessions (2I01–07)

Wednesday, August 19, 13:15–15:15, Gallery Chair: Atsushi Satoh (Iwate University)

2I01   Control Engineering I

2I01-1 Sliding Mode Control Based on Pole-Placement Method for Position Control of Linear Stage
∗Tae Dong Park, Kiheon Park (SungKyunKwan Univ.)

2I01-2 Development of a Fuzzy-Q control for achieving robust inverter systems
∗Yu-Kai Chen, Chau-Chung Song (National Formosa Univ.)

2I01-3 Inverse Problem of a Modified LQ Control
∗Mitsuyuki Saito, Takahiko Ono, Shinichi Hikita (Hiroshima City Univ.), Kazuo Yamanaka (Ibaraki Univ.), Naoya Kawasaki (Joetsu Univ. of Edu.)

2I01-4 Sliding Mode Stabilization of a Centrifugal Compressor with Spool Dynamics
∗Chau-Chung Song (National Formosa Univ.), Song-Shyong Chen (Hsiu-Ping Inst. of Tech.), Der-Cherng Liaw (National Chiao Tung Univ.)

2I01-5 Asymptotic Stability of Time Delay Systems With Unknown Uncertainty Bounds Using Adaptive Robust Control
∗Mojtaba Hosseini Toodeshki, Javad Askari, Saeed Hosseinnia (Isfahan Univ. of Tech.)

2I01-6 Design, Analysis and Implementation of H-Infinity Loop Shaping Control Design for Small Scale Helicopter
∗Hardian Reza Dharmayanda, Taesam Kang, Youngjae Lee, Sangkyung Sung (Konkuk Univ.)

2I02   Control Engineering II

2I02-1 Robust and Nonfragile H_inf Decentralized Fuzzy Model Control Method for Nonlinear Interconnected System with Time-Delay
∗J. K. Kim, Y. S. Kwon (LIG Nex1 Co., Ltd.), S. T. Park, H. B. Park (Kyungpook National University), K. H. Bang (Myongji College)

2I02-2 Semi-Global Output Feedback Tracking Control for Fully Actuated Ships
Jialu Du, ∗Shuanghe Yu, and Xingru Wang (Dalian Maritime Univ.)

2I02-3 Neural Networks Based Adaptive Control for a Class of Uncertain Nonlinear Processes
∗Emil Petre, Dan Selisteanu, Dorin Sendrescu (Univ. of Craiova)

2I02-4 Adaptive Time-varying Sliding Surface for Second-Order Variable Structure Control
∗Zhu Zhiping, Yuan Kui (CASIA), Huosheng Hu (Univ. of Essex)

2I02-5 Integral Sliding Mode Control with Adaptive Boundary of Nonlinearities for Robot Manipulators
∗Dong Sang Yoo (Hankyong National Univ.)

2I02-6 Redundancy of the Giant Swing Backward Movement on the High Bar
∗Yoshinori Kanemoto, Taiga Yamasaki, Xin Xin, Kiyoshi Gotoh (Okayama Prefectural Univ.)

2I03   Control Engineering III

2I03-1 Target Pointing of Rigid Spacecraft with Two Control Torques under Attitude Sensor Failure Situations
∗Yee-Jin Cheon, Jong-Hwan Kim (Korea Advanced Inst. of Sci. and Tech.)

2I03-2 A tabu-search approach for generating safer operations sequences
Mikiya Suzuki, ∗Rafael Batres (Toyohashi Univ. of Tech.)

2I03-3 Design and Simulation of Self-tuning PI-type Temperature Control for an Injection Molding Machine
∗Chin Sheng Chen, Yen Ting Chen (National Taipei Univ. of Tech.)

2I03-4 Two-DOF Controller Designed by CDM Incorporating FFC for a Smith Predictor Scheme
∗Tianchai Suksri, Satean Tunyasrirut (Pathumwan Inst. of Tech.)

2I03-5 The Relative humidity control
∗Santi Wangnipparnto, Tianchai Suksri (Pathumwan Inst. of Tech.)

2I03-6 A new control strategy for induction motor based on linear predictive control with Constraints
∗Bektache Abdeldjebar (Ferhat Abbes Univ. Setif)

2I04   Modeling, System Identification and Estimation I

2I04-1 Adaptive Estimation of Mass Flow Rate of a Four-Cylinder Spark Ignition Engine
∗Yuta Kitsuka, Tatsuya Nomura, Haruo Suemitsu, Takami Matsuo (Oita Univ.)

2I04-2 Adaptive Input Estimation of a Hodgkin-Huxley Neuron
∗Ryuta Ito, Yusuke Totoki, Haruo Suemitsu, Takami Matsuo (Oita Univ.)

2I04-3 High-Gain Observers for Estimation of Kinetics in a Nonlinear Bioprocess
∗Dan Selisteanu, Emil Petre, Constantin Marin, Dorin Sendrescu (Univ. of Craiova)

2I04-4 Low-order Model for Tokamak Plasma Current Control
∗Aitor J. Garrido, Izaskun Garrido, M. Goretti Sevillano, Modesto Amundarain, Mikel Alberdi (EUITI de Bilbao. UPV/EHU.), Oscar Barambones (EUI de Vitoria. UPV/EHU.), Itziar Martija (EUITI de Bilbao. UPV/EHU.)

2I04-5 Identification of Multi-Input Multi-Output Wiener-type Nonlinear Systems
∗Yuzuru Shiotani, Yasuhide Kobayashi (Hiroshima City Univ.)

2I04-6 A Wavelet-Based Approach in Detecting Visual Defects on Wafer Dies
∗Yeh Chihao (National Taipei Univ. of Tech.), Wu Fulchiang (Va-Nung Univ.), Chang Chinglan (INER), Chiu Chuiyu, Ji Weilung (National Taipei Univ. of Tech.)

2I05 Modeling, System Identification and Estimation II

2I05-1 Detecting Nonlinearity in Prediction Residuals of Snoring Sounds
∗Tsuyoshi Mikami (Tomakomai College of Tech.)

2I05-2 Localization Method of Space Rover using Two-Way Range Measurements under Uncertainties in Rotational Parameters
∗Sayaka Kanata, Hiroaki Nakanishi and Tetsuo Sawaragi (Kyoto Univ.)

2I05-3 Estimation of Hamstring Tendon Slack Length for Knee Flexor Moment Approximations
∗Hyun Woo Uhm, Han Soon Choi, Yoonsu Nam (Kangwon National Univ.)

2I05-4 Extracting Extrinsic Parameters of a Laser Scanner and a Camera Using EM
∗Jae-Han Park, Yong-Deuk Shin, Kyung-Wook Park, Seung-Ho Baeg, Moon-Hong Baeg (Korea Inst. of Indust. Tech.)

2I05-5 Application of Multi-Valued AdaBoost to Control of Autonomous Mobile Robot
∗Hisahiro Itani (Nagoya Municipal Indust. Research Inst., Nagoya Univ.), Takeshi Furuhashi (Nagoya Univ.)

2I05-6 Target Search Method for a Torpedo to the Evading Ship Using Fuzzy Inference
∗Jung-Min Pak, Dong-Gi Woo, Bonhwa Ku (Korea Univ.), Wooyoung Hong (Korea Naval Academy), Hanseok Ko, Myo-Taeg Lim (Korea Univ.)

2I06 Modeling, System Identification and Estimation III

2I06-1 Simple Initial Rotor Position Estimation Method for Three-Phase Star-Connected Switched Reluctance Machine
∗Pakasit Somsiri (National Electronics and Computer Technology Center, Thammasat Univ.), Ruchao Pupadubsin, Prapon Jitkreeyan, Seubsuang Kachapornkul, Kanokvate Tungpimolrut, Nattapon Chayopitak (National Electronics and Computer Technology Center), Pichai Aree (Thammasat Univ.)

2I06-2 Effective Computation Algorithms for Fusion Estimation
∗Seokhyoung Lee and Vladimir Shin (Gwangju Inst. of Sci. and Tech.)

2I06-3 Discrete Mathematical Model for ECG Waveform Using Kernel Function
∗Phayung desyoo, Sukanya Praesomboon, Wanida Sangpetch, Wichai Suracherdkiati (King Mongkut's Univ. of Tech. North Bangkok)

2I06-4 The Frequency Estimation of Weak Signal Based on Chaotic System Fusion Technology
∗Yanchun Xu (Harbin Inst. of Tech., Heilongjiang Univ.), Chunling Yang (Harbin Inst. of Tech.), Xiaodong Qu (Heilongjiang Univ.), Mengda Yang, Quan Yang (Harbin Inst. of Tech.)

2I06-5 HIL Simulation Approach for Feasibility Study of a Tram with an Onboard Hybrid Energy Storage System
∗Jeeho Lee, Namju Jeon, Hyeongcheol Lee (Hanyang Univ.)

2I06-6 Input Signal Reconstruction based on Improved Moving Least Squares for Nonlinear Multiple-input Multiple-output Sensor
∗Jinwei Sun, Dan Liu, Xin Liu, Guo Wei (Harbin Inst. of Tech.)

2I07 Neural Networks and Computational Intelligence

2I07-1 Study on Interpretable Fuzzy Classification System Based on Neural Networks
∗Qin Yong (Beijing Jiaotong Univ.), Xing Zong-yi (Nanjing Univ. of Sci. and Tech.), Jia Li-min (Beijing Jiaotong Univ.), Wu Ying-ying (Nanjing Univ. of Sci. and Tech.)

2I07-2 Water Management Simulation for Electric Current Generation by Max-Min Ant System
P. Roengruen, B.Ploysuk, T. Suesut, S. Gulphanich (King Mongkut' Inst. of Tech. Lakrabang.)

2I07-3 Parameters Estimation of Automotive Ignition Coil Based on Support Vector Regression
∗Qisong Wang, Song Li, Yongping Zhao (Harbin Inst. of Tech.)

2I07-4 Real-time End Point Detection Specialized for Acceleration Signal
∗Jong Gwan Lim (KAIST), Sang-Youn Kim (Korea Univ. of Tech. and Edu.), Dong-soo Kwon (KAIST)

2I07-5 The development of Genetic Algorithm for minimizing a wastewater
∗Jin Soo Park, Wonshoup So, Jae Hak Jung (Yeungnam Univ.)

2I07-6 Gas Classification and Fault Diagnosis of the Gas Sensor in the Gas Monitoring System Using Neural Networks
∗In-Soo Lee (Kyungpook National Univ.)

Interactive Sessions (3I01–07)
Thursday, August 20, 13:15–15:15, Gallery   Chair: Kenji Ikeda (Tokushima University)

3I01 Intelligent Systems

3I01-1 Banknote Recognition Based on Continuous Change in Strictness of Examination
∗Kazuo Nishimura (Kanagawa Inst. of Tech.)

3I01-2 Criteria Classification Intelligent Decision Support Systems
∗Kuceba Robert, Kieltyka Leszek (Czestochowa Univ. of Tech.)

3I01-3 The concept of the expert system diagnosing intuitive skills of the managing staff in an enterprise
∗Jedrzejczyk Waldemar, Kieltyka Leszek (Czestochowa Univ. of Tech.)

3I01-4 Cybernetic Integrators of Created Value Creation
∗Kieltyka Leszek, Kuceba Robert, Jedrzejczyk Waldemar (Czestochowa Univ. of Tech)

3I01-5 Mapping the macroeconomic conditionings of running a business in Poland with the use of Kohonen's networks
∗Kieltyka Leszek, Jedrzejczyk Waldemar, Kuceba Robert (Czestochowa Univ. of Tech)

3I01-6 Comparison of Different Decision Making Strategies by Simulation on Variant of "Snakes and Ladders Board Game"
∗Khan Muhammad Badruddin, Takashi Yamada, Takao Terano (Tokyo Inst. of Tech.)

3I02 Image Processing I

3I02-1 Object Recognition Based on Modified Intuitive Corner Detection and Two-stage Corner Matching
∗Chin Sheng Chen, Ming Fu Tsai, Chun Chan Chiu (National Taipei Univ. of Tech.)

3I02-2 Comparison of Color Spaces in Fitting Robustness of Active Appearance Model
∗Jong-Min Park, Hyun-Chul Choi, Se-Young Oh (Pohang Univ. of Sci. and Tech.)

3I02-3 Convergent Floating Thresholding Method
∗Tomoko Fujidai, Kazuhiro Kunishi, Jun'ichi Yamaguchi (Kagawa Univ.)

3I02-4 An Improved Corner Point Detection Using Extreme Value of Susan Method for measuring a displacement
∗Byung-Seung Jeon, Dong-Gi Woo, Young-Hak Mo, Myo-Taeg Lim (Korea Univ.)

3I02-5 Analysis of Hough Data Behavior for Scene Recognition
∗Kazuki Ueno Jun'ichi Yamaguchi (Kagawa Univ.)

3I02-6 Human Activity Analysis: Concentrating on Motion History Image and Its Variants
∗Md. Atiqur Rahman Ahad, J.K. Tan, H. Kim and S. Ishikawa (Kyushu Inst. of Tech.)

3I03 Image Processing II

3I03-1 SIFT-Based 3D Feature Matching and Reconstruction with Binocular Stereo Vision
∗Shuanghe Yu, Jialu Du, Siyuan Wang (Dalian Maritime Univ.), He Xu (Harbin Eng. Univ.)

3I03-2 Self-Aligning-Calibration of a Stereo Vision System
∗Dong-Hwan Lim, Tae-Yong Kuc (SungKyunKwan Univ.)

3I03-3 Motion Analysis of Nihon Buyo using Motion Capture System
∗Yukitaka Shinoda, Shingo Murakami,Yuki Mito, Reishi Watanuma, Mieko Marumo (Nihon Univ.)

3I03-4 Fast 3D feature extraction method for moving stereo
∗In Hwan Jung, Won-Seok Choi, Se-young Oh (Pohang Univ. of Sci. and Tech.)

3I03-5 Image Selection from Streaming Video Images Based on 3 Axes Acceleration Data for the Use in Agricultural Management
∗Juichi Takizawa, Kazuki Kobayashi, Yasunori Saito (Shinshu Univ.)

3I03-6 Autonomous Identification of Debris' Impact Craters Utilizing Range Image Sequence
∗Fujita Koki (Kyushu Univ.)

3I04 Remote Sensing

3I04-1 Detection of Sulfur-Containing Gases by MODIS
∗Yoshimine Tanabu, Takanori Sasaki, Tomohisa Takasugi and Shigetaka Fujita (Hachinohe Inst. of Tech.)

3I04-2 Z-R relation for snowfall using small Doppler radar and high sensitive snow gauges
M. Kubo, ∗A. Sougen, K. Muramoto (Kanazawa Univ.), Y. Fujiyoshi (Hokkaido Univ.)

3I04-3 Visualization of water vapor distribution in the lower atmosphere using two lidars
M. Kubo, ∗K. Nakamura, K. Muramoto (Kanazawa Univ.), T. Ohigashi, T. Shinoda (Nagoya Univ.), Y. Fujiyoshi (Hokkaido Univ.)

3I04-4 Shape classification of snow particle into snowflake and graupel using image processing
M. Kubo, ∗K. Seto, K. Muramoto, Y. Fujiyoshi (Kanazawa Univ.), T. Shinoda, T. Ohigashi (Nagoya Univ.)

3I04-5 Speckle Noise Filtering with Generalized Gamma Distribution
∗Sathit Intajag, Sakreya Chitwong, Nopparat Sukkasem (King Mongkut's Inst. of Tech. Ladkrabang)

3I05 Sensor Information Processing

3I05-1 3-Dimensional CFD Simulation Modeling for Optimal Flow Field Design of Direct Methanol Fuel Cell Bipolar Plate
∗Minsu Kim, Wonsub Lim, Minhye Lee, Il Moon (Yonsei Univ.)

3I05-2 Nondestructive Measurement System for Welding Residual Stress by Ultrasonic Method
∗Zhang Shiping (Harbin Inst. of Tech.), Li Ying (Local Tax Office of Nangang district in Harbin), Sun Jinwei, Fang Hongyuan (Harbin Inst. of Tech.)

3I05-3 Estimating Accelerated Body's Attitude Using an Inertial Sensor
∗Oh Chul, Heo, Kiheon, Park (Sungkyunkwan Univ.)

3I05-4 Detection Method of Mobile Terminal Spatial Location Using Audio Watermark Technique
∗Toshio Modegi (Dai Nippon Printing Co., Ltd.)

3I05-5 Detection of Human Walking Motion Based on Measurement System of Current Generated by Electrostatic Induction
∗Koichi Kurita (Kochi National College of Tech.), Ryo Takizawa, Hitoshi Kumon (Toyota Motor Corporation)

3I05-6 Real time Monitoring System for Prediction of Tool Wear and Failure in Machining Processes Using ART2
∗Min-Seok Noh, Jung-Hee Kwon, U-il Jang, Dae Sun Hong (Changwon National Univ.), Hae Young Jung (President, Forex Ind. Co. Ltd)

3I06 Components and Devices

3I06-1 Design of On-line UPS Based on Boost Converter
Chunyang Gu, Zhibing Yang, ∗Chunling Yang, Mengda Yang (Harbin Inst. of Tech.)

3I06-2 Lowest Power optimal dynamic range continuous time MOSFET-C filter in submicron CMOS tehnology compared with experimental measurement results
Kittipong Tripetch, ∗Gunyakorn Khunead (Rajamangala Univ. of Tech.)

3I06-3 Feasibility Determination of OTA for Active Floating Inductor Based Application
∗Rawid Banchuin (Siam Univ.), Roungsan Chaisricharoen (Mae Fah Luang Univ.), Boonruk Chipipop (King Mongkut's Univ. of Tech. Thonburi)

3I06-4 Development of Remote Alarm Module with Playback functions in Voyage Data Recorder
∗Jonggu Kang, Bokjin Youm, Deokhwan Cho, Hangsoeb Choe (Hyundai Heavy Industries Co., Ltd.)
3I06-5 Energy Harvester using PZT Actuator with a Cantilever
∗So-Nam Yun, Young-Bog Ham, Jung-Ho Park (Korea Inst. of Machinery and Materials)
3I06-6 Reducing Hysteresis Effect of Force Actuator in a Scanning Probe Microscope
Po-Kuang Chang, ∗Jium-Ming Lin (Chung-Hua Univ.)

3I07 Miscellaneous Topics

3I07-1 An Automated Microscope Inspection System for Inspecting the Status of Ball Spacer and Seal in the Cell Process of LCD Panel
∗Yoon-Gu Kim, Jinung An (Daegu Gyeongbuk Inst. of Sci. and Tech.), Ki-Dong Lee (Yeungnam Univ.)
3I07-2 Mechanical Performances of a Piezo-driven Stage with 4-PP Compliant Guide Mechanism
∗Kee-Bong Choi, Jae Jong Lee, Gee Hong Kim (Korea Inst. of Machinery and Materials), Seiichi Hata (Tokyo Inst. of Tech.)
3I07-3 Enhancement of I/O Network Based on RTE Technology by Loop HUB Technology
∗Koji Shibata, Hiroyuki Fujikata (Toshiba Corp.), Akira Nojima (Toshiba Mitsubishi-Electric Industrial Systems Corp.)
3I07-4 Empirical Evaluation of Object-Oriented Programming Effectiveness in Different Types of Program
∗Kazuo Nishimura (Kanagawa Inst. of Tech.)
3I07-5 Performance Evaluations of PC Clusters for Large Scale Numerical Analyses
∗Kohei Honda, Tatsuya Furukawa, Hisao Fukumoto(Saga Univ.), Masashi Ohchi (Chiba Inst. of Tech.)
3I07-6 A Verification of Fault Tree for Safety Integrity Level Evaluation
∗Younghee Lee, Jinkyung Kim, Junghwan Kim, Il Moon (Yonsei Univ.)

Interactive Sessions (4I01–07)
Friday, August 21, 13:15–15:15, Gallery Chair: Yuji Wakasa (Yamaguchi University)

4I01 Sensors and Measurements I

4I01-1 Development of a Human Motion Measurement System for Application to the Human Machine Interface
∗Koichi Kurita, Kenta Nishikubo (Kochi National College of Tech.)
4I01-2 Measurement of Scale Defects on Steel Plate in Pickling Line
Myoung Koo Kang, ∗Hyun Chul Park, Ho Mun Bae, and Se Ho Choi (POSCO Technical Research Lab.)
4I01-3 A dead reckoning sensor system and a tracking algorithm for mobile robot
∗Hye Ri Park, Dongjun Hyun, Hyun Seok Yang (Yonsei Univ.), Hyuk Sung Park (Yonsei Eng. Research Park)
4I01-4 3D Localization System for Indoor Flying Robot Using Ultrasonic and RF
∗Kuk Cho (Univ. of Sci. and Tech.), Jin-Ok Shin, Woong-Hee Shon, Sangdeok Park (Korea Inst. of Indust. Techn.)
4I01-5 Construction of a Wireless Sensor Networking Platform with Vibration Sensing and GPS Positioning
∗Chau-Chung Song (National Formosa Univ.), Yin-Chieh Hsu (Chung Hua Univ.), Chen-Fu Feng, Yu-Kai Chen (National Formosa Univ.)
4I01-6 High-resolution optical measurement of fiber optics transmission line length
∗Takeshi Tsujimura, Koichi Yoshida, Kuniaki Tanaka, Kazunori Katayama, Yuji Azuma (NTT Access Network Service Systems Lab.), Masahiko Mikawa (Tsukuba Univ.)

4I02 Sensors and Measurements II

4I02-1 Real-time Measurement of Multi-point Strain by Fiber Bragg Gratings using Optical Frequency Sweeping
Yukitaka Shinoda, ∗Yu Sasaki, Kenichi Nagai (Nihon Univ.), Izumi Ogura (Tokyo Metropolitan Univ.), Takashi Higo (Nihon Univ.)
4I02-2 A new compound sensor for optical, electrical and ultrasonic measurements in the liquid
∗Takayuki Kitajima, Akira Kimoto (Saga Univ.)
4I02-3 Design and Implementation of Novel Impedance Measurement using Digital Sine-wave Oscillator with Optimum Phase and Amplitude
∗Sukanya Praesomboon, Thitaphan Jongsataporn, Surapun Yimman (King Mongkut's Univ. of Tech. North Bangkok), Fusak Cheevasuvit (King Mongkut's Univ. of Tech. Ladkrabang)
4I02-4 Deliberation of fluorescent material by used in low temperature measurement
∗Yukari Miyazaki, Megumi Watabiki, Takayuki Sindo, Hiroaki Aizawa, Toru Katsumata, Syuji Komuro (Toyo Univ.)
4I02-5 Experimental study on wind-based vehicle speedometer applying the whistle principle
∗Tomonari Kaneko, Tomoyuki Ohkubo, Yousuke Kurihara, Kazuyuki Kobayashi (Hosei Univ.)

4I03 Man-Machine and Embedded Systems

4I03-1 Experimental Study on Reactive Switch by Using Piezoelectric Devices
∗Yuuki Takehana, , Kazuyuki Kobayashi, Tomoyuki Okubo, Yousuke Kurihara (Hosei Univ.)
4I03-2 Virtual Game and Collaborative Learning for Packaging Design
∗Ratchadawan Nimnual, Surachai Suksakulchai (King Mongkut's Univ. of Tech. Thonburi)
4I03-3 Towards a BSN-based gesture interface for intelligent home applications
∗V-ris Jaijongrak (Thammasat Univ.), Sarit Chantasuban, Surapa Thiemjarus (Sirindhorn International Inst. of Tech.),
4I03-4 Design and Implementation Procedure of AUTOSAR I_O Driver Cluster
∗Woong-Jae Won(Daegu-Gyeongbuk Inst. of Sci. and Tech.), Jangkyung Son (Next Power & Network), Gwangmin Park, Daehyun Kum, Seonghun Lee (Daegu-Gyeongbuk Inst. of Sci. and Tech.)

4I03-5 Software Architecture of Human-like Robot
∗Tae-Geun Lee (SoluBot Inc.), Kwang-Woong Yang, Moo-Sung Choi, Un-Chol Shin (Korea Inst. of Indust. Tech.)

4I04 Industrial Systems

4I04-1 Design and Development of an Open Architecture CNC Controller for Milling Machine Retrofitting
∗Kittipong Ekkachai, Udom Komin, Wuttikorn Chaopramualkul, Apicit Tantaworrasilp, Phanuphan Kwansud, Pongsakorn Seekhao, Teesid Leelasawassuk, Kamonwan Tanta-Ngai, Kanokvate Tungpimolrut (National Electronics and Computer Technology Center)

4I04-2 Distributed Control of Industrial Robot Systems using Petri Net Based Multitask Processing
∗Gen'ichi Yasuda (Nagasaki Inst. of Appl. Sci.)

4I04-3 A Multi-objective Constraint Programming for Centralized Production-distribution Planning
∗Hang-Min Cho, In-Jae Jeong (Hanyang Univ.)

4I04-4 Software Development Tool Design For Automotive Applications
∗Hyun Chul Jo, Shiquan Piao, Sung Ho Jin, Woo Young Jung (Daegu-Gyeongbuk Inst. of Sci. and Tech.)

4I04-5 Design and Implementation of the Behaviour Inspection System for Rajjaprabha Dam
∗U. Lewlomphaisarl, K. Ekkachai, K. Suksomboon, J. Kudtongngam, W. Laungnarutai, U. Supakchukul, P. Komeswarakul, S. Thirachai, S. Karukanan, P. Saengsatcha, A. Jomtarax and K. Tungpimolrut (National Electronics and Computer Technology Center)

4I04-6 The Development of High Performance Remote Terminal Unit Using RT-Linux for Distribution System
∗Jasada Kudtongngam, Pasakorn Tiwatthanont and Udom Lewlomphaisarl (National Electronics and Computer Technology Center)

4I05 Robotics and Mechatronics Systems

4I05-1 Dependable Grasping Strategy for Service Robots using Fine Approaching Positions and Adaptive Hands
∗Moosung Choi, Byunghun Hwang, Eun-Cheol Shin, Kwang-Woong Yang, Hong-Seok Kim (Korea Inst. of Indust. Tech.)

4I05-2 Unmanned Driving of Robotic Vehicle(Robicle)using Magnetic Position Sensor
∗Dae-Yeong Im, Young-Jae Ryoo, Sun-Kil Park (Mokpo National Univ.)

4I05-3 Real-time Velocity Optimization of a Group of Autonomous Members via Ant Colony Optimization (ACO)
Ramin Vatankhah, Shahram Etemadi, Aria Alasty, mehrdad Boroushaki, ∗Gholamreza Vossoughi (Sharif Univ. of Tech.)

4I05-4 Fault Tolerant Control Using Self-Diagnostic Smart Actuator
∗Inseok Yang, Kyungmin Kang, Dongik Lee (Kyungpook National Univ.)

4I05-5 An Enhanced Path Planning of Fast Mobile Robot based on Data Fusion of Image Sensor and GPS
∗Jin-Hwan Joo, Dae-Han Hong (Yeungnam Univ.), Yoon-Gu Kim (Daegu Gyeongbuk Inst. of Sci. and Tech.), Ho-Geun Lee (Electronics and Telecommunication Research Inst.), Ki-Dong Lee, Suk-Gyu Lee (Yeungnam Univ.)

4I06 Robot Technology System and Integration I

4I06-1 Design and Implementation of Vision-Based Transport for a Mobile Robot via Kalman Filter
∗Shuanghe Yu, Yuqing Chen, Dan Wang, Jialu Du (Dalian Maritime Univ.)

4I06-2 A Wall Climbing Robot with Simple Suckers
Nobuhiro Okada, ∗Kyohei Yamanaka, Eiji Kondo (Kyushu Univ.)

4I06-3 The Formation-Keeping of Multiple Mobile Robots using Chained-Poles
∗JaeHyuk Kwak, HyunDuk Kang, ChangHwan Kim (Korea Inst. of Sci. and Tech.)

4I06-4 Development of Task Planner for u-Intelligent Educational Robots
Woohyun Ko, Jaeseong Han, ∗Sanghoon Ji, Kyungtae Nam, Sangmoo Lee, Woonghee Shon (Korea Inst. of Sci. and Tech.)

4I06-5 An Emotion Engine for Intelligent Robot
∗Cheonshu Park, Jaehong Kim (Electron. Telecom. Research Inst.)

4I06-6 Prediction method of an in-pipe robot's orientation to pass in a curved pipe
∗Jungwan Park, Sangyong Park, Dongwoo Lee, Hyunseok Yang (Yonsei Univ.)

4I07 Robot Technology System and Integration II

4I07-1 Development of Human-Friendly Robot with Collision Force Suppression Mechanism
Hun-ok Lim, Masahiko Sunagawa, ∗Naoki Takeuchi (Kanagawa Univ.)

4I07-2 Development of Pipe Inspection Robot
Hun-ok Lim, ∗Taku Ohki (Kanagawa Univ.)

4I07-3 Mechanism and Control of Personal Motor Vehicle Capable of Using for Passenger and Baggage Conveyance
Hun-ok Lim, Yoshiyuki Ohta, ∗Shoji Machida (Kanagawa Univ.)

4I07-4 Development of Biped Walking Robot KBR-1R
Hun-ok Lim, Kensuke Tajima, ∗Tetsuya Yoshida, Katsuhiro Watanabe (Kanagawa Univ.)

4I07-5 A Modified Nonlinear Guidance Logic for a Leader-Follower Formation Flight of Two UAVs
∗Do-Myung Kim, Suhyun Nam, Jinyoung Suk (Chungnam National Univ.)

4I07-6 A design of onboard multi-channel sonar signal processing system for autonomous mobile robots
Hiroyuki Takai, ∗Kiyoshi Okuda, Masamichi Miyake (Hiroshima City Univ.), Keihachiro Tachibana (Osaka Gakuin Univ.)