

International Conference on Electronics & Control

March 19, 2014

EC-SS1: High Performance Application in Mechatronics			
Chair: Panus Nattharith, Naresuan University			
Room: Venda 1, 15:20 – 17:40			
Time	Paper ID	Title	Authors
15:20-15:40	EC-INV0084	An Improvement of Multilateral Control Performance of A Teleoperated Robot Using Kalman-Filter-Based State Observer	Chowarit Mitsantisuk ¹ and Kiyoshi Ohishi ² , ¹ Kasetsart University, Thailand, ² Nagaoka University of Technology, Japan
15:40-16:00	0009	An indoor mobile robot development: A low-cost platform for robotics research	Mehmet Serdar Güzel ¹ and Panus Nattharith ² , ¹ Ankara University, Turkey, ² Naresuan University, Thailand
16:00-16:20	0044	Adaptive Control Performance of a Mobile Robot Using Hybrid of SLAM and Fuzzy Logic control in Indoor Environment	Anantachai Suwannakom, Naresuan University, Thailand
16:20-16:40	0098	Robot System for Rehabilitation of Wrist Using Bilateral Control Base on Disturbance Observer	Saran Jarudamrongsak ¹ , Chowarit Mitsantisuk ¹ , Pished Bunnun ² and Yasuharu Koike ³ , ¹ Kasetsart university, Thailand, ² Nectec, Nstda, Thailand, ³ Tokyo Institute of Technology, Japan
16:40-17:00	0122	Flash Flood Warning System using SCADA system: Laboratory Level	Khosak Achawakorn, Sripatum University, Thailand
17:00-17:20	0004	A New Technique for Distance Estimation using SIFT for mobile robots	Mehmet Serdar Güzel ¹ and Panus Nattharith ² , ¹ Ankara University, Turkey, ² Naresuan University, Thailand
17:20-17:40	0046	Controller Design for 2-d Discrete Linear Networked Systems	Guido Izuta, Yonezawa Women's College, Japan

March 20, 2014

EC-SS2: New Technique in Robust and Adaptive Control			
Chair: Piyapong Olanthichachat, Pibulsongkram University, Thailand			
Room: Cattleya 3, 8:20 – 10:40			
Time	Paper ID	Title	Authors
8:20-8:40	0105	Dominant pole-placement and extra conjugate-pole assignment with the PID controller	Wirote Sangtungtong ¹ , Soontaree Seangsri ¹ and Sarawut Sujitjorn ² , ¹ Suranaree University of Technology, Thailand, ² Synchrotron light research institute (Public organization), Thailand
8:40-9:00	EC-INV005	A Demonstration of Simplified-General- Perturbations-Based Orbit Determination on Thaichote Satellite	Manop Aorpimai, Mahanakorn University of Technology, Thailand
9:00-9:20	0144	Design of 4-Way Crossover Network by using Bernstein Polynomial	Kriangsak Hlurprasert, Paitoon Raklua, Norakamon Wongsin and Virote Pirajnanchai, Rajamangala University of Technology Thanyaburi, Thailand
9:20-0:40	0125	Implementation of AU Blancing Ball Bot (AUB ³)	Narong Aphiratsakun, Assumption University, Thailand
9:40-10:00	0164	Square-root Optimal Hankel Norm Approximation Technique for Order Reduction of Non-Minimal Systems	Deepak Kumar ¹ and S. K. Nagar ² , ¹ M. N. National Institute of Technology Allahabad, India, ² Indian Institute of Technology Varanasi, India
10:00-10:20	0166	Square-root Frequency Weighted balanced model reduction via singular perturbation approximation	Deepak Kumar ¹ and S. K. Nagar ² , ¹ M. N. National Institute of Technology Allahabad, India, ² Indian Institute of Technology Varanasi, India
10:20-10:40	EC-INV009	SWU-OFDB: A Database for Occluded Face Detection Research	Theekapun Charoenpong, Srinakharinwirot University, Thailand

EC1: Industrial Electronics and Automation			
Chair: Chaiwat Nuthong, King Mongkut's Institute of Technology Ladkrabang, Thailand			
Room: Venda 1, 13:30 – 15:10			
Time	Paper ID	Title	Authors
13:30-13:50	EC-INVX002	A High Sensitive Laser –EMAT Imaging System for Biomedical Applications	Siridech Boonsang ¹ and R.J. Dewhurst ² , ¹ King Mongkut's Institute of Technology Ladkrabang, Thailand, ² University of Manchester Institute of Science and Technology, UK
13:50-14:10	0019	Electronic Structure Calculation of GaSb/GaAs Quantum Dot	Suwit Kiravittaya ¹ , Maetee Kunrugs ² , Supachok Thainoi ² , Somchai Ratanathamphan ² and Somsak Panyakeow ² , ¹ Naresuan University, Thailand, ² Chulalongkorn University, Thailand
14:10-14:30	0057	Development of Power Line Communication Circuit for Solar Farm Monitoring	Wongsakorn Limsiri, Pairote Sirinamaratana and Ekachai Leelarasmee, Chulalongkorn University, Thailand
14.30-14.50	NX002	Operation of a Doubly-Fed Induction Generator Part 1: Smooth Start up Procedure	Phongsathorn Chusun and Warachart Suwan-ngam, King Mongkut's Institute of Technology Ladkrabang
14.50-15.10	NX003	Operation of a Doubly-Fed Induction Generator Part 2: Active and Reactive Power Control	Pruksapan Manawakul and Warachart Suwan-ngam, King Mongkut's Institute of Technology Ladkrabang

EC2: Embedded System and Mechatronics			
Chair: Siridech Boonsang, King Mongkut's Institute of Technology Ladkrabang, Thailand			
Room: Venda 1, 15:30 – 17:30			
Time	Paper ID	Title	Authors
15:30-15:50	0034	Dynamic Compensation and Control of a Bicycle Robot	Anan Suebsomran, King Mongkut's University of Technology North Bangkok, Thailand
15:50-16:10	0102	Harmonic Reduction in PWM AC/DC Converters using Genetic Algorithms	Monthol Fak-aim ¹ , Piyapon Oloranthichachat ¹ , Pairoj Piyarungsan ² and Sunya Phomprasit ³ , ¹ Pibulsongkram Rajabhat University, Thailand, ² Rajamangala University of Technology Lanna, Thailand, ³ Kamphaengphet Rajabhat University, Thailand
16:10-16:30	EC-INVX001	Survey of Social Robots in Thailand	Thavida Maneewarn, King Mongkut's University of Technology Thonburi, Thailand
16:30-16:50	0022	Multi-Feature Extraction for Optical Character Recognition in Thai Language	Natchanon Sukkhadamrongrak and Anakkapon Saenthon, King Mongkut's Institute of Technology Ladkrabang, Thailand
16:50-17:10	0014	Vision-Based Lane Departure Warning Systems: An Application on iOS Platform	Chitisan Subtechitmanee and Chaiwat Nuthong, King Mongkut's Institute of Technology Ladkrabang, Thailand
17:10-17:30	EC-INV003	Image Fusion Using Wavelet Transform for Slider Orientation Measurement	Chaiwat Nuthong, King Mongkut's Institute of Technology Ladkrabang, Thailand

March 21, 2014

EC-SS3: Digital Signal Processing Techniques for Industrial Application			
Chair: Anakkapon Saenthon, King Mongkut's Institute of Technology Ladkrabang, Thailand			
Room: Venda 1, 08:40 – 10:40			
Time	Paper ID	Title	Authors
8:40-9:00	0043	On the Fly Vision System for Air Bearing Surface Cardboard	Thanee Samsicharoenlap and Somyot Kaitwanidvilai, King Mongkut's Institute of Technology Ladkrabang, Thailand
9:00-9:20	0023	Performance Evaluation of Neural Network System for English and Thai Character Recognition	Natchanon Sukkhadamrongrak and Anakkapon Saenthon, King Mongkut's Institute of Technology Ladkrabang, Thailand
9:20-9:40	0094	Machine Vision System for Counting the Number of Corrugated Cardboard	Chatchi Suppitaksakul and Meena Rattanakorn, Rajamangala University of Technology Thanyaburi, Thailand
9:40-10:00	0024	Robust Edge Detection Design for HSA Missing Gasket Inspection using Particle Swarm Optimization	Thunyatip Vipasetharat and Somyot Kaitwanidvilai, King Mongkut's Institute of Technology Ladkrabang, Thailand
10:00-10:20	0113	An Online Hybrid Adaptive Force Controller using Particle Swarm Optimization and Impedance Control	Sarucha Yanyong and Somyot Kaitwanidvilai, King Mongkut's Institute of Technology Ladkrabang, Thailand
10:20-10:40	EC-INVX003	Real-Time Road Lane Detection with Commodity Hardware	Somchok Sakjiraphong ¹ , Andre Pinho ¹ , Matthew N. Dailey ¹ and Mongkol Ekpanyapong ¹ , ² Adriano Tavares, ¹ Asian Institute of Technology, Thailand, ² University of Minho, Portugal

EC3: OPTICs and VLSI			
Chair: Warachart Suwan-ngam, King Mongkut's Institute of Technology Ladkrabang, Thailand			
Room: Venda 1, 11:00 – 12:00			
Time	Paper ID	Title	Authors
11:00-11:20	EC-INVX004	Metamaterials, Transformation, Optics and Its Applications	Wanchai Pijitrojana and W. Amorntep, Thammasat University, Thailand
11:20-11:40	0109	Evaluations of Waved-Shift Registers for the Multiplexed Bus	Tomoaki Saro ¹ , Phichet Moungnoul ² , Sorawat Chivapreecha ² and Kohji Higuchi ³ , ¹ Hirosaki University, Japan, ² King Mongkut's Institute of Technology Ladkrabang, Thailand, ³ The University of Electro-Communications, Japan
11:40-12:00	NX001	A Rate Adaptive of Error Control Coding in MAC Layer for UWB WBAN	Wannarit Khattiya and Somsak Choomchuay, King Mongkut's Institute of Technology Ladkrabang, Thailand
12:20-12:40	0036	High-Even Order Fully-Differential Biquadratic Continuous-Time Low-Pass Gm-C Filter	Chaiyan Chanapromma ¹ , Amnaj Prajong ² and Suriya Adirek ² , Wanwisa Wattanasin ³ , ¹ Uttaradit Rajabhat University, Thailand, ² Nakhon Sawan Rajabhat University, Thailand, ³ Phetchaburi Rajabhat University, Thailand

EC4: Electronic Circuits and Applications			
Chair: Anakkapon Saenthon, King Mongkut's Institute of Technology Ladkrabang, Thailand			
Room: Venda 2, 11:00 – 12:00			
Time	Paper ID	Title	Authors
11:00-11:20	0065	0.75V Four-Quadrant Current Multiplier Using Floating Gate-MOS Transistors	Montree Kumngern, King Mongkut's Institute of Technology Ladkrabang, Thailand
11:20-11:40	0096	CFTA-Based Electroniccally Tunable Quadrature Sinusoidal Oscillator	Montree Kumngern, King Mongkut's Institute of Technology Ladkrabang, Thailand
11:40-12:00	0090	A Study of Energy Loss in LiFePO4 Battery-Balancing Schemes for Electric Vehicle Applications	Adisorn Amtip ¹ , Chaiwat Nuthong ¹ , Teera Phatrapornnant ² and Amaras Kaewpunya ² , ¹ King Mongkut's Institute of Technology Ladkrabang, Thailand, ² NECTEC, Thailand
12:00-12:20	0049	A Sinusoidal Oscillator Current-mode with Amplitude Controllability	Kritphon Phanrattanachai ¹ and Koson Pitaksuttayaprot ¹ , Winai Jaikla ² , ¹ Phetchabun rajabhat university, Thailand, ² King Mongkut's Institute of Technology Ladkrabang, Thailand