

4th International Conference on Cybernetics (Cybconf 2019)

Successfully Held

The biennial International Conference on Cybernetics (CYBCONF) provides a premier international forum for researchers and practitioners to report the latest innovations, summarize the state-of-the-art, and exchange ideas and advances in all aspects of Cybernetics. Apart of the main track it includes special sessions and plenary talks by invited eminent speakers.

CYBCONF-2019 is held on July 5th-7th at Zhongguancun Campus of University of Chinese Academy of Sciences (UCAS). It is sponsored by IEEE Systems, Man, and Cybernetics Society (SMCS), organized by University of Chinese Academy of Science (UCAS), and supported by IEEE SMC Technical Committees on Social and Economic Security and IEEE Systems Council Analytics and Risk Technical Committee, and in cooperation with the School of Economics and Management of UCAS, the International College of UCAS, Center for Environmental Economics of UCAS. The theme of the conference was “Risk Analysis and decision intelligence for complex management problems”.



Photograph of all attendees



Opening ceremony of Cybconf 2019

The opening ceremony was hosted by Wu Desheng, Distinguished Professor, Vice Dean of the School of Economics and Management of UCAS, Vice Dean of International College of UCAS, Director of Research Center for Environmental Economics of UCAS and Academician of the European Academy of Sciences and Arts, Academician of the European Academy of Sciences, Academician of the Academia Europaea. Invited guests include Dr. Liu Zuoyi, Director of the Management Science Division of the National Natural Science Foundation of China (NSFC), Professor James H. LAMBERT of the University of Virginia (Chairman of the International Association for Risk Analysis, field editor of “Risk Analysis”), Professor C.L. Philip Chen of the University of Macau (Editor-in-chief of IEEE T SMC:S), Professor Ming HU of the University of Toronto, Canada (Editor-in-chief of NRL), Professor Donald Huisingsh of the University of Tennessee (Honorary Editor-in-Chief of Journal of Cleaner Production), Professor Opher Baron of University of Toronto, Canada, Professor Wu Jianjun of Beijing Jiaotong University (Deputy Secretary-General of the Society of Management Science and Engineering, State Key Laboratory of Rail Traffic Control and Safety Deputy Director), Professor Niu Dongxiao from North China Electric Power University (Dean of the School of Economics and Management, Distinguished Professor of Yangtse River Scholar), Professor Liu Yang of Linköping University, Sweden, and Prof. Guan Jun (General Secretary of Management Science and Engineering Society), Professor Weiguo

Fang of Beijing University of Aeronautics and Prof. Zhaohua Wang of Beijing Institute of Technology. Overall, there were more than 150 scholars and students attended the conference.



Cybconf-2019 hosted by Prof. Wu Desheng

The opening ceremony started with the welcome words from Professor Dong Junshe, Vice President of UCAS, he wished the conference a great success. Professor Wang Shouyang, Professor Liu Zuoyi, Professor James H. LAMBERT, Professor Guan Jun gave a welcome speech at the opening ceremony successively.



Welcome words from invited guests

After the ceremony, keynote speeches were carried on in four sessions. Firstly, Director Liu

Zuoyi of the NSFC gave the speech on “Scientific Funds and Youth Talent Growth” that focuses on presenting the current development status of the NSFC, funding orientation, review mechanism, and funding project analysis. Then, Professor James H. LAMBERT of the University of Virginia gave a speech on "Enterprise Systems Risk and Resilience". He presented the research progress in enterprise system risk and resilience, and introduced its applications in offshore ports management, grid expansion, airport runway safety, etc..



Fig1. Keynote speakers of Keynote Session 1

The second session of keynote speech was hosted by Professor Zhaohua Wang of Beijing Institute of Technology. Professor Ming HU of University of Toronto gave an insightful speech on “A Neoclassical View on Sharing Economy and Innovative Marketplaces”. He started from neoclassical and explored the differences and connections between traditional models and new applications in the sharing economy and innovation market. The speech of "Target-driven Risk Attitude in Portfolio Choice with Strong Aspiration Measures" was presented by Professor Chen Jian of Tsinghua University at the end of morning sessions.



Fig 2. Keynote speakers of Keynote Session 2

The conference continues in the afternoon, chaired by Professor Baron Opher. Professor

Donald Huisingh of the University of Tennessee gave a wonderful report "In the context of climate changes and flaws in current cybernetic feedback systems, what big challenges must governments, industry, universities, NGOs and society solve". Followed by the speech of Professor Philip Chen of University of Macau, the topic is "Data Modelling and Analysis using the new discriminative Broad Learning Systems". He discussed data modeling with outliers and markup errors, and introduces that the robust generalized learning system (RBLs) and its variants are superior to several existing learning algorithms in the regression performance of time series prediction, face recognition and data modeling. Associate Professor Alex Yang of the University of Hong Kong presented as the third keynote speaker in the afternoon, the talk focuses on "Supply Chain Finance: From Trade Credit to Financial Innovation". He introduced the latest developments in supply chain finance, the rationalization of trade credits, the most classic forms of financing between supply chain partners, and an in-depth interpretation of innovative supply chain finance solutions.



Fig 3. Keynote speakers of the Keynote session 3

The last keynote session was hosted by Prof. James H. Lambert. Professor Baron Opher of the University of Toronto, Canada, under the title of "Data Driven Forecasting and Revenue Management under Reference Prices with Exposure Effect", conducted an in-depth analysis and

interpretation of the income management in the presence of reference prices, which led to intense discussions among the scholars present.

The final keynote speech of the conference was the "The valuation of new-product introduction strategies" by Professor MIM Wahab of Ryerson, Canada. He discussed three different new product introduction strategies based on the product life cycle.

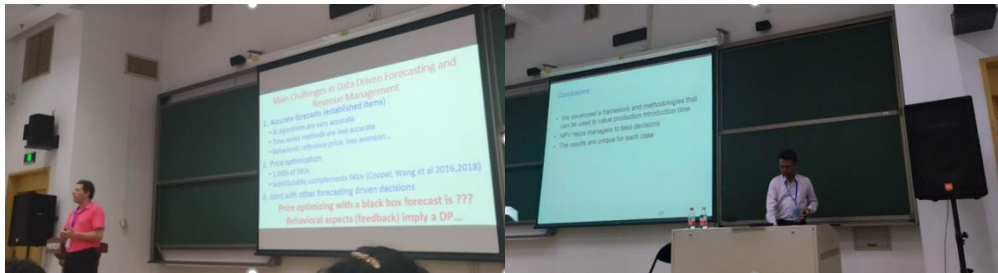


Fig 4. Keynote speakers of Keynote session 4

The annual meeting of the Society's chapter committee was held as scheduled after the keynote speeches of scholars. The conference opened two special sessions and five parallel sessions. The forums were organized around topics such as Advanced Cybernetics on Medicine and Complex classification Problems. Numerous scholars from Prairie View A&M University, Peking University, Beijing University of Aeronautics and Astronautics, Nanjing University, and the Central South University, Dalian University of Technology, Tianjin University of Technology and UCAS presented the advancement of their research works and had insightful feedbacks through discussions with the audience.