ITQM
2013
Suzhou

1st International Conference on Information Technology and Quantitative Management

May 16-18, 2013
Suzhou, China
Welcome Message from the Conference Organizers

Welcome to Suzhou and ITQM 2013!

The First International Conference on Information Technology and Quantitative Management (ITQM 2013) take places at the Dushu Lake Hotel, Suzhou, “the Venice of China”. ITQM 2013 is organized by International Academy of Information Technology and Quantitative Management (IAITQM).

The International Conference on Information Technology and Quantitative Management is a global forum for exchanging research findings and case studies that bridge the latest information technology and quantitative management techniques. It explores how the use of information technology to improve quantitative management techniques and how the development of management tools can reshape the development of information technology. It covers all topics in the broad ranges of information technology and quantitative management including. Technical exchanges within the research community will encompass invited keynote lectures, special sessions, tutorials and workshops, panel discussions as well as poster presentations.

Information technology heavily improves management performance; especially any management with data-based quantitative analysis. The needs of quantitative management also affect the advancement of information technology. The theme for ITQM 2013 is “Advancing Innovation and Development of IT and Quantitative Management”, to mark the ever-increasing importance of and progress in Quantitative Management theory and practice in IT.

For this great event, we have invited the following world leading keynote speakers to give their current and future vision of Information Technology and Quantitative Management:

- Siwei Cheng——“Virtual Business Supported by Information Technology “, Chinese Academy of Sciences Research Center on Fictitious Economy and Data Science, China
- Daniel Berg——”Reflections by an Academic/Practitioner on the Management of Emerging Technologies”, Rensselaer Polytechnic Institute and the University of Miami, USA
- Florin Gheorghe Filip——“Green Manufacturing and Computer Aided Decision Making “, the Romanian Academy, Romania
- Cheng-Few Lee——“Dividend Policy and Dividend Payment Behavior: Theory and Evidence “, Rutgers University, USA.

In addition to our excellent keynote speakers, we selected 166 high-quality papers out of 356 submitted papers for presentation at the conference. These papers are published by Elsevier in their Procedia Computer Science series. They are collated into a single main track, four special sessions and nineteen workshops. The accepted papers are contributed by scholars and practitioners from many different countries across the globe. Furthermore, we have invited two well-known scholars and experts to share their valuable experience at the tutorial sessions.

ITQM relies strongly on the vital contributions of our workshop organizers to attract high quality papers in many subject areas. We would like to thank all committee members and reviewers for the main track, the special sessions and the workshops for their contribution to ensure a high standard for the accepted papers. We would like to express our gratitude to the local organizing committee for their enthusiastic work towards the success of ITQM 2013. We owe special thanks to our sponsors: Chinese Academy of Sciences Research Center on Fictitious Economy and Data Science, School of Management, University of Chinese Academy of Sciences, China-Singapore Suzhou Industrial Park, China Data Technology (Suzhou) Co., Ltd, Xi’an Jiaotong-Liverpool University, Institute of Policy and Management, Chinese Academy of Sciences, University of Nebraska at Omaha, Chinese Society for Management Modernization, National Natural Science Foundation of China, China Financial Futures Exchange, yihaodian.com, Advanced Academic Exchange Activities of Suzhou, Wintek Corporation and Footdisc Inc, for their generous support. We are also grateful for all graduate students at the Chinese Academy of Sciences who helped to handle the reviewing process and their volunteering works at this conference.

We wish you a successful and enjoyable conference in Suzhou!

THE ITQM 2013 ORGANIZERS:
Yong Shi, Youmin Xi, Peter Wolcott, Yingjie Tian, Jianping Li, Daniel Berg, Zhengxin Chen, Enrique Herrera-Viedma, Gang Kou, Heeseok Lee, Yi Peng, Lean Yu
Organizing Committees

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- Publications and Proceedings Chair: David Olson and Lean Yu
- Awards Chair: Daniel Berg and Yong Shi

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- Liansheng Zhou (Co-chair), China Data Technology (Suzhou) Co., Ltd, China
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- KaLok Man, Xi'an Jiaotong-Liverpool University, China
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• Fred Glover, OptTek Systems, Inc., USA
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• Chongfu Huang, Beijing Normal University, China
• Guimin Huang, Guilin University of Electronic Technology, China
• Wenxue Huang, Shantou University, China
• Zhimin Huang, Adelphi University, USA
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• Sushil Jajodia, George Mason University, USA
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• Gang Kou, University of Electronic Science and Technology of China, China
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• Victoria Kreps, Saint Petersburg Central Economic-Mathematical Institute, Russia
• Wikil Kwak, University of Nebraska at Omaha, USA
• Moussa Larbani, Islamic International University, Malaysia
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• Heeseok Lee, Korea Advanced Institute of Science and Technology, Korea
• Stanley Lee, Kansas State University, USA
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• Xingsen Li, NIT, Zhejiang University, China
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• Mike McGinnis, The Peter Kiewit Institute, University of Nebraska, USA
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• Boris Mirkin, National Research University Higher School of Economics, Russia
• Vadim V. Mottl, Tula State University, Russia
• Lingfeng Niu, Chinese Academy of Sciences, China
• David L. Olson, University of Nebraska at Lincoln, USA
• Yi Peng, University of Electronic Science and Technology of China, China
• David Poole, University of British Columbia, Canada
• Zhiquan Qi, Chinese Academy of Sciences, China
• Cliff T. Ragsdale, Virginia Polytechnic Institute and State University, USA
• Balasubramaniam Ramesh, Georgia State University, USA
• Fuji Ren, The University of Tokushima, Japan
• Francisco Ruiz, Universidad de Malaga, Spain
• Thomas Saaty, University of Pittsburgh, USA
• AhtiSalo, Helsinki University of Technology, Finland
• Isaac D. Scherson, University of California at Irvine, USA
• Prakash P. Shenoy, University of Kansas, USA
• P.M.A. Sloot, Universiteit van Amsterdam, The Netherlands
• Roman Slowinski, Poznan University of Technology, Poland
• David B Smith, University of Nebraska at Lincoln, USA
• Paulo de Souza, University of Tasmanian, Australia
• Christian Stummer, Bielefeld University, Germany
• Minghe Sun, University of Texas at San Antonio, USA
• Zixiang Tan, Syracuse University, USA
• Xijing Tang, Chinese Academy of Sciences, China
• Tetsuzo Tanino, Osaka University, Japan
• Xin Tian, Chinese Academy of Sciences, China
• Yingjie Tian, Chinese Academy of Sciences, China
• James Tien, University of Miami, USA
• Zenonas Turskis, Vilnius Gediminas Technical University, Lithuania
- Gwo-Hshiung Tzeng, National Chiao Tung University, Taiwan
- Luis G. Vargas, University of Pittsburgh, USA
- Rayford Vaughn, Mississippi State University, USA
- Enrique Herrera-Viedma, University of Granada, Spain
- Jyrki Wallenius, Aalto University School of Economics, Finland
- Hsiao-Fan Wang, National TsingHua University, Taiwan
- James Wang, Pennsylvania State University, USA
- Shouyang Wang, Chinese Academy of Sciences, China
- Xiaogang Wang, York University, Canada
- Xianhua Wei, Chinese Academy of Sciences, China
- Peter Wolcott, University of Nebraska at Omaha, USA
- Chongfeng Wu, Shanghai Jiaotong University, China
- Chunchi Wu, SUNY University at Buffalo, USA
- Jianhong Wu, York University, Canada
- Wenfeng Wu, Shanghai Jiaotong University, China
- Youmin Xi, Xi’an Jiaotong-Liverpool University, China
- Weixuan Xu, Chinese Academy of Sciences, China
- Yixian Yang, Beijing University of Post and Telecommunications, China
- Lean Yu, Beijing University of Chemical Technology, China
- Philip S. Yu, University of Illinois at Chicago, USA
- Po-lung Yu, University of Kansas, USA
- Edmundas Kazimieras Zavadskas, Vilnius Gediminas Technical University, Lithuania
- Milan Zeleny, Fordham University, USA
- Chengqi Zhang, University of Technology Sydney, Australia
- Haolan Zhang, NIT, Zhejiang University, China
- Lingling Zhang, Chinese Academy of Sciences, China
- Peng Zhang, Chinese Academy of Sciences, China
- Wei Zhang, Tianjin University, China
- Yanchun Zhang, Victoria University, Australia
- Yuejin Zhang, Central University of Finance and Economics, China
- Yihua Zhong, Southwest Petroleum University, China
- Ning Zhong, Maebashi Institute of Technology, Japan
- Xiaofei Zhou, Chinese Academy of Sciences, China
- Zongfang Zhou, University of Electronic Science and Technology of China
- Xingquan Zhu, University of Technology Sydney, Australia
- Yangyong Zhu, Fudan University, China
- Kirill Zinkovskiy, National Research University Higher School of Economics, Russia
Workshops and Organizers

**Special Session 01: Multicriteria Analysis with Imprecise Information and Criteria Interaction**  
Luiz Flavio Autran Monteiro Gomes, Ibmec/Rio de Janeiro, Brazil

**Special Session 02: Optimal Decisions on Production and Logistics**  
Hsiao-Fan Wang and Ying-Yen Chen, National TsingHua University, Taiwan

**Special Session 03: Soft Computing Methods in Quantitative Management**  
Florin Gheorghe Filip, Romanian Academy, Romania  
Ioan Dzitac, Aurel Vlaicu University of Arad and Agora University of Oradea, Romania

**Special Session 04: Fuzzy Preference Modelling, Decision Making and Consensus**  
Enrique Herrera-Viedma, Granada University, Spain  
Francisco Chiclana, De Montfort University, U.K.  
Francisco Javier Cabrerizo, UNED, Spain  
Ignacio Javier Pérez, University of Cadiz, Spain

**Workshop 01: First Workshop on Semantic Learning and Intelligent Awareness**  
Alex Liu, Michigan State University, USA  
Xiaofei Zhou, Chinese Academy of Sciences, China

**Workshop 02: DATICS-ITQM’13 Workshop**  
KaLok Man, Xi’an Jiaotong-Liverpool University, China

**Workshop 03: The 3rd Workshop on Risk Correlation Analysis and Risk Measurement**  
Jianping Li, Chinese Academy of Sciences, China  
Yi Peng, University of Electronic Science and Technology of China, China  
Xiaodong Lin, Rutgers University, USA

**Workshop 04: Intelligent Knowledge Management**  
Jifa Gu, Chinese Academy of Sciences, China  
Lingling Zhang, Chinese Academy of Sciences, China

**Workshop 05: The 7th International Workshop on Computational Methods in Energy Economics**  
Lean Yu, Beijing University of Chemical Technology, China  
Kaijian He, Beijing University of Chemical Technology, China

**Workshop 06: Supply Chain Decisions Considering Human Behaviors**  
Liang Liang, University of Science and Technology of China, China  
Qinglong Gou, University of Science and Technology of China, China  
Zhimin Huang, Adelphi University, USA

**Workshop 07: The First Workshop on Quality Safety Management**  
Haiyan Wang, Nanjing University of Finance and Economics, China

**Workshop 08: First Workshop on Data Leakage Prevention and Forensics**  
Jinqiao Shi, Chinese Academy of Sciences  
Xiaojun Chen, Chinese Academy of Sciences  
Peng Zhang, Chinese Academy of Sciences
Workshop 09: Credit Risk Assessment and Management  
Yixian Yang, Beijing University of Posts and Telecommunications, China

Workshop 11: Agent-based Modeling for Socio-economic Systems  
Wei Zhang, Tianjin University, China  
Renbin Xiao, Huazhong University of Science and Technology

Workshop 12: Optimization-based Data Mining  
Yingjie Tian, Chinese Academy of Sciences Research Center on Fictitious Economy and Data Science, China  
Yong Shi, Chinese Academy of Sciences Research Center on Fictitious Economy and Data Science, China  
Zhiquan Qi, Chinese Academy of Sciences Research Center on Fictitious Economy and Data Science, China

Workshop 13: Decision Procedures in Data Analysis  
Fuad Aleskerov, National Research University Higher School of Economics, Russian Academy of Sciences, Moscow, Russia

Workshop 14: On Supporting Informed Decision-Making in Real-Time: Where Environmental Sensing Meets the Data Analytics  
Paulo de Souza, University of Tasmania, Australia

Workshop 15: Next-Generation Network and its Applications  
Guimin Huang, Guilin University of Electronic Technology, China  
Guoyong Cai, Guilin University of Electronic Technology, China  
Xiaolan Xie, Guilin University of Technology  
Xiaojian Li, Guangxi Normal University, China  
Xiangzong Zhao, Guilin University of Electronic Technology, China

Workshop 16: Intelligent Decision Making and Extenics-based Innovation  
Xingsen Li, Ningbo Institute of Technology, Zhejiang University, China  
Haolan Zhang, Ningbo Institute of Technology, Zhejiang University, China  
Bin Shen, Ningbo Institute of Technology, Zhejiang University, China  
Yanbin Liu, Ningbo Institute of Technology, Zhejiang University, China

Workshop 17: The First Workshop on Quantitative Finance  
Xianhua Wei, University of Chinese Academy of Sciences, China  
Gongmeng Chen, Shanghai Jiaotong University, China  
Chongfeng Wu, Shanghai Jiaotong University, China  
Wenfeng Wu, Shanghai Jiaotong University, China
ITQM 2013 Program AT A GLANCE

**Wednesday, 15 May**

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<tr>
<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>14:00-21:00</td>
<td>Registration</td>
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**Thursday, 16 May**

<table>
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<th>Time</th>
<th>Event</th>
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<tr>
<td>08:00-17:00</td>
<td>Registration</td>
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<tr>
<td>08:30-09:00</td>
<td>Welcome Address (GBA)</td>
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<tr>
<td>09:00-09:50</td>
<td>Keynote I (GBA)</td>
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<tr>
<td>09:50-10:00</td>
<td>IAITQM Awards Ceremony</td>
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<td>10:00-10:20</td>
<td>Group Picture &amp; Coffee Break</td>
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<tr>
<td>10:20-11:10</td>
<td>Keynote II (GBA)</td>
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<td>11:10-12:00</td>
<td>Keynote III (GBA)</td>
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<td>12:00-13:30</td>
<td>Lunch Break</td>
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<tr>
<td>13:30-14:30</td>
<td>Tutorial I (MR1)</td>
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<tr>
<td>13:30-15:30</td>
<td>Session I</td>
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<tr>
<td></td>
<td>M01a(MR2), M02a(MR3), S04(MR4), W02a(MR5), W05(MR6), W08a(MR7), W12a(MR8)</td>
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<tr>
<td>15:30-15:50</td>
<td>Break</td>
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<td>Session II</td>
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<td>S02(MR1), M01b(MR2), M02b(MR3), M03(MR4), W02b(MR5), W06(MR6), W08b(MR7), W12b(MR8)</td>
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<tr>
<td>15:50-17:30</td>
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<tr>
<td>18:00-20:00</td>
<td>Banquet I</td>
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**Friday, 17 May**

<table>
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<tr>
<th>Time</th>
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<tbody>
<tr>
<td>08:00-12:00</td>
<td>Registration</td>
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<tr>
<td>09:00-09:50</td>
<td>Keynote IV (GBA)</td>
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<td>09:50-10:10</td>
<td>Coffee Break</td>
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<td>10:10-12:30</td>
<td>Session III</td>
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<td>M04(MR1), S03(MR2), W03(MR3), W09(MR4), W11(MR8), W13(MR6), W17(MR7)</td>
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<tr>
<td>12:30-14:00</td>
<td>Lunch Break (IAITQM Broad Meeting)</td>
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<td>14:00-15:00</td>
<td>Tutorial II (MR1)</td>
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<tr>
<td>14:00-15:20</td>
<td>Session IV</td>
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<td>S01(MR2), W01(MR3), W04(MR4), W15(MR8), W16(MR6), W17(MR7)</td>
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<tr>
<td>15:30-18:00</td>
<td>Visit Suzhou Industry Park</td>
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<tr>
<td>18:00-20:00</td>
<td>Banquet II (IAITQM Business Meeting)</td>
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**Room Symbol:** GBA (Grand Ballroom A), MR1 (Meeting Room 01), MR2 (Meeting Room 02), MR3 (Meeting Room 03), MR4 (Meeting Room 04), MR5 (Meeting Room 05), MR6 (Meeting Room 06), MR7 (Meeting Room 07), MR8 (Meeting Room 08).

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Conference Information

Hours of Registration
- Wednesday, 15 May, 14:00 – 21:00
- Thursday, 16 May, 08:00 – 17:00
- Friday, 17 May, 08:00 – 12:00

Tour Introduction
- Zhuozhengyuan Garden (The Humble Administrator’s Garden)
- Zhouzhuang Water Village
  Saturday, 18 May, 09:00-17:00

✓ Charge:
  Free for the foreign participants with foreign passport or people from Taiwan, Hong Kong, Macao Regions
  200 RMB for domestic participants

Social Programs
- Banquet I
  Introduction to IAITQM
  Thursday, 16 May, 18:00 – 20:00

- Banquet II
  IAITQM Business Meeting & Announcement of ITQM 2014—— Moscow, Russia
  Friday, 17 May, 18:00 – 20:00

Instruction for Speaker
- Keynote speech: 50 minutes
- Tutorial lecture: 60 minutes
- Oral presentation: 20 minutes
Keynote Speech

Keynote I (Grand Ballroom A: GBA)
Thursday May 16
09:00-09:50

Virtual Business Supported by Information Technology

Siwei Cheng
Director of Chinese Academy of Sciences Research Center on Fictitious Economy and Data Science,
Dean of School of Management, University of Chinese Academy of Sciences,
Honorary Chairman of the International Academy for Information Technology and Quantitative Management.

Chair: Yong Shi

Abstract: Virtual business is the integration of different parts across the whole supply chain from the very beginning to the final end. This talk will explore how virtual business is supported by information technology, including IPv.6.0, cloud computation, 2D coding, 4th party logistics, etc. It will also discuss the optimization strategy of virtual business for promoting the sustainable development of China’s economy.

Keynote II (Grand Ballroom A: GBA)
Thursday May 16
10:20-11:10

Reflections by an Academic/Practitioner on the Management of Emerging Technologies

Daniel Berg
Member of the National Academy of Engineering,
Institute Professor of Science and Technology,
Rensselaer Polytechnic Institute (RPI) and Distinguished Research Professor of Engineering, the University of Miami, USA

Chair: Florin Gheorghe Filip

Abstract: Emerging technologies are critically important and difficult to define. But we do define them! Are they emerging today or many indefinite decades from today? Are they managed in identical fashion in nanotechnology, biotechnology, information technology, energy technology, etc.? I don't think so. After working decades on technologies that have emerged or on some still emerging technologies or on not quite yet emerging technologies and also having researched and taught the basics of the management of technology, in these reflections I will attempt to explore some of the continuing issues and dilemmas of the management of emerging technologies.

Keynote III (Grand Ballroom A: GBA)
Thursday May 16
11:10-12:00

Dividend Policy and Dividend Payment Behavior: Theory and Evidence

Cheng-Few Lee
Distinguished Professor of Finance at Rutgers Business School, Rutgers University.

Chair: Florin Gheorghe Filip

Abstract: In this talk, we will first review the different theories of dividend policy and dividend payment behavior. Then the interrelationship of dividend policy theory and dividend payment behavior will be explored in detail. In addition, we investigate the investment decision and dividend policy jointly from a non-steady state to a steady state. We extend Higgins' (1977, 1981, and 2008) sustainable growth rate model and develop a dynamic model which jointly optimizes the growth rate and payout ratio. We optimize the firm value to obtain the optimal growth rate in terms of a logistic equation and find that the steady state growth rate can be used as the benchmark for the mean-reverting process of the optimal growth rate. We also investigate the specification error of the mean and variance of dividend per share when introducing the stochastic growth rate. Empirical results support the mean-reverting process of the growth rate and the importance of covariance between the profitability and the growth rate in determining dividend payouts. The intertemporal behavior of the covariance may shed some light on the fact of disappearing dividends over decades.

Keynote IV (Grand Ballroom A: GBA)
Friday May 17
09:00-09:50

Green Manufacturing and Computer Aided Decision Making
Florin Gheorghe Filip  
Vice-President of the Romanian Academy,  
Chairman of the “Information Science and Technology” section of the Academy,  
Chairman of the IFAC Technical Committee on “Large-Scale Complex Systems”,  
Founding member of the International Academy for Information Technology and Quantitative Management,  
University of Nebraska at Omaha

Chair: Jifa Gu

Abstract: This talk aims at presenting the main concepts and challenges of sustainable production and logistic systems and their impact on the design of modern information systems meant to support decisions. In particular, several recent results reported in the field of “green manufacturing systems” (GMS) are reviewed first. Then a survey of various methodologies which have been utilized for the management and control of complex, large-scale systems (including hierarchical, heterarchical, and collaborative schemes) is made. The third part of the paper addresses several design aspects in building and implementing usable, useful and effectively utilized decision support systems (DSS). Special attention is paid to describing the human-computer interface (HCI) design and relevant standards utilized, various architectures and combinations of basic technologies in the DSS, multi-criteria models for choosing the ITC (information technology and communications) platform and recent business models and novel concepts, such as "software as a service", and "cyber technical systems" (CTS).

Tutorial I (MR1)  
Thursday May 16  
13:30-14:30

New Concepts and Trends in the MCDM Field for Solving Actual Problems - New Hybrid MCDM Model

Gwo-Hshiung Tzeng  
Distinguished Chair Professor, Graduate Institute of Project Management, Kainan University,  
Institute of Management of Technology, National Chiao Tung University

Chair: Zhengxin Chen

Abstract: How trends in future prospects? Which problems will be improved for satisfying the users'/customers'/social needs in marketing situations and how overall considering problems in dimensions and criteria can be achieved the aspiration levels? However, we find that the traditional MCDM field ignored some important new concepts and trends, needed some assumptions limit/defects to solve actual real-world problems. Therefore in our researches some new concepts and trends in the MCDM field for solving actual problems have been proposed as follows. First, the traditional model assumes that the criteria in value-created are independent and hierarchical in structure; however, criteria are often interdependent in real-world problems; because “Statistics and Economics are unrealistic in the real world”, so DEMATEL technique can be used to find the interrelationship matrix and build a influential network relation map (INRM) for solving the relationship problems in the real world. Second, the relative good solution from the existing alternatives is replaced by the aspiration levels to avoid "Choose the best among inferior choices/alternatives", i.e., avoid "Pick the best apple among a barrel of rotten apples". Third, the emphasis in the field has shifted from ranking and selection when determining the most preferable approaches to performance improvement of existing methods based on INRM, because “we need a systematic approach to problem-solving; instead of addressing the systems of the problem, we need to identify the sources of the problem”. Fourth, information fusion/aggregation such as fuzzy integrals, basically, a non-additive/super-additive model, has been developed to aggregate the performances. Therefore, in order to overcome the defects of conventional MADM method, we have focused on developing a series of new Hybrid Dynamic Multiple Criteria Decision Making (HDMADM) method for solving the complication dynamic problems in real world and applying to improve the real issues in the trends and prospects. Finally some empirical real cases are illustrated to demonstrate effectiveness of the proposed new hybrid MADM methods. From those real cases, the best performance improvement strategies can be devised to provide the most suitable/reasonable effective and efficient strategies for improving the gaps to reach the aspiration level. Fifth, we proposed a new thinking of MODM models with changeable spaces to help the decision-makers for win-win planning/designing to achieve the aspiration level, which is better than to achieve the ideal point or Pareto optimal solutions.

Tutorial II (MR1)  
Friday May 17  
14:00-15:00
Information Reuse in Hospital Information System: New Trends in Data-Oriented Hospital Management

Shusaku Tsumoto

Department of Medical Informatics, Faculty of Medicine, Shimane University

Chair: Wei Zhang

Abstract: Twenty years have passed since clinical data were stored electronically as a hospital information system. Stored data give all the histories of clinical activities in a hospital, including accounting information, laboratory data and electronic patient records. Due to the traceability of all the information, a hospital cannot function without the information system. Reuse of data as data mining in hospital information is a first step to innovative intelligent hospital services, which consists of the following three layers of hospital management: services for hospital management, devices for medical staff and services for patients. Data mining in hospital information system plays a central role in achieving these layers. In this tutorial, a general framework on innovation of hospital services based on data mining is presented and applied to data extracted from HIS in order to capture the characteristics of clinical activities in hospital as shown in the following illustrative examples. First, the chronological overview of hospital activities is shown: periodic behavior of the number of orders can be viewed as a "life-cycle" of a hospital. Secondly, a pattern of long-term follow up patients is extracted with respect to the number of orders by using HIS data. Thirdly, trajectories mining technique is applied to temporal analysis the number of orders. Finally, similarity-based analysis is applied to temporal trends of the numbers of nursing orders for several diseases.

Detailed Schedule

Main Track

M01a: Main Track I a (MR2) Thu, 16 May 2013 13:30-15:30
Chair: Gang Kou

1. POS Data and Your Demand Forecast (ID_004)
   Author(s): Jishan Zhu

2. Relation Based Access Control in Campus Social Network System(ID_039)
   Author(s): Zhao Du, Yuguang Liu, Ye Wang

3. China’s Huji System Reform and Social Computing (ID_046)
   Author(s): Weidong Wu

4. The Role of Text Pre-processing in Sentiment Analysis(ID_051)
   Author(s): Emma Haddi, Xiaohui Liu, Yong Shi

5. Improving Lap-TSVM with successive overrelaxation and differential evolution(ID_056)
   Author(s): Weijie Chen, Yuanhai Shao, Yafen Ye

6. Proximal Plane Clustering via Eigenvalues(ID_065)
   Author(s): Yuanhai Shao, Lan Bai, Zhen Wang, Xiangyu Hua, Naiyang Deng

7. Examining Disease Risk Factors by Mining Publicly Available Information(ID_104)
   Author(s): Jay Pedersen, Fangyao Liu, Fahad Alfarraj, Harry Ngondo

8. Metadata-based Information Resource Integration for Research Management(ID_133)
   Author(s): Zhilong Chen, Dengsheng Wu, Jingxiu Lu, Yuanping Chen

9. Scene Image Mosaic Based on Three Freedom Degree(ID_136)
   Author(s): Chengcheng Liu, Yong Shi

M01b: Main Track I b (MR2) Thu, 16 May 2013 15:50 - 17:30
Chair: Xiaodong Lin

1. Feature Selection with Attributes Clustering by Maximal Information Coefficient(ID_139)
   Author(s): Xi Zhao, Wei Deng, Yong Shi

2. Pattern Discovery in DNS Query Traffic(ID_169)
   Author(s): Weizhang Ruan, Ying Liu, Renliang Zhao

3. A New Character Segmentation Approach for Off-Line Cursive Handwritten Words(ID_194)
   Author(s): Amit Choudhary, Rahul Rishi, Savita Ahlawat

4. A Systematic Approach to Order Fulfillment of On-demand Delivery Service for Bento Industry(ID_203)
   Author(s): Rongchang Chen, Chih Hui Shieh, Kaiting Chan, Shinyi Chiu, Jyun-You Fan, Yuting Chang, Nuojhen Ma
5. A Unified Theoretical Framework for Data Mining (ID_210)
   Author(s): Dost Muhammad Khan, Nawaz Mohamudally, D K R Babajee

6. Supervised Discretization with GK−τ (ID_216)
   Author(s): Wenxue Huang, Yuanyi Pan, Jianhong Wu

M02a: Main Track II a (MR3) Thu, 16 May 2013
Chair: Zhimin Huang
13:30-15:30

1. Multi-Criteria Risk Assessment Of a Construction Project (ID_003)
   Author(s): Jolanta Tamošaitienė, Edmundas Kazimieras Zavadskas, Zenonas Turskis

2. Towards the Definition of Relations Between Clusters in Multi-criteria Decision Aid Clustering (ID_014)
   Author(s): Baroudi Rouba, Safia Nait Bahloul

3. The Theory of Multi-criteria and Multiple Constraint-level Linear Programming for Oilfield Development (ID_020)
   Author(s): Yihua Zhong, Dandan Chen, Guangfeng Cui, Yanlin Jia, Lina Li, Yuxin Liao

4. A Simple Decomposition Alternating Direction Method For Matrix Completion (ID_034)
   Author(s): Lingfeng Niu, Xi Zhao

5. Review of Multiple Criteria and Multiple Constraint-level Linear Programming (ID_069)
   Author(s): Dandan Chen, Yihua Zhong, Yuxin Liao, Lina Li

6. A Data Mining Perspective of the Newsvendor Problem (ID_095)
   Author(s): Xiaodan Yu, Zhiquan Qi, Yuanmeng Zhao

M02b: Main Track II b (MR3) Thu, 16 May 2013
Chair: Haolan Zhang
15:50-17:30

1. Application of Multi-Objective Genetic Algorithm to Quotation of Global Garment Companies (ID_205)
   Author(s): Shiue-Shiun Li, Rong-Chang Chen, Ying-Hua Chen, Mei-Hui Wu, Kuan-Hsuan Leng, Hsin-Yu Wang

2. Revised PROMETHEE II for Improving Efficiency in Emergency Response (ID_225)
   Author(s): Hongju Zhao, Yi Peng, Wei Li

3. The Market Status Tendency, the Corporation Specified Information and the Market Announcement Effect of M&A (ID_081)
   Author(s): Jing Yu, Yong Xu, Pandi Sun, Haoyu Yu, Bin Xu

4. Using Fuzzy Integral Approach to Enhance Site Selection Assessment – A Case Study of the Optoelectronics Industry (ID_998)
   Author(s): Yao-Chen Kuo, Shih-Tong Lu, Gwo-Hshiung Tseng, Ying-Chieh Lin, Yu-Shyang Huang

5. An Analysis of Internal Control Problem of State-owned Highway Construction Enterprise--Take Huanyu Highway Construction & Development Co., Ltd. as an Example (ID_1001)
   Author(s): Hongyu Zhou, Hesheng Zhou, Zhiwei Tian

M03: Main Track III (MR4) Thu, 16 May 2013
Chair: Xiaohui Liu
15:50 - 17:30

1. User Acceptance Towards Web-Based Learning Systems: Investigating The Role of Social, Organizational and Individual Factors in European Higher Education (ID_038)
   Author(s): Ali Tarhini, Kate Hone, Xiaohui Liu

2. Expanding Database Keyword Search for Database exploration (ID_052)
   Author(s): Binaya Balla, Zhengxin Chen

3. Exploring Database Keyword Search for Association Studies between Genetic Variants and Diseases (ID_053)
   Author(s): Dhwal Verma, Hesham H. Ali, Zhengxin Chen

   Author(s): Ye Wang, Zengliang Liu, Zhao Du, Yong Huang

5. Design of the Data Acquisition System Based on STM32 (ID_173)
   Author(s): Huifu Zhang, Wei Kang
6. A Space Increased Reversible Information Hiding Technique by Reducing Redundant Recording (ID_202)
   Author(s): Jeanne Chen, Tung hou Chen, Wien Hong, Chi-Nan Lin, Meichen Wu, Hanyan Wu

7. Systematic Approach to Successful Implementation of ITIL (ID_999)
   Author(s): Norita Ahmad, Zulkifli M. Shamsudin

Special Session 01
Multicriteria Analysis with Imprecise Information and Criteria Interaction

S01 (MR2) Fri, 17 May 2013 14:00-15:20
Chair: Luiz Gomes

1. Criteria Interactions in Multiple Criteria Decision Aiding: A Choquet Formulation for the Todim Method (ID_006)
   Author(s): Luiz Flavio Autran Monteiro Gomes, Maria Augusta Soares Machado, Francisco Ferreira da Costa, Luis Alberto Duncan Rangel

2. Dealing the Selection of Project Management through Hybrid Model of Verbal Decision Analysis (ID_054)
   Author(s): Plácido Rogerio Pinheiro, Thais Cristina Sampaio Machado, Isabelle Tamanini

3. Developing Sustainable SCM Evaluation Model using Fuzzy AHP in Publishing Industry (ID_061)
   Author(s): Meysam Shaverdi, Mohammad Rasoul Heshmati, Ebrahim Eskandaripour, Ali Akbar Akbari Tabar

4. Strategic Vendor Selection Criteria (ID_097)
   Author(s): Chun-Ying Shen, Kun-Tzu Yu

5. Robust Optimization for Multiobjective Programming Problems with Imprecise Information (ID_106)
   Author(s): Farhad Hassanzadeh, Hamid Nemati, Minghe Sun

Special Session 02
Optimal Decisions on Production and Logistics

S02 (MR1) Thu, 16 May 2013 15:50-17:30
Chair: Hsiao-Fan Wang

1. Two-level Stackelberg Game for Subsidy and Penalty Decisions on a Green Industry Sector (ID_025)
   Author(s): Hsiao-Fan Wang

2. An Integrated Inventory Model with Order-Size-Dependent Trade Credit and Quality Improvement (ID_026)
3. Smart Inventory Management System of Food-Processing-and-Distribution Industry (ID_041)
Author(s): Cheng-Ju Chuang, Chia-Huei Ho, Liang-Yuh Ouyang, Chien-Wei Wu

4. Fuzzy Flexible Delivery and Pickup Problem with Time Windows (ID_047)
Author(s): Chih-Chin Liang

Special Session 03
Soft Computing Methods in Quantitative Management

Author(s): Carlos Veláquez-Villada, Yezid Donoso

2. Energy Load Balancing Strategy to Extend Lifetime in Wireless Sensor Networks (ID_087)
Author(s): German A. Montoya, Yezid Donoso

3. Harmonic Fractals in the Brain: Transient Tuning and Synchronous Coordination in the Quasi-Chaotic Background of Ongoing Neural EEG Activity (ID_094)
Author(s): Hernán A. Díaz, Felisa M. Córdova

4. Olive Fruits Recognition Using Neural Networks (ID_117)
Author(s): Gabriel Gatica, Stanley Best, José Ceroni, Gastón Lefranc

5. A Fast Multifractal Model for Self-Similar Traffic Flows in High-Speed Computer Networks (ID_118)
Author(s): G. Millán, G. Lefranc

6. Goal Programming as A Decision Tool for Performance-Based Budgeting (ID_182)
Author(s): Luminita Zamfirescu, Constantin-Bala Zamfirescu

7. A New Approach to Detect and Extract Characters from Off-Line Printed Images and Text (ID_195)
Author(s): Amit Choudhary, Rahul Rishi, Savita Ahlawat

8. Toward a Hybrid Approach of Primitive Cognitive Network Process and Particle Swarm Optimization Neural Network for Forecasting (ID_201)
Author(s): Guangjin Zhang, Kevin Kam Fung Yuen

Special Session 04
Fuzzy Preference Modelling, Decision Making and Consensus

S04 (MR4) Thu, 16 May 2013 13:30-15:30
Chair: Enrique Herrera-Viedma

1. Prioritized Multi-Criteria Decision Making Based on the Idea of PROMETHEE (ID_019)
Author(s): Xiaohan Yu, Zeshui Xu, Ying Ma

2. Studies on Consistency Measures of Hesitant Fuzzy Preference Relations (ID_024)
Author(s): Bin Zhu

3. Study on Interval Intuitionistic Fuzzy Multi-Attribute Group Decision Making Method Based on Choquet Integral (ID_036)
Author(s): Jindong Qin, Xinwang Liu

4. Consensus Rules with Minimum Adjustments for Multiple Attribute Group Decision Making (ID_043)
Author(s): Bowen Zhang, Yucheng Dong

5. Optimal Weight Determination and Consensus Formation under Fuzzy Linguistic Environment (ID_044)
Author(s): Yejun Xu, Huimin Wang

Author(s): Weize Wang, Xinwang Liu

7. Linguistic Consensus Models Based on a Fuzzy Ontology (ID_200)
Author(s): I.J. Perez, R. Wikström, J. Mezei, C. Carlsson, K. Anaya, E. Herrera-Viedma

Workshop 01
First Workshop on Semantic Learning and Intelligent Awareness
1. **An HMM-based Approach for Text Classification** (ID_057)
   Author(s): J.G. Liang, X.F. Zhou, P. Liu, L. Guo, S. Bai

2. **Exploring Determinants of Inflation in China Based on L1-Epsilon-Twin Support Vector Regression** (ID_092)
   Author(s): Yafen Ye, Hui Cao, Lan Bai, Zhen Wang, Yuanhai Shao

3. **Bit-Parallel Multiple Approximate String Matching Based on GPU** (ID_129)
   Author(s): Kefu Xu, Wenke Cui, Yue Hu, Li Guo

4. **A Multi-Level Analysis Framework in Network Security Situation Awareness** (ID_187)
   Author(s): Haoliang Zhang, Jinqiao Shi, Xiaojun Chen

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**Workshop 02**
DATICS-ITQM'13 Workshop

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**W02a (MR5)**
Chair: KaLok Man

1. **DEM: Direct Estimation Method for Photovoltaic Maximum Power Point Tracking** (ID_049)
   Author(s): Jiemings Ma, K.L. Man, T.O. Ting, N. Zhang, Sheng-Uei Guan, Prudence W.H. Wong

2. **A Middleware Architecture for Price Comparison Service on Mobile Phones** (ID_55)
   Author(s): Gangmin Li, Zhun Shen

3. **Study on Government Procurement Behavior Based on the Agent Simulation** (ID_070)
   Author(s): Xing Enquan, Chen Mengying, Li Cheng

4. **State-of-art Power Line Communications Channel Modelling** (ID_088)
   Author(s): Wenfei Zhu, Xu Zhu, Enggee Lim, Yi Huang

5. **Barriers of B2B e-Business Adoption in Indonesian SMEs: A Literature Analysis** (ID_105)
   Author(s): Irma Janita, Woon Kian Chong

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**W02b (MR5)**
Chair: KaLok Man

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1. **Can Representation Bias Help the Returns Forecast and Portfolio Selection?** (ID_059)
   Author(s): Daping Zhao, Yong Fang

2. **A Factor Model for the Calculation of Portfolio Credit VaR** (ID_093)
   Author(s): Ping Li, Xiaoxu Wang, Haibo Wang

3. **Copula Based Change Point Detection for Financial Contagion in Chinese Banking** (ID_123)
   Author(s): Xiaojian Zhu, Yilin Li, Changzhi Liang, Jianming Chen, Dengsheng Wu

4. **The Systematic Controllability of Xinjiang Cotton Production in China Based on Control Theory** (ID_128)
   Author(s): Yulan Chen, Haizheng Yang, Weizhong Liu

5. **Predicting the Removal of Special Treatment or Delisting Risk Warning for Listed Company in China with Adaboost** (ID_144)
   Author(s): Ligang Zhou

6. **The Impact of Interest Rate on Information Flow Interpretation: Evidence from ChiNext** (ID_185)
   Author(s): Yongjie Zhang, Lina Feng, Xi Jin, Dehua Shen
7. The Research of Liquidity Risk Measurements in China Stock Market(ID_190)
   Author(s): Lili Li, Yuhui Feng

8. Integrating Credit and Market Risk: A Factor Copula Based Method(ID_197)
   Author(s): Changzhi Liang, Xiaoqian Zhu, Yilin Li, Xiaolei Sun, Jianming Chen, Jianping Li

9. The Impact of Investors’ Risk Attitudes on Skewness of Return Distribution(ID_218)
   Author(s): Fenghua Wen, Mengxian Tao, Zhifang He, Xiaohong Chen

10. Method of Value-At-Risk and Empirical Research for Shanghai Stock Market(ID_227)
    Author(s): Qi Chen, Rongda Chen

**Workshop 04**
Intelligent Knowledge Management

**W04** (MR4)
Chair: Jifa Gu
Fri, 17 May 2013
14:00 - 15:20

   Author(s): Yibing Chen, Lingling Zhang, Liang Zhang

2. Pattern Analysis in the Study of Science, Education and Innovative Activity in Russian Regions(ID_115)
   Author(s): Aleskerov F., Egorova L., Gokhberg L., Myachin A., Sagieva G.

3. Based on Information Fusion Technique with Data Mining in the Application of Finance Early-Warning(ID_132)
   Author(s): Liang Zhang, Lingling Zhang, Weili Teng, Yibing Chen

4. An Approach to Build Industry Asset Price Index: Take Four Industries for Examples(ID_206)
   Author(s): Fan Meng, Ye Wang, Jing Li

5. Data, Information, Knowledge, Wisdom and Meta-Synthesis of Wisdom-Comment on Wisdom Global and Wisdom Cities(ID_208)
   Author(s): Jifa Gu

**Workshop 05**
The 7th International Workshop on Computational Methods in Energy Economics

**W05** (MR6)
Chair: Lean Yu
Thu, 16 May 2013
13:30 - 15:30

1. Scenario Simulation and Policy Analysis on Energy Development in Qinghai Province(ID_120)
   Author(s): Yuying Yang, Xiaolei Sun, Xiaoqian Zhu, Yongjia Xie

2. Recent Research in Project Finance —A Commented Bibliography(ID_157)
   Author(s): Dirk Kayser

   Author(s): Li Li, Chengmei Diao

   Author(s): Leya Wu, Weihua Zeng

5. The Influence Factor Analysis of Comprehensive Energy Consumption in Manufacturing Enterprises(ID_235)
   Author(s): Geoffrey KF Tso, Fangtao Liu, Ke Liu

6. Energy Time Series Data Analysis Based on a Novel Integrated Data Characteristic Testing Approach(ID_237)
   Author(s): Ling Tang, Chenghao Wang, Shuai Wang

**Workshop 06**
Supply Chain Decisions Considering Human Behaviors

**W06** (MR6)
Chair: Qinglong Gou
Thu, 16 May 2013
15:50 - 17:30

1. The Analysis of Peasant Households’ Collective Brand Maintenance Behavior in the “One Village, One Product” Program of China(ID_008)
   Author(s): Xujin Pu, Li Jiang

2. Manufacturer’s Pricing Strategy for Supply Chain with an Inequity-averse Retailer(ID_030)
   Author(s): Ke Wang, Qinglong Gou, Ling Yang, Liang Liang
3. Supply Chain Pricing Models Considering the Retailer’s Retaliation Behavior (ID_089)
   Author(s): Yan Zhang, Juan Li, Qinglong Gou

4. New Product Pricing Strategy in the Social Media Era (ID_091)
   Author(s): Juzhi Zhang, Qinglong Gou, Zhimin Huang, Liang Liang

5. Cleaning up Supply Chain Data Using Microsoft Excel (ID_103)
   Author(s): Jishan Zhu

Workshop 08
First Workshop on Data Leakage Prevention and Forensics

W08a (MR7) Thu, 16 May 2013
Chair: Jinqiao Shi
13:30 - 15:30

1. Towards Analyzing and Improving Service Accessibility under Resource Enumeration Attack (ID_146)
   Author(s): Xiao Wang, Jinqiao Shi, Li Guo

   Author(s): Xiaojun Chen, Zicheng Wei, Yigu Pu, Jinqiao Shi

3. A Three-Dimensional Evaluation Model For Network Management System (ID_217)
   Author(s): Fei Xu, Jinqiao Shi, Xiaojun Chen, K. P. Chow

4. A Framework of Evaluation Location Privacy in Mobile Network (ID_191)
   Author(s): Chao Lee, Yunchuan Guo, Lihua Yin

5. A Recommendation-based Matchmaking Scheme for Multiple Mobile Social Networks against Private Data Leakage (ID_073)
   Author(s): Yong Wang, Jie Hou, Yuanwei Tan, Xiao Nie

6. A Multiple Watermarking Algorithm For Texts Mixed Chinese And English (ID_147)
   Author(s): Rui Xu, Xiaojun Chen, Jinqiao Shi

7. A Bigram Based Real Time DNS Tunnel Detection Approach (ID_148)
   Author(s): Cheng Qi, Xiaojun Chen, Cui Xu, Jinqiao Shi, Peipeng Liu

W08b (MR7) Thu, 16 May 2013
Chair: Peng Zhang
15:50 - 17:30

1. Mining Explainable User Interests from Scalable User Behavior Data (ID_074)
   Author(s): Jun Li, Peng Zhang

2. Advertisements Click-Through Rate Prediction using Multiple Criteria Linear Programming Regression Model (ID_116)
   Author(s): Fang Wang, Warawut Suphamitmongkol, Bo Wang

3. The Research of Weighted Community Partition Based on Sim Hash (ID_076)
   Author(s): Yang Li, Ying Sha, Jixi Shan, Kai Xu

4. Distributed OSN Crawling System Based on Ajax Simulation (ID_137)
   Author(s): Jixi Shan, Ying Sha, Yang Li, Kai Xu, Li Guo

5. EPLog Cleaner: Improving Data Quality of Enterprise Proxy Logs for Efficient Web Usage Mining (ID_135)
   Author(s): Hongzhou Sha, Tingwen Liu, Peng Qin, Yong Sun, Qingyun Liu

   Author(s): Wenyu Zang, Peng Zhang, Xiao Wang, Jinqiao Shi, Li Guo

Workshop 09
Credit Risk Assessment and Management

W09 (MR4) Fri, 17 May 2013
Chair: Zongfang Zhou
10:10 - 12:30

1. Risk Incentive Problems between a Lender & a Borrower and Possible Ways of Mitigation (ID_013)
   Author(s): Hiroshi Inoue, Masatoshi Miyake, Satoru Takahashi
2. Study on the Influence Factors of High-tech Enterprise Credit Risk: Empirical Evidence from China’s Listed Companies(ID_015)
   Author(s): Mu Zhang, Ying He, Zongfang Zhou

3. The Model And Empirical Research of Application Scoring Based on Data Mining Methods(ID_021)
   Author(s): Hui Lai, Li Shuai, Zongfang Zhou

4. Influence of Psychological and Emotional Factors on the Venture Enterprise Value and the Investment Decision-Making(ID_027)
   Author(s): Jing Gu, Hao Chen, Xian Zhang

5. The Evolutionary Game Analysis of Credit Behavior of SME in Guaranteed Loans Organization(ID_062)
   Author(s): Chao Xu, Zongfang Zhou

6. Are There Some Manipulations of SHIBOR: A Hypothesis Testing Based on Financial Products Linked to SHIBOR(ID_107)
   Author(s): Lin Chen, Zongfang Zhou

7. The Research on Credit Risk of Business Groups Based on Related Guarantee(ID_111)
   Author(s): Yang Yang, Li Li, Zongfang Zhou

Workshop 12
Optimization-based Data Mining

W12a (MR8)
Thu, 16 May 2013
13:30 - 15:30

1. Influence Analysis of FDI on China’s Industrial Structure Optimization(ID_023)
   Author(s): Qiong Zhao, Minyu Niu

2. Sensitivity Analysis of b in MCLP Model for Credit Card-holders Classification(ID_060)
   Author(s): Aihua Li, Yongli Yu, Zhidong Liu

3. The Best Separating Decision Tree Twin Support Vector Machine for Multi-Class Classification(ID_064)
   Author(s): Yuanhai Shao, Weijie Chen, Wenbiao Huang, Zhimin Yang, Naiyang Deng

4. Feature Selection Based on Linear Twin Support Vector Machines(ID_067)
   Author(s): Zhimin Yang, Jun-Yun He, Yuanhai Shao

5. An Embedded Backward Feature Selection Method for MCLP Classification Algorithm(ID_084)
   Author(s): MeiHong Zhu, Jie Song

6. Support Vector Regression for Newspaper/Magazine Sales Forecasting(ID_096)
   Author(s): Xiaodan Yu, Zhiquan Qi, Yuanmeng Zhao

Workshop 11
Agent-based Modeling for Socio-economic Systems

W11 (MR8)
Fri, 17 May 2013
10:10 - 12:30

Chair: Renbin Xiao

1. An Agent-based Model of Social Norm and Cooperation(ID_068)
   Author(s): Tongkui Yu, Li Zhang

2. An Evolutionary Game Model of Financial Markets with Heterogeneous Players(ID_083)
   Author(s): Honggang Li, Chensheng Wu, Mingyu Yuan

3. Vulnerability Analysis of Symbiosis Networks of Industrial Ecology Parks(ID_101)
   Author(s): Yu Zeng, Renbin Xiao, Xiangmei Li

4. Evolutionary Mechanism and Information Supervision of Public Opinions in Internet
   Author(s): Renbin Xiao, MR8 based Modeling for Socio-supervision Evolutionary Industrial Ecology Parks
   Author(s): Yuan He, Yiming Wang, Lei Wang

5. Structure Emergence in the Evolution of Social Networks and Its Case Study(ID_141)
   Author(s): Zhenwu Tao, Renbin Xiao, Lei Wang

6. Research on Delay Characteristics of Information in Scale-free Networks Based on Multi-Agent Simulation(ID_145)
   Author(s): Xiaoquang Gong, Jie Xu

7. Performance Evaluation of a Supply Chain Network (ID_158)
   Author(s): Tinggui Chen, Xiaoqing Gong

   Author(s): Zhigang Zhao, Wei Zhang, Shanchong Shi
Workshop 13
Decision Procedures in Data Analysis

W13 (MR6) Fri, 17 May 2013 10:10 - 12:30
Chair: Faud Aleskerov

1. **IT for Corruption Suppression**(ID_037)
   Author(s): Alexander Vasin, Pavel Nikolaev, Anton Urazov

2. **The Threshold Decision Making**(ID_066)
   Author(s): Fuad T. Aleskerov, Vyacheslav V. Chistyakov

3. **Potential Optimality of Pareto Optima**(ID_078)
   Author(s): Vladislav V. Podinovski

4. **Estimation of Conflict and Decreasing of Ignorance in Dempster-Shafer Theory**(ID_114)
   Author(s): Alexander Lepskiy

5. **Super-Threshold Procedures and Their Application to the Search Problem**(ID_131)
   Author(s): Fuad Aleskerov, Evgeny Mitchkin, Sergey Shvydun, Vyacheslav Yakuba

   Author(s): Andreas Merikas, Anna Merika, Henry Penikas

7. **Matrices of Forests, Analysis of Networks, and Ranking Problems**(ID_178)
   Author(s): Pavel Chebotarev, Rafig Agaev

Workshop 15
Decision Procedures in Data Analysis

W15 (MR8) Fri, 17 May 2013 14:00 - 15:20
Chair: Guimin Huang

1. **A New Data Processing Algorithm Based on Model Fitting for Wireless Sensor Networks**(ID_035)
   Author(s): Guimin Huang, Yuanyuan Chen, Pingshan Liu, Ya Zhou, Siyun Liu

2. **A Task Scheduling Algorithm Based on Qos-Driven in Cloud Computing**(ID_179)
   Author(s): Xiaonian Wu, Mengqing Deng, Runlian Zhang, Bing Zeng, Shengyuan Zhou

3. **A Trust Evaluation Model for Cloud Computing**(ID_180)
   Author(s): Xiaonian Wu, Runlian Zhang, Bing Zeng, Shengyuan Zhou

Workshop 16
Intelligent Decision Making and Extenics-based Innovation

W16 (MR6) Fri, 17 May 2013 14:00 - 15:20
Chair: Xingsen Li

1. **Customer Satisfaction Function for Innovative Product Management Based on Extenics**(ID_050)
   Author(s): Zhongbiao Xiang, Xingsen Li, Jian Yang

2. **Extenics-based Test Generation for UML Activity Diagram**(ID_151)
   Author(s): Liping Li, Xingsen Li, Tao He, Jie Xiong

3. **Study on Innovation Capability of College Students Based on Extenics and Theory of Creativity**(ID_152)
   Author(s): Ailing Chen, Liping Li, Xingsen Li, Jun Zhang Lei Dong

4. **Study on Business Process Knowledge Creation and Optimization in Modern Manufacturing**
Enterprises (ID_156)
Author(s): Libing Shu, Shifeng Liu, Liping Li

5. The Study of the Relationship between Interaction Orientation and Business Performance (ID_165)
Author(s): Ping Yuan, Yanbin Liu

Author(s): Zhiwang Zhang, Xinseng Li, Hailin Zou, Shiyong Kang, Guangxia Gao

7. Analysis of The Badminton Match-Throwing In London Olympics (ID_196)
Author(s): Hongzhi Yang, Wei Liu

Workshop 17
The First Workshop on Quantitative Finance

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<tr>
<th>W17 (MR7)</th>
<th>Fri, 17 May 2013</th>
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<tr>
<td>Chair: Xianhua Wei</td>
<td>10:10 – 15:20</td>
</tr>
</tbody>
</table>

1. A New Measurement of Sectoral Concentration of Credit Portfolios (ID_170)
Author(s): Yibing Chen, Xianhua Wei, Lingling Zhang

2. Sector Indices Correlation Analysis in China’s Stock Market (ID_175)
Author(s): Dingmu Cao, Wen Long, Wenning Yang

3. Trade Duration and Liquidity of Chinese Stock Market (ID_176)
Author(s): Bin Li, Mingyue Qi

Author(s): Haizhen Yang, Yuan Xiong, Yujing Ze

5. Investigation and Analysis on Current Situation of Rural Cooperative Finance in Xinjiang (ID_199)
Author(s): Jurat Ismail, Xianhua Wei

6. The Probe Algorithm with Information Map: A New Dynamic Method for Correlation Analysis (ID_207)
Author(s): Yehong Liu, Xiaoying Huang, Kun Guo
The inauguration meeting of IAITQM successfully took place in Omaha of United States on Sunday, June 3, 2012. More than 50 participants, coming from China, United States, Australia, South Korea, Japan, The Netherlands, Poland, Romania, Singapore, Spain, Lithuania, Turkey and other countries, attended the meeting.

IAITQM is glad to have Prof. Siwei Cheng (Director of CAS FEDS), Mr. Walter Scott (Chairman of Level 3 Communications Inc., board member of Berkshire Hathaway Inc) and Prof. James Tien (University of Miami) to serve as the Honorary Chairmen. IAITQM attendees discussed and passed the IAITQM bylaws, and held the first election. Attendees elected Prof. Yong Shi as the President, Prof. Peter Wolcott as the Vice President for Conferences, Prof. Wikil Kwak as the Vice President for Finance, and Prof. Jianping Li as the Secretary. According to the bylaws, the attendees also elected five committees and their chairpersons, namely, the advisory committee, the awards committee, the executive committee, the conferences committee, and the publications committee.

IAITQM’s Vision:
The International Academy of Information Technology and Quantitative Management (The Academy) is a global community for educators, scholars, policy makers and professionals to promote innovation and excellence of information technology and quantitative management.

IAITQM’s Mission:
The Academy
(1) develops and maintains a professional identity for all educators, scholars, policy makers and professionals in the fields of information technology and quantitative management around the world;
(2) promotes the use of information technology in business and other areas to gain competitive capability;
(3) promotes the development of quantitative models in support of identifying solutions that can improve business management and operations;
(4) provides multiple interchange or communication venues, including conferences, journals, books, newsletters, etc. to enhance the exchanges of ideas, research findings and business practices related to information technology and quantitative management;
(5) acts as a leading association of information technology and quantitative management to improve business efficiency and effectiveness and eventually the quality of life for all humans.
Chinese Academy of Sciences Research Center on Fictitious Economy & Data Science (FEDS) is a newly established research institute under the directed leadership of the Chinese Academy of Sciences for intersections of the research and real-life applications in Economy, Finance, Data Mining, and related areas. Professor Siwei Cheng, the Vice Chairman of China’s National Congress and the internationally well-known economist serves as the director while Professor Yong Shi, a well-known scholar of optimization and data mining serves as the executive deputy director and Professor Minjun Shi, the expert in green economy serves as vice director. To fulfill the strategic mission of the innovative projects at the Chinese Academy of Science, the center also seeks the collaborations with both domestic and international universities, research institutes and enterprises for conducting research projects and real-life applications in the areas of interfaces in economy, finance, data mining and others. Currently, the center has five research labs including Fictitious Economy Research Lab, Data Mining and Optimization Research Lab, Green Economy Research Lab, Virtual Business Research Lab and Social Computing and E-Health Research Lab. FEDS has a high-tech and high quality research team, including one “Thousand Talents Program” Professor, two CAS “Hundred Talents Program” Professors, eight overseas innovation team researchers as well as about 40 post-doctors and graduate students. Since establishment in 2007, researchers in FEDS have been received 36 scientific grants from China’s National Natural Science Foundation (NSFC), Ministry of China’s Science and Technology, other government departments, corporations and research institutions. The total of research funds is about 35 million RMB, including Innovation Group of NSFC “Data Mining and Intelligent Knowledge Management: Theory and Applications”.

中国科学院虚拟经济与数据科学研究中心
CAS Research Center On Fictitious Economy & Data Science
Established in June 1985, the Institute of Policy and Management (IPM), the Chinese Academy of Sciences (CAS), is devoted to the studies of development strategy, development and reform policy, public administration, S&T management and state-of-the-art theories and methodologies of related disciplines. It offers high-caliber research consultative services to central authorities, CAS, local governments and business firms. So far, it has received 42 prizes at national, ministerial and provincial levels.

At present, IPM has four research departments (specializing in S&T policy, innovation development policy, public security, and management science) and 12 research divisions (specializing in S&T strategy and planning; science, technology and society; S&T management and evaluation; intellectual property rights and S&T legislation; innovation and development policy; innovation and entrepreneurship policy; sustainable development strategy; economics of energy and environment; overall planning and management; policy simulation; urban development and regional management; and interdisciplinary studies of natural and social sciences).

It is home to five CAS research centers, namely, the CAS Center for Strategic Studies, the CAS Center for Innovation and Development, the CAS Center for Interdisciplinary Studies of Social and Natural Sciences, the CAS Research Center for Management, Innovation and Evaluation, and the CAS Research and Training Center for Intellectual Property Rights. It also joins hands with partners in setting up the Center for Energy and Environmental Policy Research, Beijing Center for S&T Policy, and the Beijing Capital Center for City Operations and Development Research. In addition, IPM has established the Research Center for Policy Modeling and Simulation, the Center for International Studies, the Center for Overall Planning and Security Management, the Research Center for China High-tech Development Zone, and the Research Center for Environment Policy.

IPM has master’s, doctoral and postdoc programs in management science and engineering, master’s programs in “business management,” “economics of population, resources and energy” and “S&T philosophy.” In addition, it runs a part-time master’s program in management science and engineering.

The Institute has struck agreements for long-term exchanges and cooperation with many institutions, including the National Institute of Science and Technology Policy in Japan, the Fraunhofer Institute for Systems and Innovation Research in Germany, the Science and Technology Policy Institute in ROK, Korean Institute of S&T Evaluation and Planning, University of Edinburgh in UK, School of Public Policy of Georgia Institute of Technology in USA, Business School at the University of Kent in UK, Kyoto University in Japan, and the National Institute of Science, Technology and Development in India. It has also joined hands with the School of Business of University of Kent to co-establish a research center for business and management performance.

IPM boasts a wealth of innovation network resources, housing the editorial department for Bulletin of the Chinese Academy of Sciences (Chinese and English editions), and editorial offices for a number of academic journals, including Chinese Journal of Management Science, Journal of Science Research Management, Journal of Studies of Science of Sciences, and Sciences and Society. Furthermore, it runs the presses for World Science and Technology: Modernization of Traditional Chinese Medicine, and Science and Technology for Development. In addition, some national learned bodies are affiliated to IPM: the Chinese Association for Science of Science and S&T Policy Research; the Chinese Society of Optimization, Over-all Planning and Economic Mathematics; China Association for Development Strategy; the Chinese High-tech Industries Promotion Society and the CAS Association for S&T Policy and Management.

Sticking to key topics concerning national strategies of sustainable growth and rejuvenating China through science, technology and human resource development, IPM conducts strategic studies and offers strategy options with an important bearing on the country’s development. By taking advantage of its academic buildup in integrated and interdisciplinary studies, the Institute renders strong support to China’s drive for developing a harmonious and innovation-oriented society by carrying out studies on such topics as technology foresight, S&T policy, innovation and entrepreneurship policy, energy sources and environment policy, as well as state-of-the-art theories and methodologies for regional development management, emergency management and management science. Its vision is to build IPM into a noted think-tank research institute.
China-Singapore Suzhou Industrial Park

Located in Suzhou, a city known as "the paradise on earth", Suzhou Industrial Park (SIP) is an important economic cooperation project between Chinese and Singapore government. It's also a traffic hub, accessible from Shanghai-Nanjing Expressway, Suzhou-Shanghai Expressway, Suzhou-Jiaxing-Hangzhou Expressway, as well as Shanghai-Nanjing Railway Shanghai-Nanjing Intercity Railway, and Beijing-Shanghai High-Speed Railway. SIP covers a total jurisdiction area of 288 sq km, among which 80 sq km area belongs to China-Singapore Cooperative Zone. SIP is a flagship cooperation project between Chinese and Singapore governments, a pilot zone of reform and opening-up; A successful model of international cooperation, one of China's fastest-growing development zones with the most international competitive edges.

- **SIP’s development Goals:**
  To develop into a hi-tech industrial park with international competitiveness; to develop into an innovation eco-township of internationalized, modernized, information-based happy district of Suzhou.

- **SIP’s achievements:**
  30% annual average growth in key economic indicators, ranking the second among national development zones in comprehensive development index.

- **SIP’s four “Hundreds of Billions” achievements:**
  RMB 133 billion of GDP, RMB 165 billion of accumulated taxes, USD 18.9 billion of accumulated utilized foreign capital and RMB 197.2 billion of accumulated registered domestic capital.

- **SIP’s records:**
  Remarkable achievements in economic transformation and upgrading:
  RMB 147.2 billion of output value from new emerging industries in 2010, accounting for 45.4% of scale industries and ranking the first in Suzhou; Ranking the first for years among China's development zones in using foreign capital; Ranking the second among national development zones in comprehensive assessment on investment environment by Ministry of Commerce in 2009; Among the first new-type industrial demonstration bases in China; Among the country's first demonstration eco-industrial parks; Among the first national IRP demonstration parks; China's first service outsourcing demonstration base; China's first experimental area on preferential policies for technologically advanced service enterprises; China's only demonstration base of service trade innovation; China's only national demonstration area of business tourism; China's only nanotech innovation & industrialization base; No.1 among most competitive development zones.
Floor Map

二楼会议室平面示意图
Second Floor Meeting Rooms

一楼会议室平面示意图
First Floor Meeting Rooms
Area Map
Global leader in mobile display and capacitive touch panels

Tier 1 customer base and superior product mix

Leading touch panel technology and integrated process know-how

Leadership in product innovation, design and manufacturing capabilities