Preface

With the increase of global competition and the rapid development of financial market (especially for emerging financial market), business intelligence and financial engineering become two important research areas for academics and practitioners. In the two cross-disciplinary fields, business intelligence refers to computer-based techniques used in spotting, digging-out, and analyzing business data, which can provide the ability to manage growing volumes of complex data and enables organizations to evaluate the data in order to make well informed business decisions. Usually, business intelligence can be regarded as elevating data to information and then to knowledge.

While financial engineering usually relies on computational intelligence, mathematical finance, numerical methods and computer simulations to make trading, hedging and investment decisions, as well as facilitating the risk management of those decisions. Utilizing various methods, practitioners of financial engineering aim to precisely determine the financial risk that certain financial instruments create. In the sense, financial engineering is closely related to business intelligence.

Nevertheless, as a new cross-disciplinary field, the existing business intelligence methods are far from practical uses for scenarios in global financial market; it is not clear how the quickly emerging business intelligence techniques can be used to improve the quality of financial and business decisions.

Therefore, it is necessary to conduct a thorough investigation for the business intelligence and financial engineering and meantime understand what the fundamental theoretical problems are in the business intelligence and financial engineering. In order to promote theoretical development and strengthen practical discussions on the field of computational business intelligence and financial engineering applications, the Fifth International Conference on Business Intelligence and Financial Engineering (BIFE 2012) was held in Lanzhou & Tunhuang, Gansu, China, August 18-21, 2012.

BIFE 2012 builds on the success of last year’s conference held in Wuhan during 17-18 October, 2011. The main purpose of BIFE 2012 is to bring together researchers, developers, practitioners, and users of artificial intelligence, computer science, financial engineering and other business applications to present, discuss and exchange ideas, results and experiences in the fields of business intelligence for problems in financial engineering and inter-disciplinary business applications.

This conference provides an open international forum for academic researchers and industry practitioners in the field of business intelligence and financial engineering from universities throughout the world to practitioners from industry to share cutting-edge information, to address current hottest issues, and to explore new modeling approaches and future alternative solutions.

This year we received 468 submissions (including two main tracks and nine workshops) from 11 countries and regions. All submitted papers went through a rigorous reviewing process. Every submission was reviewed by at least two independent reviewers in a standard peer-review process. Papers belonged to two main categories: regular papers of 5 pages and short papers of 4 pages in terms of review comments.
According to the results of peer-review, 141 papers are finally accepted by the conference and the acceptance rate of the conference was 30.13% (141 papers accepted out of 468 submissions).

BIFE 2012 would not have been successful without the support of many people and organizations. First and foremost, we would like to thank all the authors for submitting their papers to the conference, for their presentations and discussions during the conference. We would like to express our gratitude to Program Committee members and reviewers, who carried out the most difficult work by carefully evaluating the submitted papers. We would like to give special thanks to the conference sponsors.

This year, BIFE 2012 is co-sponsored by National Natural Science Foundation, China; Chinese Academy of Sciences (CAS), China; Academy of Mathematics and Systems Sciences, CAS, China; College of Business, City University of Hong Kong, Hong Kong; School of Economics and Management, Beijing University of Chemical Technology, China; Centre for Forecasting Science (CEFS) of CAS, China; Key Laboratory of Management, Decision and Information Systems (MADIS) of CAS, China; School of Economics and Management, Changsha University of Science & Technology, China; Centre for Energy Chemical Management, Beijing University of Chemical Technology, China; and Beijing Zhongke Markway Education Technology Center, China.

Meantime, BIFE 2012 is technically co-sponsored by System Engineering Society of China, China; Beijing Operations Research Society, China; International Institute for Decision Sciences (IIDS), Hong Kong; Technical Committee on Energy Chemical System Engineering of System Engineering Society of China; Technical Committee on Decision Science of Operation Research Society of China, China; Technical Committee on Management Science and Engineering of Chinese Society of Management Modernization, China; Technical Committee on Financial System Engineering of System Engineering Society of China, China; Technical Committee on Business Intelligence of Chinese Society of Management Modernization, China; and Youth Branch of Chinese Society of Optimization, Overall Planning and Economical Mathematics, China. Their sponsorships support the success of conference.

BIFE 2012 has marked an important shift in the number of submissions received and in attracting a larger audience of researchers. This year, BIFE 2012 has two main tracks: Business Intelligence and Computational Finance. In conjunction with BIFE 2012 we have 9 workshops that complemented BIFE 2012 program with contributions for specific topics. We would like to thank all workshops chairs for their excellent work in organizing these workshops.

We would like to express our gratitude to Bob Werner, CPS production editor of IEEE Computer Society, for all the support and help related to the production of this important scientific work. BIFE 2012 conference used EasyChair Conference System and the system developer, Andrei Voronkov’s support is much appreciated.

Last but not least, we would like to thank all conference participants for their contribution and support. We hope all participants take this opportunity to share and exchange ideas with one another and enjoy BIFE 2012.

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