# Conference Schedule

**June 10 (Wed), 2015**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>7:30</td>
<td>Registration begins (Room 309)</td>
</tr>
</tbody>
</table>
| 9:00-9:30 | Opening (Room 308)  
Professor Moonis Ali  
Introduction  
Professor Chung-Sun Hong  
*President, Korea Institute of Information Scientist & Engineers*  
*Welcome*  
*Chair: Moonis Ali* |
| 9:30-10:30 | **Professor Sun Kim:** Modeling and Mining Phenotype-Specific Biological Mechanisms Using Big Molecular Biology Data (Room 308)  
*Chair: Seoung Bum Kim* |
| 10:30-11:00 | Coffee Break (3F)                                                    |
| 11:00-12:30 | **Session 1A:** Theoretical AI (1)  
*Chair: Seoung Bum Kim*  
**Session 1B:** Knowledge Based Systems (1)  
*Chair: Yun Bai*  
**Session 1C:** Machine Learning (1)  
*Chair: Jae C. Oh* |
| 12:30-1:30 | Lunch                                                                |
| 1:30-3:00  | **Session 2A:** Theoretical AI (2)  
*Chair: Seoung Bum Kim*  
**Session 2B:** Knowledge Based Systems (2)  
*Chair: Franz Wotawa*  
**Session 2C:** Machine Learning (2)  
*Chair: Kishan Mehrotra* |
| 3:00-3:30 | Coffee Break (3F)                                                    |
| 3:30-5:30 | **Session 3A:** Optimization (1)  
*Chair: Malek Mouhoub*  
**Session 3B:** Unsupervised Learning  
*Chair: Yung-Seop Lee*  
**Session 3C:** Intelligent Systems Applications (1)  
*Chair: Hyunjoong Kim* |
<p>| 5:30   | Reception(3F)                                                         |</p>
<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>9:00-10:00</td>
<td>Professor Seong-Whan Lee: Brain-Computer Interface: Recent Progress and Challenges in Neuro-Rehabilitation (Room 308) Chair: Chang-Hwan Lee</td>
</tr>
<tr>
<td>10:00-10:30</td>
<td>Coffee Break (3F)</td>
</tr>
<tr>
<td>10:30-12:30</td>
<td><strong>Room A</strong>&lt;br&gt;Session 4A: Theoretical AI (3)&lt;br&gt;Chair: Chang-Hwan Lee</td>
</tr>
<tr>
<td></td>
<td><strong>Room B</strong>&lt;br&gt;Session 4B: Intelligent Systems Applications (2)&lt;br&gt;Chair: Chan-Gyu Park</td>
</tr>
<tr>
<td></td>
<td><strong>Room C</strong>&lt;br&gt;Special Session 1: Machine Learning Algorithms and Their Applications (1)&lt;br&gt;Chair: Yongdai Kim</td>
</tr>
<tr>
<td>12:30-1:30</td>
<td>Lunch</td>
</tr>
<tr>
<td>1:30-3:30</td>
<td><strong>Room A</strong>&lt;br&gt;Session 5A: Optimization (2)&lt;br&gt;Chair: Mina Jung</td>
</tr>
<tr>
<td></td>
<td><strong>Room B</strong>&lt;br&gt;Session 5B: Intelligent Systems Applications (3)&lt;br&gt;Chair: Young Sig Kwon</td>
</tr>
<tr>
<td></td>
<td><strong>Room C</strong>&lt;br&gt;Special Session 2: Machine Learning Algorithms and Their Applications (2)&lt;br&gt;Chair: Yongdai Kim</td>
</tr>
<tr>
<td>3:30-4:00</td>
<td>Coffee Break (3F)</td>
</tr>
<tr>
<td>4:00-6:00</td>
<td><strong>Room A</strong>&lt;br&gt;Session 6A: Web and Social Networks (1)&lt;br&gt;Chair: Rey-Long Liu</td>
</tr>
<tr>
<td></td>
<td><strong>Room B</strong>&lt;br&gt;Session 6B: Vision, Image and Text Processing (1)&lt;br&gt;Chair: Mina Jung</td>
</tr>
<tr>
<td></td>
<td><strong>Room C</strong>&lt;br&gt;Session 6C: Classification (1)&lt;br&gt;Chair: Jooyoung Lee</td>
</tr>
<tr>
<td>6:00</td>
<td>Banquet (Room 307) + Best paper award&lt;br&gt;Chair: Juntae Kim</td>
</tr>
</tbody>
</table>
### June 12 (Fri), 2015

<table>
<thead>
<tr>
<th>Time</th>
<th>Room A</th>
<th>Room B</th>
<th>Room C</th>
</tr>
</thead>
</table>
| 9:00-10:30 | **Session 7A:** Vision, Image and Text Processing (2)  
Chair: Byungun Yoon | **Session 7B:** Web and Social Networks (2)  
Chair: Somayeh Haghighi | **Special Session 3:**  
Statistical Learning and Its Applications  
Chair: Keunbaik Lee |
| 10:30-11:00 | Coffee Break (3F)                           |                                             |                                             |
| 11:00-12:30 | **Session 8A:** Classification (2)  
Chair: Young Sig Kwon | **Session 8B:** Knowledge Based Systems (3)  
Chair: Byungun Yoon | **Session 8C:**  
Machine Learning (3)  
Chair: Uk Jung |
| 12:30-1:30 | Lunch + ISAI meeting                       |                                             |                                             |

2:00-6:00

**Tour A:** ChangDeok Palace, Biwon Garden (limited to 40 people)

OR

**Tour B:** GyeongBok Palace, National Folk Museum, and Insa-Dong

* For Tour A, you need to sign in when registering at the conference. (first come, first served)
**June 10  11:00 ~12:30**

**Session 1A: Theoretical AI (1)**  
Chair: Dr. Seoung Bum Kim

**Novel AI Strategies for Multi-Player Games at Intermediate Board States**  
Spencer Polk and John Oommen. (Carleton University)

**AIs for Dominion using on Monte-Carlo Tree Search**  
Morten Goodwin, Robin Tollisen, Jon Vegard Jansen and Sondre Glimsdal. (University of Agder)

**Evolutionary Dynamic Scripting: Adaptation of Expert Rule Bases for Serious Games**  
Reinier Kop (VU University Amsterdam), Armon Toubman (National Aerospace Laboratory NLR), Mark Hogendoorn (VU University Amsterdam) and Jan Joris Roessingh (National Aerospace Laboratory NLR).

**Session 1B: Knowledge Based Systems (1)**  
Chair: Dr. Yun Bai

**A Real-time Monitoring Framework for Online Auctions Frauds**  
Samira Sadaouui, Xuegang Wang and Dongzhi Qi. (University of Regina)

**Reasoning about the State Change of Authorization Policies**  
Yun Bai, Edward Caprin and Yan Zhang. (University of Western Sydney)

**Integration of Disease Entries Across OMIM, Orphanet, and a Proprietary Knowledge Base**  
Maori Ito (National Institute of Biomedical Innovation), Shin’ichi Nakagawa (Research Institute of Info-Communication Medicine), Kenji Mizuguchi (National Institute of Biomedical Innovation) and Takashi Okumura (National Institute of Public Health).

**Session 1C: Machine Learning (1)**  
Chair: Dr. Jae C. Oh

**Heuristic Pretraining for Topic Models**  
Tomonari Masada (Nagasaki University) and Atsuhiro Takasu (National Institute of Informatics).
Fast Online Learning to Recommend a Diverse Set from Big Data
Mahmuda Rahman and Jae C. Oh.(Syracuse University)

Learning From Demonstration Using Variational Bayesian Inference
Mostafa Hussein, Yasser Mohammad and Samia Ali.(Assiut University)

June 10 13:30~15:00

Session 2A: Theoretical AI (2)
Chair: Dr. Seoung Bum Kim

Uncertainty Management in Multi-Leveled Risk Assessment Context of IMS-QSE
Marwa Ben Aissa, Ahmed Badreddine and Nahla Ben Amor.(Université de Tunis)

Implementation of Theorem Prover of Relevant Logic
Noriaki Yoshiura.(Saitama University)

Finding Longest Paths in Hypercubes: 11 New Lower Bounds for Snakes, Coils, and Symmetrical Coils
Seth Meyerson, Thomas Drapela, William Whiteside and Walter Potter. (University of Georgia)

Session 2B: Knowledge Based Systems (2)
Chair: Dr. Franz Wotawa

Sheet2RDF: a Flexible and Dynamic Spreadsheet Import & Lifting Framework for RDF
Manuel Fiorelli, Tiziano Lorenzetti, Maria Teresa Pazienza, Armando Stellato and Andrea Turbati.(University of Rome)

An Approach to Dominant Resource Fairness in Distributed Environment
Qinyun Zhu and Jae Oh.(Syracuse University)

Mining SQL Queries to Detect Anomalous Database Access using Random Forest and PCA
Charissa Ann Ronao and Sung-Bae Cho.(Yonsei University)
Session 2C: Machine Learning (2)

Chair: Dr. Kishan Mehrotra

Modeling Snow Dynamics Using a Bayesian Network
Bernt Viggo Matheussen and Ole-Christoffer Granmo. (University of Agder)

Evaluation of the Rate Constants Reactions of the Phenyl Radical with Hydrocarbons with Use the Artificial Neural Network
Vladimir Tumanov. (Institute of Problems of Chemical Physics)

Predicting SET50 Index Trend using Artificial Neural Network and Support Vector Machine
Montri Inthachot, Veera Boonjing and Sarun Intakosum. (King Mongkut’s Institute of Technology Ladkrabang)

June 10  15:00~17:00

Session 3A: Optimization (1)

Chair: Dr. Malek Mouhoub

Stability in Biomarker Discovery: Does Ensemble Feature Selection Really Help?
Nicoletta Dessì and Barbara Pes. (Università degli Studi di Cagliari)

Integrating TCP-Nets and CSPs: The Constrained TCP-Net (CTCP-Net) Model
Shu Zhang, Malek Mouhoub and Samira Sadaoui. (University of Regina)

Multiobjective Optimization for the Stochastic Physical Search Problem
Jeffrey Hudack, Nathaniel Gemelli, Daniel Brown, Steven Loscalzo (Air Force Research Laboratory) and Jae Oh (Syracuse University).

Towards Multilevel Ant Colony Optimisation for the Euclidean Symmetric Traveling Salesman Problem
Thomas Andre Lian, Marilex Rea Llave, Morten Goodwin and Nourddine Bouhmala. (University of Agder)
Session 3B: Unsupervised Learning
Chair: Dr. Yung-Seop Lee

Similarity Measure by Combination of Formal Concept Analysis and Clustering for Case-based Reasoning
Mohsen Asghari and Somayeh Alizadeh. (K.N.Toosi University of technology)

Ensembling Algorithms for Unsupervised Anomaly Detection
Zhiruo Zhao, Kishan Mehrotra and Chilukuri Mohan. (Syracuse University)

Comparison of Adjusted Methods for Selecting Useful Unlabeled Data for Semi-Supervised Learning Algorithms
Thinh-Binh Le and Sang-Woon Kim. (Myong ji University)

A Novel Clustering Algorithm based on a Non-parametric Anti-Bayesian Paradigm
Hugo Lewi Hammer, Anis Yazidi (Oslo and Akershus University College of Applied Sciences) and John Oommen. (Carleton University)

Session 3C: Intelligent Systems Applications (1)
Chair: Dr. Hyunjoong Kim

Scene Understanding Based on Sound and Text Information for a Cooking Support Robot
Ryosuke Kojima, Osamu Sugiyama and Kazuhiro Nakadai. (Tokyo Institute of Technology)

Logic Simulation with Jess for a Car Maintenance e-Training System
Gil-Sik Park, Dae-Sung Park, Ki Hyun Park and Juntae Kim. (Dongguk University)

Dynamic Scoring-based Sequence Alignment Adaptation for Process Diagnostics
Eren Esgin and Pinar Karagoz. (Middle East Technical University)

RFID Service Provider Selection using An Integrated Fuzzy MCDM Approach
Gulcin Buyukozkan (Galatasaray University), Jbid Arsenyan (Bahcesehir University) and Yagmur Karabulut. (Galatasaray University)
June 11  10:30~12:30

**Session 4A: Theoretical AI (3)**
Chair: Dr. Chang-Hwan Lee

**Particle Filter-Based Model Fusion for Prognostics**
Claudia García (Grup Rubí Social), Yanni Zou (Jiujiang University) and Chunsheng Yang (National Research Council Canada).

**Fuzzy Q-Learning Approach to QoS Provisioning in Two-tier Cognitive Femtocell Networks**
Jerzy Martyna (Jagiellonian University)

**A Neurologically Inspired Model of the Dynamics of Situation Awareness under Biased Perception**
Dilhan Thilakarathe (VU University Amsterdam)

**Session 4B: Intelligent Systems Applications (2)**
Chair: Dr. Chan-Gyu Park

**Optimization of Trading Rules for the Spanish Stock Market by Genetic Programming**
Bonifacio Castano, Sergio Luengo (University of Alcal’a), Stephan Winkler (University of Applied Sciences Upper Austria) and David Barrero (University of Alcal’a).

**Meta-Diagnosis for a Special Class of Cyber-Physical Systems: the Avionics Test Benches**
Cosse Ronan, Denis Berdjag, Sylvain Piechowiak (University of Valenciennes), Christian Gaurel (Marseille International Airport) and David Duvivier (University of Valenciennes).

**Finding Similar Time Series in Sales Transaction Data**
Swee Chuan Tan, Pei San Lau and Xiaowei Yu (SIM University)

**Prediction of Package Chip Quality using Fail Bit Count Data of the Probe Test**
Jinsoo Park and Seoung Bum Kim (Korea University)
Smart Home Energy Conservation Based on Context Awareness Technology
Bin Dai(Xiamen University of Technology), Rung-Ching Chen and Kun-Lin Chen.(Chaoyang University of Technology)

**Special Session 1: Machine Learning Algorithms and Their Applications (1)**
Chair: Dr. Yongdai Kim

**Generalized Bagging**
Woncheol Jang(Seoul National University)

**On the Computational Issues in High Dimensional Regression Problems**
Joong-Ho Won(Seoul National University)

**Sparse Luce Model**
Jong-June Jeon(University of Seoul)

**Latent Dirichlet Allocation with Unknown Number of Topics**
Minwoo Chae(Seoul National University)

**June 11  13:30~15:30**

**Session 5A: Optimization (2)**
Chair: Dr. Mina Jung

**Relations Framework between Sub-Problems in a Hierarchical Optimization Problem**
Marouene Chaieb, Jaber Jemai and Khaled Mellouli.(LARODEC Institut Supérieur de Gestion de Tunis)

**A Four-Decomposability Conditions Framework for Combinatorial Optimization Problems**
Marouene Chaieb, Jaber Jemai and Khaled Mellouli.(LARODEC Institut Supérieur de Gestion de Tunis)

**Learning Low Cost Multi-Target Models by Enforcing Sparsity**
Pekka Naula, Antti Airola, Tapio Salakoski and Tapio Pahikkala.(University of Turku)
Interactive Interface to Optimize Sound Source Localization with HARK
Osamu Sugiyama, Ryosuke Kojima (Tokyo Institute of Technology) and Kazuhiro Nakadai (Honda Research Institute Japan Co., Ltd).

Session 5B: Intelligent Systems Applications (3)
Chair: Dr. Young Sig Kwon

A Practical Approach to the Shopping Path Clustering
In-Chul Jung, M. Alex Syaekhoni and Young S. Kwon (Dongguk University)

iDianNao: Recommending Volunteer Opportunities to Older Adults
Wen-Chieh Fang, Pei-Ching Yang, Meng-Che Hsieh and Jung-Hsien Chiang (National Cheng Kung University)

Particle Filter-Based Approach to Estimate Remaining Useful Life for Predictive Maintenance
Chunsheng Yang (National Research Council Canada), Qingfeng Lou, Jie Liu (Carleton University), Hongyu Gou (National Research Council Canada), Yun Bai (University of Western Sydney)

Combining Constrained CP-nets and Quantitative Preferences for Online Shopping
Bandar Mohammed, Eisa Alanazi and Malek Mouhoub (University of Regina)

Focused Diagnosis for Failing Software Test
Seema Jehan, Birgit Hofer, Ingo Pill and Franz Wotawa (Graz University of Technology)

Special Session 2: Machine Learning Algorithms and Their Applications (2)
Chair: Dr. Yongdai Kim

Statistical Completion of a Partially Identified Graph with Applications for the Estimation of Gene Regulatory Networks
Johan Lim (Seoul National University)

Tracking Concept Drift Using a Constrained Penalized Regression Combiner
Hosik Choi (Kyonggi University)
Subset Selection for Autoregressive Models by Regularization
Sunghoon Kwon(Konkuk University)

Adaptive Model Selection Criterion
Yongdai Kim(Seoul National University)

June 11  16:00~18:00

Session 6A: Web and Social Networks (1)
Chair: Dr. Rey-Long Liu

Retrieval of Highly Related Biomedical References by Key Passages of Citations
Rey-Long Liu. (Tzu Chi University)

Summarization of Documents by Finding Key Sentences Based on Social Network Analysis
Su Gon Cho and Seoung Bum Kim. (Korea University)

Dynamic Facet Hierarchy Constructing for Browsing Web Search Results Efficiently
Wei Chang and Jia-Ling Koh.(National Taiwan Normal University)

Filtering Reviews by Random Individual Error
Michaela Geierhos, Frederik S. Bäumer, Sabine Schulze and Valentina Stuß.(University of Paderborn)

Session 6B: Vision, Image and Text processing (1)
Chair: Dr. Mina Jung

Research on an Intelligent Liquid Lamp Inspector Based on Machine Vision
Lasheng Yu, Yanying Zeng and Zhaoke Huang.(Central South University, Changsha)

Event Extraction for Gene Regulation Network Using Syntactic and Semantic Approaches
Wen-Juan Hou and Bamfa Ceesay.(National Taiwan Normal University)
**Video Stitching System of Heterogeneity Car Video Recorders**
Teng-Hui Tseng (Oriental Institute of Technology) and Chun-Ming Tsai (University of Taipei)

**A Self-Adaptive Genetic Algorithm for the Word Sense Disambiguation Problem**
Wojdan Alsaeedan and Mohamed El Bachir Menai (King Saud University)

**Session 6C: Classification (1)**

**Chair: Dr. Jooyoung Lee**

**Approximate is Enough: Distance-Based Validation for Geospatial Classification**
Yangping Li and Tianming Hu (Dongguan University of Technology)

**Efficient Classification of Binary Data Stream with Concept Drifting Using Conjunction Rule based Boolean Classifier**
Yiou Xiao, Kishan Mehrotra and Chilukuri Mohan (Syracuse University)

**Semi-Supervised SVM-based Feature Selection for Cancer Classification using Microarray Gene Expression Data**
Jun Chin Ang, Habibollah Haron and Haza Nuzly Abdull Hamed (Universiti Teknologi Malaysia)
June 12  9:00~10:30

Session 7A: Vision, Image and Text processing (2)
Chair: Dr. Byungun Yoon

Improving Noisy T1-Weighted MRI Spatial Fuzzy Segmentation Based on a Hybrid of Stationary Wavelet Thresholding and Filtering Preprocess
Papangkorn Pidchayathanakorn and Siriporn Supratid. (Rangsit University)

Smoke Detection for Autonomous Vehicles using Laser Range Finder and Camera
Alexander Filonenko, Danilo Cáceres Hernández, Van-Dung Hoang and Kang-Hyun Jo.(University of Ulsan)

Tracking Failure Detection using Time Reverse Distance Error for Human Tracking
Joko Hariyono, Van-Dung Hoang and Kang-Hyun Jo.(University of Ulsan)

Session 7B: Web and Social Networks (2)
Chair: Dr. Somayeh Haghighi

Building Browser Extension to Develop Website Personalization Based on Adaptive Hypermedia System
Hendry Honk(Chaoyang University of Technology), Harestu Pramadharma(Satya Wacana Christian University) and Rung-Ching Chen.(Chaoyang University of Technology)

Discovering Potential Victims within Enterprise Network via Link Analysis Method
Yu-Ting Chiu, Shun-Te Liu, Hsiu-Chuan Huang and Kai-Fung Hong.(Chunghwa Telecom Laboratories)

A Simple and Efficient Algorithm for Lexicon Generation Inspired by Structural Balance Theory
Anis Yazidi, Aleksander Bai, Hugo Lewi Hammer and Paal Engelstad.(Oslo and Akershus University)
**Special Session 3: Statistical Learning and Its Applications**
Chair: Dr. Keunbaik Lee

**A new classification tree method with interaction detection capability**
Ahhyoun Kim and Hyunjoong Kim (Yonsei University)

**Bayesian Cumulative Logit Random Effects Models for Longitudinal Ordinal Data with General Covariance Matrix**
Jiyeong Kim, Keunbaik Lee and Insuk Sohn (SungKyunKwan University)

**Introduction to Difference Based Error Variance Estimator for Outlier Detection in Multiple Linear Regression Models**
Chun Gun Park (Kyonggi University), Hee-Kyung Kim, Yung-Seop Lee(Dongguk University)

**June 12  11:00~12:30**

**Session 8A: Classification (2)**
Chair: Dr. Young Sig Kwon

**Opponent Classification in Robot Soccer**
Asma Larik and Sajjad Haider. (Institute of Business Administration, Pakistan)

**Improving Multi-label Classification of Documents Using Fine-Grained Weights**
Soohwan Song(KAIST) and Chang-Hwan Lee.(DongGuk University)

**Diagnosis of Epilepsy in Patients Based on the Classification of EEG Signals Using Fast Fourier Transform**
Thao Nguyen Thieu and Hyungjeong Yang.(Chonnam National University)

**Session 8B: Knowledge Based Systems (3)**
Chair: Dr. Byungun Yoon

**Synthetic Evidential Study for Deepening Inside Their Heart**
Takashi Ookaki, Masakazu Abe, Masahiro Yoshino, Yoshimasa Ohmoto and Toyoaki Nishida. (Kyoto University)

**Multi-criteria Decision Aid and Artificial Intelligence for Competitive Intelligence**
Dhekra Ben Sassi(National School of Computer Science), Anissa Frini(University of Quebec at Rimouski) and Wahiba Ben Abdessalam. (National School of Computer Science)

**Ontology-Based Fuzzy-Syllogistic Reasoning**
Mikhail Zarechnev and Bora Kumova. (Izmir Institute of Technology)

---

**Session 8C: Machine Learning (3)**

**Chair: Dr. Uk Jung**

**Mobile Application Recommendations Based on Complex Information**
Shuotao Yang, Hong Yu, Weiwei Deng and He Jiang. (Dalian University of Technology)

**The Regulation of Steam Pressure in a Drum Boiler by Neural Network and System Identification Technique**
Karin Kandananond. (Valaya Alongkorn Rajabhat University)

**Pattern Recognition Using the TTOCONROT**
César A. Astudillo(Universidad de Talca) and John Oommen(Carleton University).