

INNS-WC 2012 Technical Program (tentative – as of 17/09/2012)

Tuesday, October 2, 2012 – Pre-Conference Workshops at Thailand Science Park (for those who pre-registered and prepaid for these workshops) – in conjunction with InCoB2012

- 07:30 – 8:30 Transfer from Centara Grand at Central Plaza Ladprao Bangkok to Sirindhorn Science Home, Thailand Science Park, Pathumthani
- 08:30 – 9:00 *Registration* [Foyer, Sirindhorn Science Home]
- 09:00 – 12:00 **Workshop I** [Lecture 1, Sirindhorn Science Home]
Bairong Shen (Director, Center for Systems Biology, Soochow University, China),
Systems biology with R
- 09:00 – 12:00 **Workshop II** [Lecture 2, Sirindhorn Science Home]
Hon Wai Leong (Department of Computer Science, National University of Singapore, Singapore),
Sriganesh Srihari (Department of Computer Science, National University of Singapore, Singapore),
Computational methods for detecting protein complexes from whole-genome PPI networks
- 09:00 – 12:00 **Workshop III** [Auditorium, Sirindhorn Science Home]
Gaurav Chopra (Department of Microbiology, University of Washington, USA),
Atomic modeling of complex biological systems
- 12:00 – 13:00 Lunch at canteen
- 13:00 – 14:00 Transfer to Centara Grand at Central Plaza Ladprao Bangkok
(for those not attending the afternoon session)
- 13:00 – 16:00 **Workshop IV** [Auditorium, Sirindhorn Science Home]
Yang Cheng (Roche Diagnostics, China),
Whole genome sequencing data analysis (using Roche 454 GS data analysis software)
- 16:00 – 17:00 Transfer to Centara Grand at Central Plaza Ladprao Bangkok

Wednesday, October 3, 2012

- 08:15 – 15:30 *Registration* [Ballroom Foyer, Centara Grand]
- 09:00 – 9:30 **Opening Ceremony and Welcome Speeches** [Ballroom B, Centara Grand]
Dr. Sakarindr Bhumiratana/ Dr. Shoba Ranganathan/ Dr. Thaweesak Koanantakool
- 09:30 – 10:15 **Keynote Talk 1** [Ballroom B, Centara Grand]
Jurg Ott (Professor Emeritus, Rockefeller University, New York, USA), *Statistical approaches to testing and estimating the number of functional variants in complex disease*
Chair by Prasit Palittapongarnpim
- 10:15 – 10:45 Coffee Break
- 10:45 – 11:30 **Keynote Talk 2** [Ballroom B, Centara Grand]
Tatsuhiko Tsunoda (Director, Research Group for Medical Informatics, RIKEN Center for Genomic Medicine, Japan), *Genomic medicine's milestones and future*
Chair by Sissades Tongsim
- 11:30 – 12:00 Asia Pacific Bioinformatics Network (APBioNet) 2012 report [Ballroom B, Centara Grand]
- 12:00 – 12:15 Corporate presentation 1 [Ballroom B, Centara Grand]
Yang Cheng, Roche
Whole genome sequencing data analysis
- 12:15 – 13:15 Lunch [Ballroom A, Centara Grand]
- 13:15 – 14:00 **INNS Keynote Talk 1** [Rungsit 1, Centara Grand]
Fredric Ham (Professor, Florida Institute of Technology, USA),
A neurocomputing approach for monitoring plinian volcanic eruptions and other natural phenomena using infrasound
Chair by Irwin King
- 14:00 – 14:45 **INNS Keynote Talk 2** [Rungsit 1, Centara Grand]
Irwin King (Professor, Chinese University of Hong Kong, China),
Social computing in the e-era
Chair by Fredric Ham
- 14:45 – 15:45 **Technical Session: INNS-WC1**
- INNS-WC1: Trends in Natural and Machine Intelligence** [Rungsit 1, Centara Grand]
Chair by Fredric Ham
- 14:45 – 15:05 Stimuli Localization: An Integration Methodology Inspired by the Superior Colliculus for Audio and Visual Attention
Kiran Ravulakollu, Jindong Liu and Kevin Burn

- 15:05 – 15:25 Self-Regulating Action Exploration in Reinforcement Learning
Teck-Hou Teng, Ah-Hwee Tan and Yuan-Sin Tan
- 15:25 – 15:45 Controlling Generative Processes of Generative Art
Somnuk Phon-Amnuaisuk and Jirapat Panjapornpon
- 15:45 – 16:00 Coffee Break
- 16:00 – 17:00 **Technical Session: INNS-WC2**
INNS-WC2: INNS Symposium on Data Analytics and Competitions [Rungsit 1, Centara Grand]
Chair by Irwin King
- 16:00 – 16:20 Temporal data mining and visualization for treatment outcome prediction in HIV patients
Wipada Chanthaweethip and Sumanta Guha
- 16:20 – 16:40 Post-Modern Portfolio Theory for Information Retrieval
Ming-Feng Tsai and Chuan-Ju Wang
- 16:40 – 17:00 Factors affecting students intention to choose IT program
Sunisa Sathapornvajana and Bunthit Watanapa
- 17:00 – 18:15 **Technical Session: INNS-WC3**
INNS-WC3: Posters Session [Ballroom Foyer, Centara Grand]
- A Framework of Multi-Stage Classifier for Identifying Criminal Law Sentences
Sotarat Thammaboosadee, Bunthit Watanapa and Nipon Charoenkitkarn
 - Robustness Test of Genetic Algorithm on Generating Rules for Currency Trading
Shangkun Deng, Yizhou Sun and Akito Sakurai
 - Source Identification of Traffic-Related Ultrafine Particles Data Mining Contest
Kelly Sabaliauskas, Greg Evans and Cheol-Heon Jeong
 - A set of criteria for face detection preprocessing
Hossein Ziaei Nafchi and Seyed Morteza Ayatollahi
 - A Hybrid Approach to Localize Farsi Text in Natural Scene Images
Maryam Darab and Mohamad Rahmati
 - Upper body tracking using KLT and Kalman filter
Pouya Bagherpour, Seyed Ali Cheraghi and Musa Bin Mohd Mokji

Thursday, October 4, 2012

- 08:15 – 15:30 *Registration* [Ballroom Foyer, Centara Grand]
- 09:00 – 09:45 **Keynote Talk 3** [Ballroom B, Centara Grand]
Yongyuth Yuthavong (Professor Emeritus, Mahidol University, Thailand), *Bioinformatics within and beyond biology*
Chair by Suthat Fucharoen
- 09:45 – 10:15 **Plenary Talk 1** [Ballroom B, Centara Grand]
Ram Samudrala (Professor, University of Washington, Seattle, USA), *Computational analysis of novel drug opportunities (CANDO)*
Chair by Wasun Chantratita
- 10:15 – 10:45 Coffee Break
- 10:45 – 11:15 **Plenary Talk 2** [Ballroom B, Centara Grand]
Yutaka Yasui (University of Alberta, Canada), *Epistasis exploration as a key element in GWAS data analysis*
Chair by Wasun Chantratita
- 11:15 – 11:45 **Plenary Talk 3** [Ballroom B, Centara Grand]
Richard Wintle (Assistant Director, The Centre for Applied Genomics, Sick Children Hospital, Canada), *Old disorders, new approaches: genomic variability in autism spectrum disorder*
Chair by Jonathan Chan
- 11:45 – 12:15 Corporate presentation 2 [Ballroom B, Centara Grand]
Robert Fassett, Oracle
Addressing big data challenges to accelerate personalized medicine initiatives
- 12:15 – 13:15 Lunch [Ballroom A, Centara Grand]
- 13:30 – 15:40 **Technical Session: INNS-WC4**
INNS-WC4: INNS Symposium on Vision and Image Processing [Rungsit 1, Centara Grand]
Chair by Chee Seng Chan
- 13:30 – 13:50 Bounding Box Object Localization Based On Image Superpixelization
Mostafa Ibrahim, Amr Badr, Mostafa Reda and Ibrahim Farag
- 13:50 – 14:10 A Novel Shape Descriptor for Rectangle-like Classification
Rungkarn Siricharoenchai, Wasin Sinthupinyo and Treepop Sunpetchniyom

- 14:10 – 14:30 3D motion trajectory analysis approach to improve Sign Language 3D-based content recognition
Mehrez Boulares and Mohamed Jemni
- 14:30 – 14:50 Firearm Classification Based on Numerical Features of the Firing Pin Impression
Choong-Yeun Liong, Nor Azura Md Ghani, Saadi Bin Ahmad Kamaruddin and Abdul Aziz Jemain
- 14:50 – 15:10 Irregular Rotation Deformation from Paper Scanning: An investigation
Mohammad Faizul Nasrudin, Omar Wahdan and Khairuddin Omar
- 15:10 – 15:30 A Folded Neural Network Autoencoder for Dimensionality Reduction
Jing Wang, Haibo He and Danil Prokhorov
- 15:40 – 16:00 Coffee Break
- 16:00 – 17:00 **Technical Session: INNS-WC5**
INNS-WC5: INNS Symposium on Women in Science and Engineering [Rungsit 1, Centara Grand]
Chair by TBA
TBA
TBA
- 17:00 – 18:00 **Technical Session: INNS-WC6 & CSBio6**
INNS-WC6: Demonstrations and Competitions [Rungsit 1, Centara Grand]
Chair by Jonathan Chan
- 17:10 – 17:55 Gustavo Stolovitzky – via videoconferencing
(Manager, Functional Genomics and Systems Biology, IBM Computational Biology Center)
IMPROVER diagnostic signature challenge and results + DREAM
- 18:00 – 20:30 Conference dinner [Ballroom A, Centara Grand]

Friday, October 5, 2012 – venue at School of Information Technology (SIT), King Mongkut's University of Technology Thonburi (KMUTT)

- 07:30 – 08:30 Transfer from Centara Grand to SIT, KMUTT
- 08:30 – 09:00 *Registration* [Foyer, 1st Fl. SIT Building]
- 09:00 – 12:00 **Technical Session: INNS-WC6 – (via video conferencing)**
INNS-WC6: INNS Symposium on Autonomous Learning 1 [4th Fl. SIT Building]
Chair by Asim Roy
- 09:00 – 09:30 Detecting and Preventing Error Propagation via Competitive Learning
Thiago Silva and Liang Zhao
- 09:30 – 10:00 Autonomous learning is facilitated by knowing when to quit
Thomas Shultz and Eric Doty
- 10:00 – 10:30 Autonomous learning in cognitive architectures
Sebastien Helie and Ron Sun
- 10:30 – 11:00 An Autonomous Distal Reward Learning Architecture for Embodied Agents
Shawn Taylor, Michael Healy and Thomas Caudell
- 11:00 – 11:30 An overview of what NSF wants for autonomous learning
Asim Roy
- 11:30 – 12:30 Lunch [4th Fl. SIT Building] + tour of SIT/KMUTT
- 12:30 – 16:00 **Technical Session: INNS-WC7 – (via video conferencing)**
INNS-WC7: INNS Symposium on Autonomous Learning 2 [4th Fl. SIT Building]
Chair by Bruno Apolloni
- 12:30 – 13:00 On-line Spatio- and Spectro-Temporal Pattern Recognition with Evolving Spiking Neural Networks utilising Integrated Rank Order- and Spike-Time Learning
Nikola Kasabov, Kshitij Dhoble, Nuttapod Nuntalid and Giacomo Indiveri
- 13:00 – 13:30 Autonomous Reinforcement Learning with Experience Replay for Humanoid Gait Optimization
Pawel Wawrzynski
- 13:30 – 14:00 How a population-based representation of binocular visual signal can intrinsically mediate autonomous learning of vergence control
Agostino Gibaldi, Andrea Canessa, Manuela Chessa, Fabio Solari and Silvio Paolo Sabatini
- 14:00 – 14:30 Autonomous exploration for navigating in MDPs
Shiau Hong Lim and Peter Auer
- 14:30 – 15:00 A network of walking neurons
Bruno Apolloni
- 15:00 – 15:30 Developmental mechanisms for autonomous life-long learning in robots

15:30 – 16:00 *Pierre-Yves Oudeyer*
Embodied learning with the humanoid robot iCub
Angelo Cangelosi
16:10 – 17:30 Transfer from SIT, KMUTT to Centara Grand