CIS-RAM 2013
11-13 November 2013, Manila, Philippine

Program at a Glance

11 Nov 2013 (Monday)	**14:00 - onwards**	**Registration**		
	18:00 - 21:00	**Welcome Reception and Cultural Show** **Henry Sy Hall, De La Salle University, Manila**		
12 Nov 2013 (Tuesday)	**08:30 - 10:00**	**Opening Ceremony**		
	10:00 - 10:30	*Tea Break*		
	10:30 - 12:30	**TuB1 (RAM)**	**TuB2 (CIS)**	
	12:30 - 14:15	*Lunch*		
	14:15 - 15:15	**Keynote Speech**		
	15:15 - 15:45	*Tea Break*		
	15:45 - 18:05	**TuC1 (RAM)**	**TuC2 (CIS)**	**TuC3 (RAM)**
	19:00 - 21: 00	**Banquet**		
13 Nov 2013 (Wednesday)	**08:30 - 10:10**	**WeA1 (RAM)**	**WeA2 (CIS)**	
	10:10 - 10:40	*Tea Break*		
	10:40 - 12:40	**WeB1 (RAM)**	**WeB2 (CIS)**	
	12:40 - 14:10	*Lunch*		
	14:10 - 15:10	**Keynote Speech**		
	15:10 - 15:40	*Tea Break*		
	15:40 - 18:00	**WeC1 (RAM)**	**WeC2 (RAM)**	**WeC3 (CIS)**
		Closing Ceremony and Farewell Party		

Opening ceremony

Master of Ceremonies: Laurence Gan Lim

07:15 AM	Registration	
08:30 - 10:00	Welcome Remarks	PROF. ELMER DADIOS, Ph.D. General Chair, HNICEM 2013 EXECOM Member – IEEE Region 10 Professor and University Fellow De La Salle University, Philippines DR. JOHN-JOHN CABIBIHAN General Chair, CIS 2013 Professor–Qatar University, Qatar PROF. MARCELO ANG, Ph.D. General Chair, RAM 2013 Program Chair, HNICEM 2013 Professor – National University of Singapore, Singapore
	Opening Remarks	BR. RICARDO LAGUDA, FSC President and Chancellor De La Salle University, Philippines
	Introduction of Keynote Speaker	PROF. RAYMOND GIRARD TAN, PhD. Keynote Speaker: Vice Chancellor for Research & Innovation Professor and University Fellow De La Salle University, Philippines
	Keynote Speech	DR. ROWENA CRISTINA GUEVARA Executive Director Philippine Council for Industry Department of Science and Technology, Philippines

TuB1: (RAM) Humanoid robot and human motion tracking
Venue:
Session Chair: Ho Seok Ahn
Session Co-chair:

10:40 - 11:00	TuB1.1	28	Real-Time Imitation Human Upper-body Movement With Joint And Self-collision Constraints	Chen Yihong and Chen Qijun
11:00 - 11:20	TuB1.2	31	Development of a Human-like Narrator Robot System in EXPO	Ho Seok Ahn
11:20 - 11:40	TuB1.3	40	Using vision and haptic sensing for human-humanoid haptic joint actions	Don Joven Agravante, Andrea Cherubini and Abderrahmane Kheddar
11:40 - 12:00	TuB1.4	46	Point-Cloud Multi-Contact Planning for Humanoids: Preliminary Results	Stanislas Brossette, Joris Vaillant, François Keith, Adrien Escande and Abderrahmane Kheddar
12:00 - 12:20	TuB1.5	51	Human Velocity Tracking and Localization Using 3 IMU Sensors	Qilong Yuan, I-Ming Chen and Albert Causo
12:20 - 12:40	TuB1.6	62	Novel Automatic Posture Detection for In-patient Care Using IMU Sensors	Vo Nhat Nguyen and Haoyong Yu

TuB2: (CIS) Robotic and Hybrid Systems
Venue:
Session Chair: Oliver Weede
Session Co-chair: Miaolong Yuan

10:40 - 11:00	TuB2.1	12	A Hardware-Accelerated Reduced Dimensionality Multi-Prototype Learning and Recognition System with Complementary Classifiers	Indra Bagus Wicaksono, Fengwei An and Hans Jürgen Mattausch
11:00 - 11:20	TuB2.2	22	An Intuitive and Efficient Switching Particle Filter for Real-time Vision-based Localization	Bo Tian, Chee-Meng Chew, Huajin Tang and Miaolong Yuan
11:20 - 11:40	TuB2.3	30	Knowledge-based Planning of Port Positions for Minimally Invasive Surgery	Oliver Weede, Josephin Wünscher, Hannes Kenngott, Beat Peter Müller-Stich and Heinz Wörn
11:40 - 12:00	TuB2.4	9	People Detection in Heavy Machines Applications	Manh-Tuan Bui, Vincent Fremont, Djamal Boukerroui and Pierrick Letort
12:00 - 12:20	TuB2.5	16	Moving Objects Detection and Credal Boosting Based Recognition in Urban Environments	Dingfu Zhou, Vincent Fremont and Benjamin Quost

TuC1: (RAM) Navigation and localization

Venue:
Session Chair: Simon Yang
Session Co-chair: Rajesh Elara Mohan

15:40 - 16:00	TuC1.1	9	Text Plates Detection and Recognition Techniques Used for an Autonomous Robot Navigating in Indoor Environments	Chin-Shyurng Fahn and Po-Hsun Chang
16:00 - 16:20	TuC1.2	12	Gray-dynamic EKF for Mobile Robot SLAM in Indoor Environment	Peng Wang, Qibin Zhang and Zonghai Chen
16:20 - 16:40	TuC1.3	21	Dynamic Maneuverability Through Voluntary Morphosis in a Four-Legged Robot	Farrukh Iqbal Sheikh and Syed Shams-Ul-Haq
16:40 - 17:00	TuC1.4	23	Post Identification and Location Derivation in Vineyards through Point Clouds using Cylinder Extraction and Density Clustering	Di Gao, Tien-Fu Lu and Steven Grainger
17:00 - 17:20	TuC1.5	30	Autonomous Car in Path Following Control under Side Wind Effect by Laguerre Function	Fitri Yakub and Yasuchika Mori
17:20 - 17:40	TuC1.6	41	An IPPSO Approach for Cooperative Foraging Tasks of Multi-robots in Unknown Environments	Yifan Cai, Simon Yang and Gauri Mittal
17:40 - 18:00	TuC1.7	17	Robot Inclusive Space Challenge: A Design Initiative	Rajesh Elara Mohan, Nicolas Rojas, Ricardo Sosa and John Kaisner

TuC2: (CIS) Scheduling, Intelligent Manufacturing and Complex Systems

Venue:
Session Chair: Prospero Naval
Session Co-chair: Bhuvaneswari Ramachandran

15:40 - 16:00	TuC2.1	26	Permutation Flow Shop Scheduling with Dynamic Job Order Arrival	Humyun Fuad Rahman, Ruhul Sarker and Daryl Essam
16:00 - 16:20	TuC2.2	36	Economic Scheduling in Smart Grid with Nondispatchable and Dispatchable loads	Bhuvaneswari Ramachandran and David Cartes
16:20 - 16:40	TuC2.3	13	Stabilization of Decentralized Networked Complex Systems with Multiple-Packet Transmission	Lubomir Bakule, Martin Papik and Branislav Rehak
16:40 - 17:00	TuC2.4	37	Estimation of Ionic Contamination in Printed Circuit Boards from Shape and Color Features of Dendritic Patterns	Helen Villanueva, Manolo Mena and Prospero Naval

TuC3: (RAM) Robotic mechanisms and design

Venue:
Session Chair: Eugen Meister
Session Co-chair:

15:40 - 16:00	TuC3.1	2	The driving mechanism research of Six unit soft robots	He Jun, Xu Linsen and Song Xiaobo
16:00 - 16:20	TuC3.2	25	Investigation into the Force Distribution Mechanism of a Soft Robot Gripper Modeled for Picking Complex Objects Using Embedded Shape Memory Alloy Actuators	Michael .O. Obaji and Zhang Shiwu
16:20 - 16:40	TuC3.3	34	Automatic Onboard and Online Modelling of Modular and Self-Reconfigurables Robots	Eugen Meister, Eugen Nosov and Paul Levi
16:40 - 17:00	TuC3.4	45	Active Wheel - An Autonomous Modular Robot	Sergej Popesku, Eugen Meister and Florian Schlachter
17:00 - 17:20	TuC3.5	63	An Improved Parameterized Approach for Real Time Optimal Motion Planning of AUV Moving in Dynamic Environment	Wenhao Luo, Jun Peng and Jing Wang

WeA1: (RAM) Mobile robot and motion planning

Venue:
Session Chair: Marcelo Ang
Session Co-chair: Byunhoon Seo

08:30 – 08:50	WeA1.1	8	Novel robotic platform for stable stair climbing by flipping locomotion	Byunghoon Seo, Hyungyu Kim, Minhyeok Kim, Yanheng Liu, Taewon Seo and Kyungmin Jeong
08:50 – 09:10	WeA1.2	37	A Unified Optimization Method for Real-Time Trajectory Generation of Mobile Robots with Kinodynamic Constraints in Dynamic Environment	Wenhao Luo, Jun Peng, Weirong Liu, Jing Wang and Wentao Yu
09:10 – 09:30	WeA1.3	44	Metric Mapping and Topo-metric Graph Learning of Urban Road	Baoxing Qin, Zhuang Jie Chong, Tirthankar

09:30 – 09:50	**WeA1.4**	47	Performance Evaluation of a Network Flow Based Algorithm for Multi Robots Coordinated Motion Planning	Nasr Mohamed and Ashraf Elnagar
09:50 – 10:10	**WeA1.5**	52	Motion Planning using Cooperative Perception on Urban Road	Wei Liu, Seong-Woo Kim, Zhuang Jie Chong, Xiaotong Shen and Marcelo H. Ang Jr.

(above row preceded by: Network — Bandyopadhyay and Marcelo H. Jr. Ang)

WeA2: (CIS) Dynamic System Modeling and Intelligent Control
Venue:
Session Chair: Branislav Rehak
Session Co-chair: Nguyen Huu Cong

08:30 – 08:50	**WeA2.1**	14	Observer design for a polynomial system with time delays via sum-of-squares	Branislav Rehak
08:50 – 09:10	**WeA2.2**	25	Researching model order reduction based on Schur analysis	Nguyen Huu Cong, Vũ Ngọc Kiên, Dao Huy Du and Bui Trung Thanh
09:10 – 09:30	**WeA2.3**	28	Adaptive Optimal Control for Linear Discrete Time-Varying Systems	Shuzhi Sam Ge, Chen Wang, Yanan Li, Tong Heng Lee and Marcelo Ang
09:30 – 09:50	**WeA2.4**	39	Issues in Balancing Control of Lateral-Pendulum Unicycle by Separate Regulations of Its Longitudinal and Lateral Modes	Yohanes Daud, Abdullah Al Mamun and Jian-Xin Xu
09:50 – 10:10	**WeA2.5**	19	TransELM: Online Sequential ELM based Transfer Learning for Transportation Mode Recognition	Yiqiang Chen and Zhiqi Shen

WeB1: (RAM) Robot control and programming

Venue:
Session Chair: Bruce MacDonald
Session Co-chair: Mitsuru Kanamori

10:40 - 11:00	WeB1.1	3	Experimental Study of Anti-windup Adaptive Tracking Control for Euler-Lagrange systems with Actuator Saturation	Mitsuru Kanamori
11:00 - 11:20	WeB1.2	32	Rollover Prevention with Predictive Control of Differential Braking and Rear Wheel Steering	Lee Shihao, Yakub Fitri and Mori Yasuchika
11:20 - 11:40	WeB1.3	42	An Efficient Programming Framework for Socially Assistive Robots based on Separation of Robot Behavior Description from Execution	Chandimal Jayawardena, I-Han Kuo and Bruce MacDonald
11:40 - 12:00	WeB1.4	49	Software platform design for personal service robots in healthcare	Chandan Datta, Hong Yul Yang, I-Han Kuo, Elizabeth Broadbent and Bruce MacDonald
12:00 - 12:20	WeB1.5	61	Properties of Lateral-Pendulum-Controlled Unicycle Robot in States of Balance and Motion	Yohanes Daud, Abdullah Al Mamun and Jian-Xin Xu
12:20 - 12:40	WeB1.6	64	Optimal Placement and Sizing of Distributed Generation in Distribution Power System Based on Multi-Objective Harmony Search Algorithm	Yuan Liu, Yunhua Li, Ke-Yan Liu and Wanxing Sheng

WeB2: (CIS) Human-Machine and Multi-Agent Systems

Venue:
Session Chair: John-John Cabibihan Cabibihan
Session Co-chair: Miaolong Yuan

10:40 - 11:00	WeB2.1	5	Detecting Injection Attacks in Linear Time Invariant Systems	Peter Loh, Giedre Sabaliauskaite and Aditya Mathur
11:00 - 11:20	WeB2.2	27	A Prototype of Digital Illuminance Sensor for The Distributed Control Lighting System	Mitsunori Miki, Yo Motoya, Kenta Yoshida, Yuya Hirano and Hiroto Aida
11:20 - 11:40	WeB2.3	32	Tactile Sensing in an Object Passing Task	John-John Cabibihan Cabibihan, Kam Wai Wu and Amudharasi Ramalingam
11:40 - 12:00	WeB2.4	29	Decentralized Formation Flocking for Multiple Non-Holonomic Agents	Yongnan Jia and Long Wang
12:00 - 12:20	WeB2.5	38	A Multi-Agent Framework for Voltage Regulation Control in Distribution Systems	Sumith Madampath Sreechithra and Panida Jirutitijaroen

WeC1: (RAM) Human-robot interaction

Venue:
Session Chair: Hongliang Ren
Session Co-chair: D K Limbu

15:40 - 16:00	WeC1.1	19	Hybrid Dynamic Model for Haptic Systems with Planar Mechanisms	Csaba Antonya
16:00 - 16:20	WeC1.2	43	Affective Social Interaction with CuDDler Robot	D K Limbu, C Y Anthony Wong, H J Adrian Tay, T A Dung, Y K Tan, H D Tran, H Y Alvin Wong, W Z Terence Ng, R D Jiang and J Li
16:20 - 16:40	WeC1.3	50	On the robustness of tiny decoding graphs for voice-based robotic interaction	Abdelaziz A. Abdelhamid, Waleed H. Abdulla and Bruce A. MacDonald
16:40 - 17:00	WeC1.4	59	Ablation Planning Based on Genetic Algiorithm in Computer-Assisted Interventions	Hongliang Ren
17:00 - 17:20	WeC1.5	33	Simulation tool for 3D shape sensors based on Fiber Bragg gratings and optimization of measurement points	Christoph Ledermann,Hendrikje Pauer, Oliver Weede and Heinz Woern
17:20 - 17:40	WeC1.6	10	Robotic object grasping in context of human grasping and manipulation	Pavel Dzitac and Abdul Md Mazid
17:40 - 18:00	WeC1.7	16	Tailoring the Ratios Between Eigenfrequencies of Tapping Mode Atomic Force Microscope Probe Using Concentrated Masses	Jiandong Cai, Michael Yu Wang and Qi Xia

WeC2: (RAM) Visual servo and applications

Venue:
Session Chair: Shaohui Foong
Session Co-chair: Albert Causo

15:40 - 16:00	WeC2.1	22	New Scheme for Image Space Path Planning Incorporating CAD Based Recognition Methods for Visual Servoing	Zahra Ziaei, Reza Oftadeh and Jouni Mattila
16:00 - 16:20	WeC2.2	48	Position-Based Visual Servoing for Pallet Picking by an Articulated-frame-steering Hydraulic Mobile Machine	M M. Aref, R Ghabcheloo, A Kolu, M Hyvönen, K Huhtala and J Mattila
16:20 - 16:40	WeC2.3	53	3D Point Cloud Segmentation: A survey	Anh Nguyen and Bac Le
16:40 - 17:00	WeC2.4	56	Designing a Socially Assistive Companion Robotic Wheel Chair: RoboChair	C Jayawardena, N Baghaei, K Ganeshan and A Sarrafzadeh
17:00 - 17:20	WeC2.5	65	Determination of Temporal Window Size for Classifying the Mean Value of fNIRS Signals from Motor Imagery	Noman Naseer and Keum-Shik Hong
17:20 - 7:40	WeC2.6	6	Non-contact Parametric Estimation and Localization of Human Head for Transcranial Magnetic Stimulation (TMS)	Y Srinivasa, S H Foong, D Madhavan, U-Xuan Tan, L Hu, X Fu and Y L Lo

WeC3: (CIS) Computational Intelligence and Applications

Venue:
Session Chair: Ryszard S. Choras
Session Co-chair: Miaolong Yuan

15:40 - 16:00	WeC3.1	7	Facial feature detection for face authentication	Ryszard S. Choras
16:00 - 16:20	WeC3.2	23	Heuristic Modelling of Outdoor Path Loss for 9m, 3m and 1.5m Antenna at 677 MHz	Jennifer Dela Cruz and Felicito Caluyo
16:20 - 16:40	WeC3.3	31	Evolutionary Optimization of Meta Data Metric for Method Recommendation	Roman Neruda, Ondrej Kazik, Jakub Šmíd and Klara Peskova
16:40 - 17:00	WeC3.4	20	Continuous Attractors and Population Decoding Multiple-peaked Activity	Jiali Yu, Miaolong Yuan and Huajin Tang
17:00 - 17:20	WeC3.5	21	A hippocampus CA3 spiking neural network model for storage and retrieval of sequential memory	Chin Hiong Tan, Huajin Tang, Kay Chen Tan and Miaolong Yuan