PROGRAM OF THE 2011 INTERNATIONAL SYMPOSIUM ON AUTOMOTIVE AND CONVERGENCE ENGINEERING

Ho Chi Minh City University of Technology, Jan 19th, 2011

08:00 ~ 08:30	Registration
08:30 ~ 08:45	Opening Ceremony Welcome Address by Assoc.Prof. Dr. Dinh-Thanh Vu, Rector of HCMUT
08:45 ~ 09:00	Speech by Prof. Sang-Bong Kim, President of BEST, PKNU
09:00 ~ 09:15	Speech by Dr. Thien-Phuc Tran, Dean of Mechanical Eng. Faculty, HCMUT
09:20 ~ 11:40	Symposium
11:45 ~ 13:00	Lunch Time
13:00 ~ 15:00	Symposium

ORAL PRESENTATION

Room 1

Chairman	Tan-Tien Nguyen and Sang-Bong Kim
09:20 ~ 09:40 L-02	**Motion Control of an Omnidirectional Mobile Platform for Path Following Using Backstepping Technique** Viet-Tuan Dinh, Giang-Hoang, Thien-Phuc Tran[1], Hak-Kyeong Kim and Sang-Bong Kim *Department of Mechanical and Automotive Engineering, PKNU, Busan 608-739, Korea* [1]*Faculty of Mechanical Engineering, HCMUT, Hochiminh, Vietnam*
09:40 ~ 10:00 L-04	**Heading Motion Control of a 3-Joint Carangiform Fish Robot Using an Efficient Neural PID Controller** Tuong-Quan Vo and Byung-Ryong Lee[1] *Department of Mechatronics Engineering, Faculty of Mechanical Engineering, HCMUT* [1]*School of Mechanical and Automotive Engineering, University of Ulsan, Korea*
10:00 ~ 10:20 L-06	**Control of Inpipe Inspection Robot for Inspecting Variable Pipe Line** Chul-Han Park, Seo-Kwang Kim, Viet-Tuan Dinh, Hak-Kyeong Kim and Sang-Bong Kim *Department of Mechanical and Automotive Engineering, PKNU, Busan 608-739, Korea*
10:20 ~ 10:40	Tea/Coffee Break
Chairman	Tan-Tung Phan and Hak-Kyeong Kim
10:40 ~ 11:00 L-08	**Control of Omini-Directional Mobile Vehicle For Obstacle Avoidance** Gyeong-Mok Lee, Giang-Hoang , Tan-Tung Phan[1], Hak-Kyeong Kim and Sang-Bong Kim *Department of Mechanical and Automotive Engineering, PKNU, Busan 608-739, Korea* [1]*Faculty of Mechanical Engineering, HCMUT, Hochiminh, Vietnam*
11:00 ~ 11:20 L-10	**University-Industry Linkage - Key Factor for the Sustainable Development of Domestic Automotive Industry** Xuan-Mai Pham and Van-Tai Pham[1] *Faculty of Transportation Engineering, HCMUT, Vietnam* [1]*Thaco Group*
11:20 ~ 11:40 L-12	**Path Tracking Control of Automated Guided Vehicle Using Camera Sensor** Phuc-Thinh Doan, Tan-Tien Nguyen[1], Viet-Tuan Dinh, Hak-Kyeong Kim and Sang-Bong Kim *Department of Mechanical and Automotive Engineering, PKNU, Busan 608-739, Korea* [1]***Faculty of Mechanical Engineering, HCMUT, Hochiminh, Vietnam***
11:40 ~ 13:00	**Lunch Time**
Chairman	Duy-Anh Nguyen and Young Seok Jung
13:00 ~ 13:20 L-14	**PD-Neural Network Controller for Dynamic Positioning of Ship** Phung-Hung Nguyen and Duy Anh Nguyen[1] *Navigation Faculty, Vietnam Maritime University, Hai Phong City, Vietnam* [1]*Mechatronics Eng. Dept., Faculty of Mechanical Eng., HCMUT, Vietnam*

13:20 ~ 13:40 L-16	**A Study on Controllers Design for Depth Control of An Autonomous Underwater Vehicle** Thanh-Trung Nguyen, Khac-Anh Hoang and Tuong-Quan Vo *Department of Mechatronics Engineering, Faculty of Mechanical Engineering, HCMUT, Vietnam*
13:40 ~ 14:00 L-18	**Designing and Fabricating a 3-D Small Size CNC Engraving Machine using Mach3** Dinh-Huan Phan *Faculty of Mechanical Engineering, HCMUT, Vietnam*
14:00 ~ 14:20	Tea/Coffee Break
Chairman	Ngoc-Bich Le and Marn Go Kim
14:20 ~ 14:40 L-20	**A Stable Formation Control Using On-board Sensors** Viet-Hong Tran *Department of Mechatronics Engineering, Faculty of Mechanical Engineering, HCMUT, Vitenam*
14:40 ~ 15:00 L-22	**A Study on Control Tele-operation Manipulator** Diep-Cong-Thanh Tu *Department of Mechatronics Engineering, Faculty of Mechanical Eng., HCMUT, Vietnam*

Room 2

Chairman	Dinh-Huan Phan and Byung-Tak Kim
09:20 ~ 09:40 L-01	**FE Analysis for Various Profiles of Blast Wall Structure** Christian Wijaya[1], Byung-Tak Kim[2], Don-Kun Lee[3] [1]*Graduate School of Mechanical Design Engineering, PKNU, Busan 608-739, Korea* [2]*Faculty of Mechanical and Automotive Engineering, PKNU, Busan 608-739, Korea* [3]*JIBTech, Co., LTD, Gimhae, Korea*
09:40 ~ 10:00 L-03	**A Study on Signal Simulation and Experiment of St-cut Quartz SAW Delay-line Sensor Response** Ngoc-Bich Le and Yi-Chu Hsu[1] *Department of Mechatronics Engineering, Faculty of Mechanical Engineering, HCMUT, Vitenam* [1]*Dept. of Mech. Engineering, Southern Taiwan University*
10:00 ~ 10:20 L-05	**Frequency-Locked Loop with a Single Frequency-to-Voltage Converter** Byoung-Gil Kim and Hyek -Hwan Choi *Department of Electronics Engineering, PKNU, Republic of Korea*
10:20 ~ 10:40	Tea/Coffee Break
Chairman	Thanh-Phuong Nguyen and Wan-Young Chung
10:40 ~ 11:00 L-07	**An Efficient Cross-Range Scaling Algorithm for ISAR Images** Sang-Hong Park *Department of Electronic Engineering, Pukyong National University, Busan 608-737, Korea*
11:00 ~ 11:20 L-09	**Image Recognizing and Processing On Target Tracking Mobile Robot** Thanh-Tuyen Pham[1], Cao-Cuong Ngo, Dinh-Huy Tran and Thanh-Phuong Nguyen [1]*Application group, IC design research & education center (ICDREC), Viet Nam* *Mechanical - Electric – Electronics faculty, University of Technical Ho Chi Minh (HUTECH), Viet Nam*
11:20 ~ 11:40 L-11	**Bi-Directional Horizontal Disparity Visualization Using Stereoscopic Camera Rig** Rohit Ramesh, Heung-Sub Shin, Shin-Il Jeong and Wan-Young Chung ***Department of Electronics Engineering, PKNU, Busan 608-737, South Korea***
11:40 ~ 13:00	**Lunch Time**
Chairman	Dung-An Wang and Nam-Ho Kim
13:00 ~ 13:20 L-13	**Self-noise Suppressing Voltage Controlled Ring Oscillator** Young-Shig Choi *Department of Mechanical and Automotive Engineering, PKNU, Busan 608-739, Korea*
13:20 ~ 13:40 L-15	**An Electromagnetic Energy Harvester Based on Pressure Fluctuation in Kármán Vortex Street** Huy-Tuan Pham, Chun-Yuan Chiu and Dung-An Wang *Graduate Institute of Precision Eng., National Chung Hsing University, Taichung 40227, Taiwan*

13:40 ~ 14:00 L-17	**Impulse Noise Removal using Modified Nonlinear Filter** Gao Yinyu and Nam-Ho Kim *Department of Control & Instrumentation Engineering, PKNU, Republic of Korea*
14:00 ~ 14:20	Tea/Coffee Break
Chairman	Thien-Phuc Tran and Yeong-Yeun Hwang
14:20 ~ 14:40 L-19	**The Adaptive Fuzzy Controller for Robot** Minh-Thanh Nguyen[1], Ngoc-Lam Nguyen, and Thanh-Viet Cao [1]*Department of Industrial Automation, Hochiminh City University of Transport, Vietnam* *Vietnam Research Institute of Electronics, Informatics and Automation – VIELINA, Vietnam*
14:40 ~ 15:00 L-21	**A Ship Berthing Technique by Autonomous Tug Boats Control** Van-Phuoc Bui[1], Young-Bok Kim[2], Kyu-Il Han[2] and Kwon-Soon Lee[3] [1]*Department of Mechanical and Control Engineering, PKNU, Namgu, Busan, Korea* [2]*Department of Mechanical System Engineering, PKNU, Namgu, Busan, Korea* [3]*Department of Electronic Engineering, Dong-A University, Sahagu, Busan, Korea*

POSTER SECTION

09:20 ~ 15:00   (Maximum 06 pages of A4 size)

PS-01	**A Compensation Circuit for System-On-Chip** Jee-Youl Ryu and Seung-Hun Park *Department of Information and Communications Engineering, PKNU, Namgu, Busan, Korea*
PS-02	**A New Method for Improving PID Controller Performance using Dual-Input Describing Function (DIDF) Method** Yeon-Wook Choe *Department of Control & Meas. Engineering, PKNU, Busan, Korea*
PS-03	**A New Method to Control Image Quality** Jung-Hoon Lee and Jee-Youl Ryu *Department of Information and Communications Engineering, PKNU, Namgu, Busan, Korea*
PS-04	**A New Third-Order Cascaded Sigma-Delta Modulator** Sung-Woo Kim and Jee-Youl Ryu *Department of Information and Communications Engineering, PKNU, Namgu, Busan, Korea*
PS-05	**A Study on Inertial Effects to Flow Rate Spectrum of Diffuser Micropumps** Ngoc-Bich Le and Yi-Chu Hsu[1] *Department of Mechatronics Engineering, Faculty of Mechanical Engineering, HCMUT, Vitenam* [1]*Dept. of Mech. Engineering, Southern Taiwan University*
PS-06	**A Study on Load Cell Using Zig-Bee** J. I. Bae *Department of Electrical Engineering, Pukyong National University, Republic of Korea*
PS-07	**A Study on the Creep Deformation and Rupture Life of Mg-Nd-Zn-Zr Alloy** Dae-Min Kang, Kyoung-Do Park and Ji-Hee Park *Division of Mechanical Engineering, Pukyong National University, Busan 608-739, Korea*
PS-08	**Catching Algorithm for 2D Robot Manipulator** Duc-Hanh Le and Yi-Pin Chiu *Department of Mechanical Eng., National Taiwan University of Science and Technology, Taiwan*
PS-09	**Control for Parallel Parking of an Omni-Directional Driving Automatic Guided Vehicle** Seo-Kwang Kim, Jong-Hoon Shin , Hak-Kyeong Kim and Sang-Bong Kim *Department of Mechanical and Automotive Engineering, PKNU, Busan 608-739, Korea*
PS-10	**Control of the Automatic System for Ship Welding Applying FSW** (Friction Stir Welding) Thien-Phuc Tran, Trung-Chanh Nguyen Do, Quy-Duc Le and Sang-Bong Kim[1] *Faculty of Mechanical Eng., HCMUT, 268 Lythuongkiet St., Dist. 10, Hochiminh City, VietNam,* [1]*Department of Mechanical and Automotive Engineering, PKNU, Busan 608-739, Korea*
PS-11	**Development of Data Acquisition System for Consolidation Phase of Triaxial Test** Xuan Quoc Vo, Thach Le and Tan Tien Nguyen *Department of Mechatronics Engineering, Faculty of Mechanical Engineering, HCMUT, Vietnam*
PS-12	**Driving Algorithm for Inpipe Inspection Robot in Elbow Using Infrared Sensor** Chul Han Park, Dae Hwan Kim, Hak Kyeong Kim and Sang Bong Kim *Department of Mechanical and Automotive Engineering, PKNU, Busan 608-739, Korea*

PS-13	**Dual-Loop Phase·Delay Locked Loop** Tae-Ha Kwon and Young-Shig Choi *Department of Mechanical and Automotive Engineering, PKNU, Busan 608-739, Korea*
PS-14	**Fuzzy Logic Controller to Regulate pH/EC for Irrigation System in Greenhouse** Hoang Nguyen, Thanh-Tung Tran, Quoc-Dat Le, Duy-Anh Nguyen, and Tan-Tien Nguyen *Mechatronics Engineering Dept., Faculty of Mechanical Engineer, HCMUT, Vietnam*
PS-15	**Mode Estimation in Machining Process by Recursive Least Square Algorithm** Jong-do Kim and Moon-chul Yoon *Department of Mechanical and Automotive Engineering, PKNU, Busan, South Korea*
PS-16	**Modeling of the Average Current Mode Control** Young-Seok Jung and Marn-Go Kim[1] *Department of Mechanical and Automotive Engineering, PKNU, Busan, Korea* [1]*Department of Control and Instrumentation Engineering, PKNU, Busan, Korea*
PS-17	**Optimal Controller Design for Mobile Inverted Pendulum** Viet-Tuan Dinh, Giang-Hoang, Van-Giap Nguyen[1], Hak-Kyeong Kim and Sang-Bong Kim *Department of Mechanical and Automotive Engineering, PKNU, Busan 608-739, Korea* [1]*Faculty of Mechanical Engineering, HCMUT, Hochiminh, Vietnam*
PS-18	**Path Planning of the 3D Pipe Cutting Machine** Thien-Phuc Tran, Van-Long Han, Le-Quang Nguyen and Sang-Bong Kim[1] *Faculty of Mechanical Eng., HCMUT, 268 Lythuongkiet St., Dist. 10, Hochiminh City, VietNam,* [1]*Department of Mechanical and Automotive Engineering, PKNU, Busan 608-739, Korea*
PS-19	**Performance Analysis in a Liquid Nitrogen Cryostat** Eunpil Kim *Department of Refrigeration and Air-Conditioning Engineering, PKNU, Busan, Korea*
PS-20	**Soft-Switching Two-transistor Forward Converter with Minimum Capacitive Turn-on Loss** Marn-Go Kim and Young-Seok Jung[1] *Department of Control and Instrumentation Engineering, PKNU, Busan, Korea* [1]*Department of Mechanical and Automotive Engineering, PKNU, Busan, Korea*
PS-21	**Stabilization of Two-Wheeled Inverted Pendulum Using PID Controller** Dae-Hwan Kim, Hak-Kyeong Kim, Sang-Bong Kim and Young-Suk Jung *Department of Mechanical and Automotive Engineering, PKNU, Busan 608-739, Korea*
PS-22	**Stress Analysis of a Blast Wall with Connections** Jae-Kwon Baek, Christian Wijaya and Byung-Tak Kim[1] *Graduate School of Mechanical Design Engineering, PKNU, Busan 608-739, Korea* [1]*Faculty of Mechanical and Automotive Engineering, PKNU, Busan 608-739, Korea*
PS-23	**Study on Effectiveness Caused by Different Desiccant Flow Rate in a Dehumidification System** Kwang-hwan Choi *Department of Refrigeration and Air-conditioning Engineering, College of Mechanical Engineering, PKNU, South Korea*
PS-24	**Study on Seam Tracking Control for GMAW with Rotating Arc Sensor** Thanh Luan Nguyen, Duy Anh Nguyen, Thien Phuc Tran[1] and Tan Tien Nguyen *Department of Mechatronics Engineering, Faculty of Mechanical Engineering, HCMUT* [1]*Faculty of Mechanical Engineering, HCMUT, Vietnam*
PS-25	**Thermal Spreader Design for LED Lamp Using Vapor Champ Type Heat Pipe** Jong-Soo Kim, Jeong-Wan Jang, Soo-Jung Ha, Yong-Ha Kwon, Dong-Kwang Jeong and Ji-Won Yeo *Department of Refrigeration and Air-Conditioning Engineering, PKNU, Busan 608-739, Korea*
PS-26	**Damage Inspection For Wiper Blade Using Image Processing Techniques** Hoang Thai Son Nguyen[1], Duy Anh Nguyen[2] and Tan Tien Nguyen[3] [1]*Hi-Tech Mechatronics Lab., Faculty of Mechanical Engineer, Hochiminh City University of Technology, Hochiminh City, Vietnam* [2,3]*Mechatronics Engineering Dept., Faculty of Mechanical Engineer, Hochiminh City University of Technology, Hochiminh City, Vietnam*
PS-27	**An Improved Design for Driver's Seat Suspension** Thanh-Tung Luu HoChiMinh city University of Technology, HoChiMinh city, Vietnam