Technical Program

Time	Morakot 1	Morakot 2	Palin	Petch	Petch Palin	Ploy	Tup Tim
Wednesday, September 4							
09:00	T1.1: *How to write a good research journal paper?*	T2.1: *Introduction to HPC with Intel Xeon Phi™ Coprocessor*					
13:00	T1.2: *OpenStack Cloud and Fault Tolerance*	T2.2: *Getting to know programming with MapReduce*					
Thursday, September 5							
09:30					K1: *Data Fusion for 3D Urban Scene Modeling and Understanding*		
10:15						WS-Key: *Keynote for WS- ontology: Ontological Engineering for Big Data*	
10:30					K2: *Introduction to big data technology, big data revolution in healthcare, and big data analytic for retail.*		
11:15							
11:30			PAR1: *Parallel/Distributed Computing*	IT1: *Information Technology*		WS1: *WS-Ontology*	THA2: *Workshop and Algorithms*
13:00							
13:30			PAR2: *Parallel/ Distributed Computing & Network*	IT2: *Information Technnology*		P1: *CSE Education : Teaching sustainable knowledge*	THA1: *Thai Track1 (Ontology and IT)*
15:00			COM1: *Computational*	DM1: *Data Mining, Knowledge*			THA3: *Artificial*

	Theory	*Management and Analytics*			*Intelligence*

Friday, September 6

09:00			K3: *Big Data - Top 5 practical uses cases of Big Data*		
09:50			K4: *Connecting BigData with Business Analytics*		
11:00	COM2: *Computational Intelligence*	MUL1: *Multimedia*		NET1: *Computer Network*	THA4: *Network & Security*
13:30	COM3: *Computational Intelligence*	MUL2: *Multimedia*		NET2: *Computer Network*	THA5: *Image Processing*
15:00	COM4: *Computational Intelligence*	MUL3: *Multimedia*		NET3: *Computer Network*	THA6: *Software Engineering*

Wednesday, September 4

09:00 - 12:00

T1.1: How to write a good research journal paper?

Prof. Chidchanok Lursinsap

Room: Morakot 1
Chair: Chantana Chantrapornchai (Silpakorn University, Thailand)

T2.1: Introduction to HPC with Intel Xeon Phi™ Coprocessor

Asst. Prof. Dr. Putchong Uthayopas, Kasetsart University

Room: Morakot 2
Chair: Rachadaporn Kanawong (Silpakorn University, Thailand)

Parallel computing is one of the key technologies that can be employed to accelerate a large scale application in science and engineering. The new emerging manycore technology can bring an extremely high performance at the level closed to one Teraflop to a single computer. This talk will present the architecture concept of the new Intel Xeon Phi processor and introduce tools and technique that can be used to develop a compute intensive application on this platform. These include topics such as native compilation, off load compilation, some optimization. Currently, the Intel Manycore remote testing lab is successfully deployed in Kasetsart University. This Xeon-Phi remote testing access lab will be used to demonstrate the programming concept. The participant will gain some basic knowledge on how to use the manycore coprocessor to speed up their advanced HPC applications.

13:00 - 16:00

T1.2: OpenStack Cloud and Fault Tolerance

Dr. Kasidit Chanchio, Thammasat University

Room: Morakot 1
Chair: Pinyo Taeprasartsit (Silpakorn, Thailand)

This tutorial aims to give an introduction to OpenStack and demonstrate how to use the software. OpenStack is an Open Source IaaS Cloud management software that has received a lot of attentions recently. The software has a large user-base and has been deployed by many companies to build private and public cloud around the world. The tutorial will have two parts. The first part will discuss its history, the overall architecture, and its key components such as keystone, nova, glance, and quantum. In the Second part, we will give a demo showing how to use OpenStack to create and use Virtual Machines and networks.

T2.2: Getting to know programming with MapReduce

Walisa Romsaiyud, Siam University

Room: Morakot 2
Chair: Rachadaporn Kanawong (Silpakorn University, Thailand)

In a world of rapidly increasing storage requirements, the need for storage systems of massive size and high performance is emerging. Distributed storage systems provide a way to store enormous amounts of data, while allowing incremental upgrades to improve system performance and storage capacity such as processing documents on a cluster of commodity machines or deployed and run through cloud systems. Furthermore, Data-intensive computing that process large volumes of data typically terabyte (1012) or petabyte (1015) or exabyte (1018) and so on in size is a challenge in terms of their processing time to I/O and manipulation of data.

MapReduce is a simple and powerful programming model that enables easy development of scalable parallel applications to process vast amounts of data on a large cluster of commodity machines. With large clusters of machines, it becomes important to have a simple monitoring framework that provides a visual indication of how the cluster is and has been performing.

In this session, we present the Hadoop MapReduce, the Architecture of Hadoop Distributed File System, an example of MapReduce, the Development of a MapReduce application using Java, data analysis with Hadoop MapReduce and a case study on MapReduce applications.

Thursday, September 5

09:30 - 10:15

K1: Data Fusion for 3D Urban Scene Modeling and Understanding

Assoc. Prof Ye Duan, University of Missouri at Columbia, USA

Room: Petch Palin

In this talk we will present our recent work in 3D urban scene modeling and understanding by fusion of large scale multi-modality data such as airborne and terrestrial LIDAR, airborne and ground based video and images with a focus on 3D reconstruction, 3D segmentation, and 3D compression. We will also discuss our recent work in virtual navigation of the interior spaces of urban structures, rock geo-mechanics analysis for highway safety, etc.

10:15 - 11:15

WS-Key: Keynote for WS- ontology: Ontological Engineering for Big Data

Dr.Kouji Kozaki, Associate Professor, Osaka University

Room: Ploy
Chair: Marut Buranarach (National Electronics and Computer Technology Center (NECTEC), Thailand)

For efficient and innovative use of big data, it is important to integrate multiple data bases across domains. For example, various public data bases are developed in life science, and how to find a novel scientific result using them is an essential technique. In social and business areas, open data strategies in many countries promote diversity of public data, how to combine big data and open data is a big challenge. That is, diversity of dataset is a problem to be solved for big data.
Ontology gives a systematized knowledge to integrate multiple datasets across domains with semantics of them. Linked Data also provides techniques to interlink datasets based on semantic web technologies. We consider that combinations of ontology and Linked Data based on ontological engineering can contribute to solution of diversity problem in big data.
In this talk, I discuss how ontological engineering could be applied to big data with some trial examples.
I also give a brief introductions on the current state of Linked Open Data (LOD) activities.

10:30 - 12:00

K2: Introduction to big data technology, big data revolution in healthcare, and big data analytic for retail.

Mr. Suchai Yenruedee, Senior Director of Channel Business Division, A-Host (IBM Partner)

Room: Petch Palin
Chair: Rachadaporn Kanawong (Silpakorn University, Thailand)

11:15 - 12:30

WS1: WS-Ontology

Room: Ploy
Chair: Thepchai Supnithi (NECTEC, Thailand)

11:15 ***A Review and Comparison of Rule Languages and Rule-based Inference Engines for the Semantic Web***
Thanyalak Rattanasawad (Khon Kaen University, Thailand); Kanda SaiKeaw (Khon Kaen University, Thailand); Marut Buranarach

(National Electronics and Computer Technology Center (NECTEC), Thailand); Thepchai Supnithi (NECTEC, Thailand)
pp. 19-24

11:30 ***Ontology Development for SMEs E-commerce Website Based on Content Analysis and Its Recommendation System***
Pagon Gatchalee (Beihang University, Thailand); Thepchai Supnithi (NECTEC, Thailand); Zhoujun Li (Beihang University, P.R. China)
pp. 25-30

11:45 ***Large RDF Representation Framework for GPUs Case Study Key-Value Storage and Binary Triple Pattern***
Chantana Chantrapornchai (Silpakorn University, Thailand); Chidchanok Choksuchat (Department of Computing, Faculty of Science, Silpakorn University, Thailand)
pp. 31-36

12:00 ***Semantically Enabled Academic Paper Sharing Used in a Seminar Course***
Siraya Sitthisarn (Thaksin University, Thailand); Kamoltip Rattanabundan (Faculty of Science, Thaksin University, Thailand)
pp. 37-42

12:15 ***Extracting Semantic Metadata for Effective Spreadsheet Search***
Somchai Chatvichienchai (University of Nagasaki, Siebold Campus & Faculty of Global Communication, Japan)
pp. 43-48

11:30 - 12:30

IT1: Information Technology

Room: Petch
Chair: Vara Varavithya (King Mongkut's Inst. of Tech. North Bangkok, Thailand)

11:30 ***Adaptive Learning in Moodle Using Competence-Based Knowledge Space Theory and IMS QTI***
Onjira Sitthisak (Thaksin University, Thailand); Lester Gilbert (University of Southampton, United Kingdom); Dietrich Albert (Graz University of Technololgy, Austria)
pp. 49-53

11:45 ***Detecting Romanized Thai Tokens in Social Media Texts***
Nutthamon Moknarong (Chulalongkorn, Thailand)
pp. 54-59

12:00 ***Developing a Model to Measure the Skills of ERP Implementation Team***
Mehdi Mahdavian (King Mongkut's University of Technology Thonburi, Thailand); Maryam Mahdavian (King Mongkut's University of Technology Thonburi, Iran); Naruemon Wattanapongsakorn (King Mongkut's University of Technology Thonburi, Thailand)
pp. 60-63

12:15 ***Design and Implementation of BitTorrent File System for Distributed Animation Rendering***
Namfon Assawamekin (University of the Thai Chamber of Commerce, Thailand); Ekasit Kijsipongse (NECTEC, Thailand)
pp. 64-68

PAR1: Parallel/Distributed Computing

Room: Palin
Chair: Putchong Uthayopas (Kasetsart University, Thailand)

11:30 ***Online Code Editor on Private Cloud Computing***
Warangkhana Kimpan (King Mongkut's Institute of Technology Ladkrabang, Thailand)
pp. 69-74

11:45 ***Efficient Energy Aware Task Scheduling for Parallel Workflow Tasks on Hybrids Cloud Environment***
Putchong Uthayopas (Kasetsart University, Thailand); Thanawut Thanavanich (Kasetsart University, Thailand)
pp. 75-80

12:00 ***A High Performance Computing for AOM Stock Trading Order Matching Using GPU***
Ketsarin Rungraung (Kasetsart University, Thailand); Putchong Uthayopas (Kasetsart University, Thailand)
pp. 81-84

12:15 ***Parallel Simulation of Magnetic Targeting of Nano-Carriers in Capillary Using OpenMP and MPI***
Chantana Chantrapornchai (Silpakorn University, Thailand); Kanok K. Huankumnerd (Silpakorn University, Thailand); Banpot Dolwithayakul (Silpakorn University, Thailand)
pp. 85-90

11:30 - 12:45

THA2: Workshop and Algorithms

Room: Tup Tim
Chair: Kata Praditwong (Silpakorn, Thailand)

11:30 ***The Core Retail Management Software with Big Data Integration***
Prasong Praneetpolgrang (Sripatum University, Thailand); Chienchuang Kalayanamitr (Kesonica Company, Thailand); Sirinapa Mesantea (Shinnawatra University, Thailand); Prasopchoke Pramongkit (Shinawatra University, Thailand); Suchai Thanawastien (Shinawatra University, Thailand)
pp. 430-434

11:45 ***A Comparative Study of Compression Algorithms for Each Data Type***
Chanapa Silawong (King Mongkut's University of Technology North Bangkok, Thailand); Tanapat Anusas-amornkul (King Mongkut's University of Technology North Bangkok, Thailand)
pp. 435-440

12:00 ***Acupuncture Expert System for Office Syndrome***
Chakkrit Sirirak (Burapha University, Thailand); Sunisa Rimcharoen (Burapha University, Thailand); Kriengkrai Thalerngpol (Herlichuan Master, Thailand)
pp. 441-446

12:15 ***Web Service Discovery Using Semantic-based Service Search Agent***
Somkiet Sornnuan (Khon Kaen University, Thailand); Ngamnij Arch-Int (Khonkean, Thailand); Somjit Arch-Int (Khon Kaen University, Thailand); Teerayut Thongkrau (Khon Kaen University, Thailand)
pp. 447-453

12:30 ***Applying L-System for Thai Traditional Music Composing by Accent***
Praramad Itthisan (Silpakorn University, Thailand); Wasara Rodhetbhai (Silpakorn University, Thailand)
pp. 454-459

13:00 - 14:45

P1: CSE Education : Teaching sustainable knowledge

Asst. Prof. Dr. Bundit Thipakorn

Room: Ploy
Chairs: Tiranee Achalakul (King Mongkut's University of Technology Thonburi, Thailand), Putchong Uthayopas (Kasetsart University, Thailand)

In this panel, we are welcome the discussion for finding the innovation in teaching computer science and engineering fields for Thai students.
Current computer and information technology has been growing fast in the past decade. Since the new technology has come around everyday, the related body of knowledge has been gradually evolved. We are opening the discussions to seek for innovation and techniques in teaching in the field to develop the computer science and engineering graduate that have skills and core knowledge which can sustain the changes in the fields. The industry and academic institutions are welcome to share their opinions and experiences. The expected outcome from this panel is the best practice in necessary skill development and sustainable core body of knowledge.

Points to address here:

Motivation: challenges in developments of computer science/engineering graduates
Knowledge: What is the computer science/engineering body of knowledge?
People: What is the qualification of the desired graduate by the industry?
Process: Teaching process/innovation for achieving both knowledges and skills?
Collaboration: What are possible collaborations among academic instiutions and industry?

What is next? What is the impact of this forum outcome ?
-next discussion forum/next action

Guest speakers from industry: Microsoft, Intel, IBM, Wealth
Academic guests from KMUTT, Mahidol, Chula
and we welcome more lecturer participants!!

13:30 - 14:30

IT2: Information Technnology

Room: Petch
Chair: Marut Buranarach (National Electronics and Computer Technology Center (NECTEC), Thailand)

13:30 ***On Effects of Tokens in Source Code to Accuracy of Fault-prone Module Prediction***
Osamu Mizuno (Kyoto Institute of Technology, Japan)
pp. 91-96

13:45 ***Erlang C Model for Evaluate Incoming Call Uncertainty in Automotive Call Centers***
Laksamon Archawaporn (Mahidol University, Thailand)
pp. 97-101

14:00 ***Dimensionality Reduction on Slope One Predictor in the Food Recommender System***
Supaporn Bundasak (Burapha University, Thailand)
pp. 102-107

14:15 ***Data Integration for Phone Users' Mobility Analysis***
Marko Niinimaki (University of Applied Sciences of West-Switzerland, Switzerland); Tapio Niemi (Helsinki Institute of Physics, Switzerland)
pp. 108-113

13:30 - 14:45

PAR2: Parallel/ Distributed Computing & Network

Room: Palin
Chair: Jeff Adie (SGI, Singapore)

13:30 ***Design and Comparative Analysis of DSS Queries in Distributed Environment***
Manik Sharma (GNDU Amritsar & Sewa Devi S. D. College, India); Gurvinder Singh (G N D U, India); Rajinder Virk (GNDU, India); Gurdev Singh (PTU, India)
pp. 114-119

13:45 ***Evaluating a Two Dimensional Box Packing Algorithm on Batch Processing Cluster Job Scheduling Problem***
Pichet Yongyingprasert (Prince of Songkla University, Thailand); Sangsuree Vasupongayya (Prince Of Songkla University, Thailand)
pp. 120-125

14:00 ***PID Controller Tuning and Optimizing for Greenhouse Lighting Application Considering Real-Time Pricing in the Smart Grid***
Mehdi Mahdavian (King Mongkut's University of Technology Thonburi, Thailand); Naruemon Wattanapongsakorn (King Mongkut's University of Technology Thonburi, Thailand)
pp. 126-131

14:15 ***Smart Device Sensing Architectures and Applications***
Koustabh Dolui (St. Thomas College of Engineering & Technology, India); Srijani Mukherjee (St. Thomas College of Engineering & Technology, India); Soumya Kanti Datta (EURECOM, France)
pp. 132-137

14:30 ***The Comprehensive Guiding and Navigation Services on Smart Phones***
Hsien-Tang Lin (Tahwa University of Science and Technology, Taiwan)
pp. 138-143

13:30 - 14:30

THA1: Thai Track1 (Ontology and IT)

Room: Tup Tim
Chair: Namfon Assawamekin (University of the Thai Chamber of Commerce, Thailand)

13:30 ***An Information Integration of Community Organization Using Ontology***
Yoawalak Jitdamrong (Community Organizations Development Institute, Thailand); Gridaphat Sriharee (KMUT-NB, Thailand)
pp. 460-465

13:45 ***Database to Ontology Mapping System***
Nattida Budprom (Khon Kaen University 123 Moo 16 Mittapap Rd Nai-Muang Muang District Khon Kaen 40002 Thailand, Thailand); Pusadee Seresangtakul (Khon Kaen University, Thailand)
pp. 466-470

14:00 ***Facebook Application for Place Recommendation***
Patcharaporn Jiranuwattanawong (Khon Kaen University, Thailand); Kanda SaiKeaw (Khon Kaen University, Thailand)
pp. 471-476

14:15 ***Epidemiological Alert System by Using Business Intelligence***
Chatchawan Mungsang (Khon kaen University, Thailand); Ngamnij Arch-in (Khonkaen University, Thailand); Somjit Arch-Int (Khon Kaen University, Thailand); Wararat Rungworawut (KKU, Thailand)
pp. 477-482

15:00 - 16:45

COM1: Computational Theory

Room: Palin
Chair: Varin Chouvatut (Chiang Mai University, Thailand)

15:00 ***Radius Particle Swarm Optimization***
M Anantathanavit (Mahanakorn University of Technology, Thailand); Mudarmeen Munlin (Mahanakorn University of Technology, Thailand)
pp. 144-148

15:15 ***Prediction Oriented Analysis of Optimal Replacement***
Liu Fang (Northwestern Polytechnical University, P.R. China); Zhang Shengbing (Northwestern Polytechnical University, P.R. China); Ren Meng (Northwestern Polytechnical University, P.R. China); Zhang Meng (Northwestern Polytechnical University, P.R. China)
pp. 149-153

15:30 ***New Full Text Indexing Algorithms Using ITEM-List Data Structure***
Kematus Phuttarakra (Rajabhat Rajanagarindra University, Thailand)
pp. 154-158

15:45 ***Automatic Removal of EEG Artifacts Using ICA and Lifting Wavelet Transform***
Suwicha Jirayucharoensak (National Electronics and Computer Technology Center, Thailand); Pasin Israsena (National Electronics

and Computer Technology Center (NECTEC), Thailand)
pp. 159-162

16:00 ***Applying a Mixed Objective Model in a University Timetabling Solution Searching Technique***
Warakorn Sitthirit (Prince of Songkla University, Thailand); Sangsuree Vasupongayya (Prince Of Songkla University, Thailand)
pp. 163-168

16:15 ***Computation-Aware Algorithm Based on Inter-View Motion Vector Analysis for Multi-View Video Coding***
Hao-Wen Chi (National Dong Hwa University, Taiwan); Gwo-Long Li (Industrial Technology Research Institute, Taiwan); Mei-Juan Chen (National Dong-Hwa University, Taiwan)
pp. 169-175

16:30 ***Characterization of Personal Behavior with Enhanced Spherical Self Organizing Map***
Noriaki Koide (Graduate School of Information Science and Technology, Osaka University, Japan)
pp. 176-179

15:00 - 16:30

DM1: Data Mining, Knowledge Management and Analytics

Room: Petch
Chair: Sunee Pongpinigpinyo (Silpakorn University, Thailand)

15:00 ***Outlier Detection Score Based on Ordered Distance Difference***
Nattorn Buthong (Chulalongkorn University, Thailand)
pp. 180-185

15:15 ***Prefix Filtering with Data Partitioning for Similarity Join***
Methus Bhirakit (Chulalongkorn University, Thailand); Jaruloj Chongstitvatana (Chulalongkorn University, Thailand)
pp. 186-190

15:30 ***Farthest Boundary Clustering Algorithm: Half-orbital Extreme Pole***
Benjapun Kaveelerdpotjana (Chulalongkorn University, Thailand)
pp. 191-196

15:45 ***A Comparison of Spatial Interpolation Methods for Surface Temperature in Thailand***
Panudda Tiengrod (Mahidol University Thailand, Thailand)
pp. 197-201

16:00 ***A Design Pattern Knowledge Base and Its Application to Sequence Diagram Design***
Binita Shakya (Sirindhorn International Institute of Technology, Thammasat University, Thailand); Ekawit Nantajeewarawat (Sirindhorn International Institute of Technology, Thailand)
pp. 202-207

16:15 ***Efficient Evolution-Based Clustering of High Dimensional Data Streams with Dimension Projection***
Rattanapong Chairukwattana (Kasetsart University, Thailand); Thanapat Kangkachit (Kasetsart University, Thailand); Kitsana Waiyamai (Kasetsart University, Thailand); Thanawin Rakthanmanon (Kasetsart University, Thailand)

pp. 208-213

15:00 - 16:15

THA3: Artificial Intelligence

Room: Tup Tim
Chair: Yodthong Rodkaew (UTCC, Thailand)

15:00 ***Improvement Query in Thesis and Research Database Using Particle Swarm Optimization***
Suksun Promboonruang (Khonkaen University, Thailand)
pp. 483-488

15:15 ***Affecting Behavior Analysis for the Treatment of Pulmonary Tuberculosis Using Data Mining Techniques: Case Study of Muang Sakon Nakhon Public Health Office***
Kesinee Chaleeporn (Khon Kaen University, Thailand); Silada Intarasothonchun (Khon Kaen University, Thailand)
pp. 489-494

15:30 ***A Classification Improvement of Extreme Learning Machine Classifier by Feature Selection***
Nichapa Wangomklang (Computer Science Khon Kaen University, Thailand); S Chiewchanwattana (Khon Kaen University, Thailand)
pp. 495-500

15:45 ***Extreme Learning Machine for Pre-Hypertension Classification***
Chirapa Somchai (Khon Kaen University, Thailand); Sirapat Chiewchanwattana (Khon Kaen University, Thailand); Khamron Sunat (Khon Kaen, Thailand); Nipotepat Muangkote (Khon Kaen University, Thailand)
pp. 501-506

16:00 ***A Comparison of Statistical Downscaling for Temperature in Thailand by Regression Analysis***
Khajeewan Promvichai (Mahidol University, Thailand)
pp. 507-512

Friday, September 6

09:00 - 09:45

K3: Big Data - Top 5 practical uses cases of Big Data

Jeff Adie- Principal Systems Engineer, SGI, Singapore

Room: Petch Palin

Over the last decade the data has grown many folds in volume, velocity and most importantly in variety! For many organizations Big Data is a buzz word. While market specialists keep churning out articles, talks, trainings and workshops to demystify the confusion, this topic still continues to carry its mystery.

This talk will attempt to explain Big Data concepts with 5 most practical use cases which are used by various organizations in real life today. This talk will present 5 use cases for the following fields.

- Science/R&D

- Social Media

- Govt/Enterprises

- Finance

- Media Industry

The talk will briefly explain the issues faced by the various fields and the big data solutions applied to solve/mitigate the challenges.

09:50 - 10:35

K4: Connecting BigData with Business Analytics

Mr. Wattanapong Wongtrakool from ORACLE (Thailand) Co. Ltd.

Room: Petch Palin

If your organization is like many, you're capturing and sharing more data from more sources than ever before. As a result, you're facing the challenge of managing high-volume and high-velocity data streams quickly and analytically.

Big Data is all about finding a needle of value in a haystack of unstructured information. Companies are now investing in solutions that interpret consumer behavior, detect fraud, and even predict the future! McKinsey released a report in May 2011 stating that leading companies are using big data analytics to gain competitive advantage. They predict a 60% margin increase for retail companies who are able to harvest the power of big data.

To support these new analytics, IT strategies are mushrooming, the newest techniques include brute force assaults on massive information sources, and filtering data through specialized parallel processing and indexing mechanisms. The results are correlated across time and meaning, and often merged with traditional corporate data sources. New data discovery techniques include spectacular visualization tools and interactive semantic query experiences. Knowledge workers and data scientists sift through filtered data asking one unrelated explorative question after another. As these supporting technologies emerge from graduate research programs into the world of corporate IT, IT strategists, planners, and architects need to both understand them and ensure that they are enterprise grade.

11:00 - 12:30

COM2: Computational Intelligence

Room: Palin
Chair: Kata Praditwong (Silpakorn, Thailand)

11:00 ***Handwritten Recognition on Pali Cards of Buddhadasa Indapanno***
Tanasanee Phienthrakul (Mahidol University, Thailand); Wanwisa Chevakulmongkol (Mahidol University, Thailand)
pp. 214-218

11:15 ***A Nondominated Adversarial Search Algorithm for a Three-player Chess Game***
Nathaporn Karnjanapoomi (Faculty of Information and Communication Technology, Silpakorn University, Thailand); Pongpol Pramanpol (Faculty of Information and Communication Technology, Silpakorn University, Thailand); Voratep Lertratsamewong (Faculty of Information and Communication Technology, Silpakorn University, Thailand); Torsakuln Chacavarnkitkuln (Faculty of Information and Communication Technology, Silpakorn University, Thailand); Vazuthorn Rattanajongjittakorn (Faculty of Information and Communication Technology, Silpakorn University, Thailand); Chaicharn Thavaravej (Silpakorn University, Thailand); Warin Wattanapornprom (Department of Computer Engineering, Faculty of Engineering, Chulalongkorn University, Thailand); Yodthong Rodkaew (UTCC, Thailand)
pp. 219-223

11:30 ***Web Page Template Design Using Interactive Genetic Algorithm***
Davy Sorn (Burapha University, Thailand); Sunisa Rimcharoen (Burapha University, Thailand)
pp. 224-229

11:45 ***A Frequency-Based Updating Strategy in Compact Genetic Algorithm***
Srichol Phiromlap (Burapha University, Thailand); Sunisa Rimcharoen (Burapha University, Thailand)
pp. 230-234

12:00 ***A Mobile Emotion Recognition System Based on Speech Signals and Facial Images***
Yu-Hao Wu (Feng Chia University, Taiwan); Shu-Jing Lin (Feng Chia University, Taiwan); Don-Lin Yang (Feng Chia University, Taiwan)
pp. 235-240

12:15 ***Support Vector Machine Accuracy Improvement with k-Means Clustering***
Teera Siriteerakul (King Mongkut's Institute of Technology Ladkrabang, Thailand); Veera Boonjing (KMITL, Thailand)
pp. 241-244

MUL1: Multimedia

Room: Petch
Chair: Ye Duan (University of Missouri, USA)

11:00 ***Virtual Piano with Real-Time Interaction Using Automatic Marker Detection***
Varin Chouvatut (Chiang Mai University, Thailand); Wattana Jindaluang (Chiang Mai University, Thailand)
pp. 245-249

11:15 ***Musical-scale Characteristics for Traditional Thai Music Genre Classification***
Pheerasut Boonmatham (Silpakorn University, Thailand); Sunee Pongpinigpinyo (Silpakorn University, Thailand); Tasanawan Soonklang (Silpakorn University, Thailand)
pp. 250-255

11:30 ***Real-time Video Denoising for 2D Ultrasound Streaming Video on GPUs***
Banpot Dolwithayakul (Silpakorn University, Thailand); Chantana Chantrapornchai (Silpakorn University, Thailand); Noppadol Chumchob (Silpakorn University, Thailand)
pp. 256-261

11:45 ***On Building PCA/ ICA Deformable Facial Models***
Vitavat Vitayakailert (Suranaree University of Technology, Thailand); Paramate Horkaew (Suranaree University of Technology,

Thailand)
pp. 262-267

12:00 ***Automatic Multiple Kinect Cameras Setting for Simple Walking Posture Analysis***
Suttipong Kaenchan (King Mongkut's University of Technology Thonburi, Thailand); Pornchai Mongkolnam (King Mongkut's University of Technology Thonburi, Thailand); Bunthit Watanapa (King Mongkut's University of Technology Thonburi, Thailand); Sasipa Sathienpong (King Mongkut's University of Technology Thonburi, Thailand)
pp. 268-272

12:15 ***Handwritten Curve Approximation by a Bézier Curve with Featured Points***
Rattikarn Jaroensawad (King Mongkut's University of Technology North Bangkok, Thailand)
pp. 273-277

NET1: Computer Network

Room: Ploy
Chair: Wasara Rodhetbhai (Silpakorn University, Thailand)

11:00 ***Multipath Query Spreading Over Vehicular Ad-hoc Networks***
Singha Wongdeethai (Kings Mongkut University of Technology Thonburi, Thailand); Peerapon Siripongwutikorn (King Mongkut's University of Technology Thonburi, Thailand)
pp. 278-283

11:15 ***Path-Reputation Based Technique in Reactive AODV Ad Hoc Sensor Networks Routing for Flood Warning Application***
Nuttida Khawsa-ard (Chulalongkorn University, Thailand); Assist. Prof. Chaiyachet Saivichit (Chulalongkorn University, Thailand)
pp. 284-288

11:30 ***A Novel Personal Health Record System for Handling Emergency Situations***
Phuwanai Thummavet (Prince of Songkla University, Thailand); Sangsuree Vasupongayya (Prince of Songkla University, Thailand)
pp. 289-294

11:45 ***Of Order-Handoffs for Hyper-Erlang Traffics in Cellular Wireless Networks***
Bongkarn Homnan (Dhurakijpundit University, Thailand); Watit Benjapolakul (Chulalongkorn University, Thailand)
pp. 295-298

12:00 ***Enhanced RED-based Scheduling (ERBS) Scheme in WiMAX Network***
Hann-Tzong Chern (Taiwan University of Science & Techlonogy, Taiwan); Ynanming Liu (Taiwan University of Science & Techlonogy, Taiwan); Jhih-Syue Jhou (Kun Shan University, Taiwan)
pp. 299-303

12:15 ***A Web-based Management System Design for Wireless Sensor Network Monitoring***
Wibhada Naruephiphat (NECTEC, Thailand); Ridnarong Promya (NECTEC, Thailand); Chalermpol Charnsripinyo (National Electronics and Computer Technology Center (NECTEC), Thailand)
pp. 304-308

THA4: Network & Security

Room: Tup Tim
Chair: Sethalat Rodhetbhai (Silpakorn University, Thailand)

11:00 ***Application of Game Theory to Vertical Handoff Decision Scheme Within Heterogeneous Mobile Communication Network***
Rungrat Viratikul (Chulalongkorn University, Thailand)
pp. 513-517

11:15 ***Applying Wireless Sensor Network Based on ZigBee/IEEE802.15.4 Standard for Railway Crossing System***
Muhammad Mansattha (Chulalongkorn University, Thailand)
pp. 518-523

11:30 ***How Good is Food as a CAPTCHA?***
Nuttanont Hongwarittorrn (Thammasat University, Thailand); Pornpimol Ramonudom (Thammasat University, Thailand)
pp. 524-529

11:45 ***Authentication Protocol on Wireless Sensor Networks Based on Hybrid Cryptographic Technique***
Phumipat Sukpimontree (Mahanakorn University of Technology, Thailand); Supakorn Kungpisdan (Mahanakorn University of Technology, Thailand)
pp. 530-535

12:00 ***Effects of Image Priming on Recall of Password***
Nipat Pattarasophonkul (Thammasat University, Thailand); Nuttanont Hongwarittorrn (Thammasat University, Thailand)
pp. 536-541

12:15 ***Key Stroke Dynamics Authentication with Trajectory Dissimilarity***
Kasem Wangsuk (King Mongkut's University of Technology North Bangkok, Thailand); Tanapat Anusas-amornkul (King Mongkut's University of Technology North Bangkok, Thailand)
pp. 542-547

13:30 - 14:45

COM3: Computational Intelligence

Room: Palin
Chair: Tasanawan Soonklang (Silpakorn University, Thailand)

13:30 ***Improving the Running Time of the Nearest Neighbor Algorithm***
Nattakon Chompupatipong (King Mongkut's Institute of Technology Ladkrabang, Thailand)
pp. 309-314

13:45 ***Evolutionary Circular Extreme Learning Machine***
Sarutte Atsawaraungsuk (Khon Kaen University & Khonkaen University, Thailand); P Horata (Khon Kaen University, Thailand); Khamron Sunat (Khon Kaen, Thailand); Sirapart Cheawcharnwattana (Khonkean University, Thailand); Pakarat Musigawan (University, Thailand)
pp. 315-320

14:00 ***A Performance Evaluation of a Probabilistic Parallel Genetic Algorithm: FPGA Vs Multi-core Processor***

Yutana Jewajinda (National Electronics and Computer Technology Center, Thailand)
pp. 321-324

14:15 ***Prediction of Stock Price Using an Adaptive Neuro-Fuzzy Inference System Trained by Firefly Algorithm***
Hien Nhu Nguyen (King Mongkut's University of Technology North Bangkok, Thailand); Supot Nitsuwat (King Mongkut's University of Technology North Bangkok, Thailand); Maleerat Sodanil (Faculty of Information Technology, KMUTNB, Thailand)
pp. 325-330

14:30 ***Estimation of Recursive Order Number of a Photocopied Document Through Entropy From Gray Level Co-occurrence Matrix***
Suman V Patgar (University of Mysore, India); Vasudev T (Maharaja Institute of Technology, India)
pp. 331-335

13:30 - 14:30

MUL2: Multimedia

Room: Petch
Chair: Ye Duan (University of Missouri, USA)

13:30 ***The Last Eternity, a 3D Role-Playing Game with a Cross-Platform Development***
Yodthong Rodkaew (UTCC, Thailand)
pp. 336-341

13:45 ***Proactive Ergonomics Through Digital Human Modeling and Simulation for Product Design Innovation: A Case Study***
Uday Kumar B. (Dept. of Design, IIT Guwahati, India); Abhinandan Bora (Dept. of Mechanical Engineering, NIT Silchar, India); Sanjog J (Dept. of Design, IIT Guwahati, India); Sougata Karmakar (Dept. of Design, IIT Guwahati, India)
pp. 342-346

14:00 ***Buddhist Amulet Coin Recognition by Genetic Algorithm***
Chomtip Pornpanomchai (Mahidol University, Thailand); Natdanai Srisupornwattana (Mahidol University, Thailand)
pp. 347-350

14:15 ***On the Comparison of Digital Image Steganography Algorithm Based on DCT and Wavelet***
Chantana Chantrapornchai (Silpakorn University, Thailand); Jitdumrong Preechasuk (Kasetsart University, Thailand)
pp. 351-356

13:30 - 14:45

NET2: Computer Network

Room: Ploy
Chair: Apisake Hongwitayakorn (Silpakorn University, Thailand)

13:30 ***MVFactor: A Method to Decrease Processing Time for Factorization Algorithm***

Kritsanapong Somsuk (Department of Computer Science, Faculty of Science, Khonkaen University, Thailand); Sumonta Kasemvilas (Department of Computer Science, Faculty of Science, Khon Kaen University, Thailand)
pp. 357-360

13:45 ***Enhanced Prediction-Based Routing Protocol with Game Theory Adoption***
Tai Chi Wang (NTHU, Taiwan); Shih Yu Chang (National Tsing Hua University of Taiwan, Taiwan)
pp. 361-367

14:00 ***Temporal Behavior Analysis of Malware/Bot Downloads Using Top-10 Processing***
Chaxiong Yukonhiatou (International College, King Mongkut's Institute of Technology Ladkrabang, Thailand); Surin Kittitornkun (King Mongkut's Institute of Technology Ladkrabang, Thailand); Hiroaki Kikuchi (Meiji University, Japan)
pp. 368-372

14:15 ***Analysis Model for Measuring Information Flow in Social Networks***
Atikhom Siri (Chiang Mai University, Thailand); Trasapong Thaiupathump (Chiang Mai University, Thailand)
pp. 373-378

14:30 ***Game Theoretic Analysis of Jamming Attack in Wireless Mesh Network with Delay Tolerance***
Satawat Benromarn (Chulalongkorn University, Thailand); Patrachart Komolkiti (Assumption University, Thailand); Chaodit Aswakul (Chulalongkorn University, Thailand)
pp. 379-383

13:30 - 14:30

THA5: Image Processing

Room: Tup Tim
Chair: Pinyo Taeprasartsit (Silpakorn, Thailand)

13:30 ***Smart Bedroom Prototype for the Elderly Using Kinect Camera Motion Captures***
Yoottana Booranrom (King Mongkut's University of Technology Thonburi, Thailand); Bunthit Watanapa (King Mongkut's University of Technology Thonburi, Thailand); Pornchai Mongkolnam (King Mongkut's University of Technology Thonburi, Thailand)
pp. 548-553

13:45 ***A Search and Recognition Approach Car License Plate Under Traffic CCTV Environment***
Rerkchai Fooprateepsiri (Mahanakorn University of Technology & Information Science and Technology, Thailand)
pp. 554-558

14:00 ***Image Segmentation of Left Ventricle in Cardiac Magnetic Resonance Images by Using Active Contour Model***
Krit Somkantha (Rajabhat Udon thani University, Thailand); Wilaiporn Kultangwattana (Rajabhat Udon Thani University, Thailand)
pp. 559-564

14:15 ***A Comparative of the Methods to Find Fingertips and Valleys Based on Images Processing***
Apiwat Sawatdirat (Rajamangala University of Technology Thanyaburi, Thailand)
pp. 565-570

15:00 - 15:30

COM4: Computational Intelligence

Room: Palin
Chair: Sunisa Rimcharoen (Burapha University, Thailand)

15:00 ***The Feature Selection for Classification by Applying the Significant Matrix with SPEA2***
Ekapong Chuasuwan (Chiangmai University, Thailand); Narissara Eiamkanitchat (Chiang Mai University, Thailand)
pp. 384-389

15:15 ***Improved Termite Hill Routing Protocol Using ACO in WSN***
Chandni Devi (Nitttr, India); Kanika Sharma (Punjab University, India); Himanshu Monga (Rayat & Bahra Institute of Engineering & Bio-Tech, Kharar, MOHALI, PUNJAB, India); Purnima Devi (NITTTR, India)
pp. 390-395

15:00 - 15:45

MUL3: Multimedia

Room: Petch
Chair: Rachadaporn Kanawong (Silpakorn University, Thailand)

15:00 ***Voltage-mode Universal Biquadratic Filter Using a Single DDCCTA***
Panit Lamun (King Mongkut's Institute of Technology Ladkrabang Chumphon Campus, Thailand)
pp. 396-399

15:15 ***Impacts of Joint Packet Scheduling for Heterogeneous Component Carriers in Multi-carrier Systems***
Sangchul Oh (ETRI, Korea); Ryu Byung Han (ETRI, Korea); Yeon-seung Shin (ETRI, Korea); Song Pyeong-Jung (ETRI, Korea); Dongseung Kwon (ETRI, Korea)
pp. 400-405

15:30 ***A Policy-Improving System with a Mixture Probability and Clustering Distributions to Unknown 3D-environments***
Uthai Phommasak (Muroran Institute of Technology, Japan); Daisuke Kitakoshi (Tokyo National College of Technology, Japan); Shioya Hiroyuki (Muroran Institute of Technology, Japan)
pp. 406-411

NET3: Computer Network

Room: Ploy
Chair: Jitdumrong Preechasuk (Kasetsart University, Thailand)

15:00 ***A Dual-band Wireless Energy Transfer Protocol for Heterogeneous Sensor Networks Powered by RF Energy Harvesting***
Prusayon Nintanavongsa (Rajamangala University of Technology Thanyaburi, Thailand); M. Yousof Naderi (Northeastern University, USA); Kaushik Chowdhury (Northeastern University, USA)

pp. 412-417

15:15 ***Vulnerability Analysis on Mobile VoIP Supplementary Service and MITM Attack***
You-Joung Ham (Hanshin University, Korea); Won-Bin Choi (Hanshin University, Korea); Hyung-Woo Lee (Hanshin University, Korea)
pp. 418-423

15:30 ***The Performance Measurement of Packet Scheduling Algorithm Based on Set Covering Problem***
Chatchanan Jandaeng (Walailak University, Thailand)
pp. 424-429

THA6: Software Engineering

Room: Tup Tim
Chair: Saowalak Arampongsanuwat (Silpakorn University, Thailand)

15:00 ***A Comparison of Software Quality From Aspect Refactoring with Different Number of Duplicate Method Calls***
Thanaporn Kungpanichkul (Chulalongkorn University, Thailand)
pp. 571-576

15:15 ***Impact Analysis of Test Cases Based on Changes of a Web Application***
Surasak Phetmanee (Chulalongkorn University, Thailand); Taratip Suwannasart (Chulalongkorn University, Thailand)
pp. 577-582

15:30 ***Applying Security Patterns and Aspect-Oriented Programming to Web Services***
Jaturapat Patanasongsivilai (Chulalongkorn University, Thailand)
pp. 583-589