Title:

Practical Big Data and Artificial Intelligence

Abstract:

Big Data and Artificial Intelligence have become an ubiquitous cross-industry terms to describe vast amounts of large data sets and that AI machine learning and deep learning are pulling from every data input and using those inputs to generate new rules for future business analytics. That are challenging to store, search, share, visualize, analyze, and learn. Effective management and analysis of the Big Data and Artificial Intelligence would bring great benefits and unique opportunities to the users. However, there are still many open issues for deep investigation. The Practical Big Data and Artificial Intelligence Workshop in ICAIS 2022 is to promote the research in this emerging area of Big Data-intensive Research, Development, Computing, Algorithms, Systems, and Applications. The Practical Big Data and Artificial Intelligence workshop in ICAIS 2022, aims to bring together builders and users of practical big data analytic systems and artificial intelligence applications to share research results, experiences and new ideas. It solicits high-quality papers that illustrate novel Big Data and Artificial Intelligence models, architecture and infrastructure, management, search and processing, security and privacy, applications, surveys and industrial experiences.

Scope and Topics:

Potential topics include but are not limited to:

- ✧ Big Data and Artificial Intelligence Applications
  - Big Data and Artificial Intelligence Applications and Software in Science, Engineering, Healthcare, Finance, Business, Transportation, Telecommunications, etc.
  - Big Data and Artificial Intelligence Analytics in Small Business Enterprises, Public Sector and Government.
  - Big Data and Artificial Intelligence Industry Standards
  - Development and Deployment Experiences with Big Data and Artificial Intelligence Systems.
- ✧ Integrating Big Data and Artificial Intelligence in to treatment planning: Applications in treatment plan automation and evaluation
- ✧ Wrangling Radiomics: Applications of big data with conventional and Artificial Intelligence based approaches
- ✧ Approaching a New Big Data Based Radio-Biology: Using big data to create more comprehensive outcomes models
- ✧ Clinical Practice Big Data and Artificial Intelligence : Application to support safety and clinical practice improvement
- ✧ Integrating the voice of the patient in to Big Data: Collection, standardization

and application of Patient Reported Outcomes and other measures…

- Big Data Theory and Foundation
- Theoretical and Computational Models for Big Data
- Theories and Methodologies for Big Data Processing
- Architectures and Designs of Big Data Processing Systems
- Information Quantitative and Qualitative for Big Data

✧ Big Data Infrastructure

- Cloud/Grid/Stream Computing for Big Data
- System Architectures, Platforms, Design, and Deployment for Big Data
- High Performance/Parallel Computing Platforms for Big Data
  Energy-efficient Computing for Big Data
- Programming Models and Environments for Cluster, Cloud, and Grid Computing

✧ Big Data Management

- Data Model and Structure for Big Data
- Advanced Database and Web Applications for Big Data
- Data Preservation and Provenance
- Data and Information Integration and Fusion for Big Data
- Interfaces to Database Systems and Analytics Software
- Scientific and Social Data Management and Workflow Optimization

✧ Big Data Search and Processing

- Data Management for Mobile, Pervasive and Grid Computing
- Algorithms and Architectures for Big Data Search, Mining and Processing
- Big Data Search Architecture, Scalability, and Efficiency
- Search, Store and Process Big Data in Distributed, Grid and Cloud Systems
- Semantic-based Big Data Analytics and Processing
- Multi-Structured Multi-Domain Big Data Fusion and Integration
- Ontology Representations and Processing in Big Data
- Automatic and Machine Learning Methods for Big Data
- High Performance and Efficiency Data Cryptography
- Privacy Threats Analysis for Big Data Systems
- Visualizing Large-Scale Security Data
- Security and Risk in Big Data Processing

✧ Big Data Protection, Security and Privacy

- Threat and Intrusion Detection for High-Speed Networks
- Trust, Reputation and Recommendation Systems for Big Data Systems
- Privacy and Security Preservation for Multi-Level Security (MLS) Cross-domain Big Data Computing System

Program Committee Chairs:

SUN Guang, Hunan University of Finance and Economics, China
Email: Sunguang@hufe.edu.cn

Homepage: https://www.hufe.edu.cn
Bio: Dr. Guang SUN is currently a Full Professor with the School of Information Technology and Management, Hunan University of Finance and Economics. His current research interests include Practical Big Data in Finance, Deep Learning, Software Watermarking, Software Birthmarking and Dependable Software. He has published over 50 SCI-indexed journal papers and 50 EI indexed refereed conference papers related to these research areas. He is a associate dean of School of Information Technology and Management, dean of Financial Big Data Research Institute. He currently serves as the Director of National Information Technology Standardization Technical Committee.

ZHOU Hangjun, Hunan University of Finance and Economics, China
Email: zhjnudt@gmail.com
Homepage: https://www.hufe.edu.cn
Bio: Hangjun Zhou has received Ph.D in Computer Science from National University of Defense Technology. Now he is a Full Professor in Hunan University of Finance and Economics, and senior data development engineer of Ministry of Industry and Information of P. R. China. His research interests are mainly engaged in Big Data mining, Artificial Intelligence, Internet of Things, Financial risk management, etc. In these fields, he is the first author of more than 40 articles, 2 national standard, 10 national inventions, 4 treatises, and 8 provincial research projects.

GUO Peng, Universiti Malaysia Sabah, Malaysia
Email: DB1911021A@student.ums.edu.my
Homepage: https://www.ums.edu.my/v5/
Bio: Peng Guo is currently a Ph.D. with the Faculty of Business, Economics & Accountancy, Universiti Malaysia Sabah, Kota Kinabalu, Malaysia. And a vice-professor with the School of Business Administration, Hunan University of Finance and Economics. His current research interests include Mobile Marketing, Gamification, Behavioural Loyalty, and Brand Community.

LANG Lin, Hunan University of Finance and Economics, China
Email: langlin@hufe.edu.cn
Homepage:https://www.hufe.edu.cn
Bio:Lin Lang is currently a lecturer with the School of Information Technology and Management, Hunan University of Finance and Economics. He received the B.S. degree, M.S. degree, and Ph.D. degree from National University of Defense Technology(NUDT) in 2006, 2009, and 2016 respectively. His research interests include legged robot control, and intelligent control theory.

Program Committee:

JIANG Wangdong, Hunan University of Finance and Economics, China
GONG Chunhong, Hunan University of Finance and Economics, China