

**Title:**

Application of Big Bata Analytics for Smart System

Abstract:

In recent years, the advancement in sensor and data capture technologies, with the assistance of the Internet, has led to the creation of large datasets which potentially can provide useful information and insights into consumption behaviour and system performance. There is an increasing desire from all quarters to apply various Artificial Intelligence (AI) technologies to mine these data more meaningfully and efficiently, with the potential to develop smarter and more intelligent systems. Some of these developments can be industry specific. Examples of such applications are found in the manufacturing, energy, transportation, and social media analytics sectors. This will change the traditional production and utilization processes and promote the effective applications of the various systems.

The huge successes of big data application, big data analysis and AI technologies have attracted wide attention. The purpose of this workshop is to examine how different academic institutes and industries have embraced Big Data Analytics to solve their specific and unique challenges in the push for energy systems (smart grid), intelligent transportation, intelligent manufacturing, social media understanding, etc..

Scope and Topics:

Potential topics include but are not limited to:

- ✧ Big Data Analysis Technology Applied in Smart Grid and Integrated Energy System
- ✧ Machine Learning for Social Media Analysis
- ✧ AI Theory and Research Applications to Industry
- ✧ Intelligent Transportation
- ✧ AI Applied in Cyber Physical System and Security
- ✧ Lightweight Intelligent Optimization Algorithm Base on Edge Computing Technique
- ✧ Data analytics for Sentiment and Emotion Analysis in industry
- ✧ Natural Language Processing (NLP) for Industry Use
- ✧ Big Data for Safety and Risk Analysis
- ✧ Cognitive Robotics & Autonomous Systems
- ✧ Machine Learning in Social Analysis to Supply Optimal Energy Consumption
- ✧ New Applications of Computational Intelligence
- ✧ Big Data for Intelligent Urban systems
- ✧ Social Cognitive Modelling and Simulation
- ✧ ...

**Program Committee Chairs:**

Zhaoxia Wang, Institute of High Performance Computing (IHPC), Agency for Science, Technology and Research (A*STAR), Singapore

Email: wangz@ihpc.a-star.edu.sg

<https://www.a-star.edu.sg/ihpc/People/tid/509>

Dr. Zhaoxia Wang is a data and AI scientist at the Institute of High Performance Computing (IHPC), Agency for Science, Technology and Research (A*STAR), Singapore. She has been awarded an Adjunct Professorship of Tianjin University since 2015. As an expert in AI, data analytics, and NLP, she has successfully led and delivered 15+ research as well as industry projects as Principal Investigator (PI) and co-PI. She spearheaded the development of 5+ quality IPs as the first inventor and more than 10 companies have signed evaluation licenses or commercial licenses on her patents. She is currently the research lead in the big data analytics and AI research area. Her current research interests include data analytics, machine learning, text mining, NLP, fine-grained sentiment and emotion analysis, opinion-based stock marketing trending analysis, social intelligence, social media content mining and analysis, safety and risk analysis, AI & CI and their applications.

Ting Yang, School of Electrical and Information Engineering, Tianjin University, China

Email: yangting@tju.edu.cn

http://www.tju.edu.cn/seea/szdw/xddgdzjszx/201702/t20170224_290437.htm

Dr. Ting Yang is currently a Chair professor of Theory and Advanced Technology of Electrical Engineering, at the School of Electrical and Information Engineering, Tianjin University, China. He was the cooperative research staff of Imperial College London (2008), University of Sydney, Australia (2011, 2015). Prof. Yang is the winner of the “New Century Excellent Talents in University Award” from Chinese Ministry of Education. He is the leader of tens of research grant projects, including the International S&T Cooperation Program of China, the National High-Tech Research and Development Program of China (863 Program), the National Natural Science Foundation of China, and so on. Prof. Yang is the chairman of two workshops of IEEE International Conference, and the editor in Chief of Special Issues of the international journal of DSN. He is the author/co-author of four books, published by Springer and Elsevier Inc., more than one hundred publications in internationally refereed journals and conferences. Prof. Yang is a senior member of the Chinese Institute of Electronic, the fellow of Circuit and System committee, the fellow of Theory and Advanced Technology of Electrical Engineering, and the member of International Society for Industry and Applied Mathematics. His research fields include AI, big data analysis and the techniques applied in Smart Grid and Integrated Energy System.



Chin Hoong Chor, Department of Civil and Environmental Engineering, National University of Singapore, Singapore

Email: ceeche@nus.edu.sg

<http://cee.nus.edu.sg/people/ceeche/>

Assoc Professor Chin is the Associate Head (Academic) in Civil & Environmental Engineering at the National University of Singapore. He specializes in modelling urban transportation as well as safe transportation systems. A registered Professional Engineer, he is involved in a number of transportation projects to improve operational efficiency and safety of transportation systems. An innovator, he is the recipient of the Institution of Civil Engineers Webb Prize for his innovation in road safety performance and has also received several gold awards for innovative teaching.

Program Committee:

Seng-Beng Ho, Social and Cognitive Computing Department, Institute of High Performance Computing (IHPC), Agency for Science, Technology and Research (A*STAR), Singapore.

Md. Mazharul (Shimul) Haque, Science and Engineering Faculty, Queensland University of Technology, Australia.

Xiaorong Li, Info-communications Media Development Authority (IMDA) of Singapore, Singapore.

Wei Li, School of Information Technology, the University of Sydney, Australia

Flávia Delicato, Department of Computer Science and Applied Mathematics, Federal University of Rio de Janeiro, Brazil