Title:

Artificial Intelligence Applications in Emerging Engineering Fields

Abstract:

The Artificial Intelligence (AI) is playing a more and more essential role in the industrial revolution and we are seeking a lot of evolution in various machine learning methodologies. Nowadays, the AI techniques are widely used by the practicing engineer to solve a whole range of hitherto intractable problems. The emerging engineering fields are usually built on the great progresses of the single-theory or the integration of multi-disciplinary. Therefore, the traditional research methods and engineering theories are not applicable for the emerging engineering fields.

In this workshop, we attempt to research and reconstruct the artificial intelligence applications about the topic Emerging Engineering Fields in several typical emerging and hot engineering spots, such as computer aided diagnosis system in medical engineering, simultaneous localization and mapping in vehicle engineering, distributed edge computing in Internet of Things engineering.

By organizing such a workshop we hope to provide a display platform for the current researches on AI-related techniques in emerging engineering applications, and promote the technologies progress in the future.

Scope and Topics:

Potential topics include but are not limited to:
✧Computer aided diagnosis system in healthcare engineering
✧Big data intelligent analysis in data engineering
✧Smart IoT application in cyber physical system
✧Machine learning in industrial monitoring system
✧Cyber infrastructure architectures in traffic engineering
✧Simultaneous localization and mapping in vehicle engineering
✧Real-time decision and automation in vehicle engineering
✧Distributed edge computing in IoT system
✧Computational intelligence applications in 5G mobile communication
✧Wearable and implantable devices in human engineering
✧Building information modelling in construction engineering
✧Flexible production line in manufacturing engineering
✧Genetic expression in biological engineering
✧The artificial intelligence applications in the other emerging engineering fields

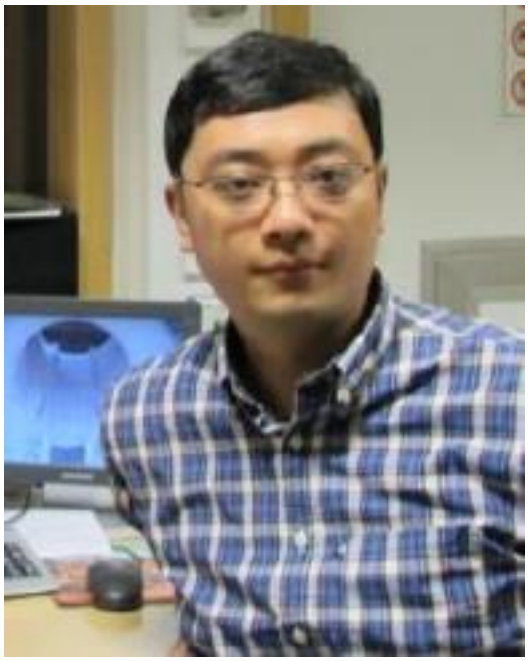
Program Committee Chairs:

Zhaohua Ding, Vanderbilt University , USA
zhaohua.ding@vanderbilt.edu
https://engineering.vanderbilt.edu/bio/zhaohua-ding

Zhaohua Ding received his M.S. degree in computer science from The Ohio State University, and the Ph.D. degree in biomedical engineering from The Ohio Staten University. He is currently services as an associate professor in the Vanderbilt University Institute of Imaging Science, Vanderbilt University. His primary research interests include image theory and engineering application, so far his research funded totaled $10 million by the U.S. department of health and human services. He served on peer reviewer for several academic journals, such as IEEE Transaction on Medical Imaging, NeuroImage and Magnetic Resonance in Medicine. He has already published more than 200 high cited papers, especially one paper published in IEEE Transaction on Image Processing with 1000 plus citations and won the annual best paper award for IEEE signal processing society.

Jiliu Zhou, Chengdu University of Information Technology , China
zhoujl@cuit.edu.cn
http://jsjxyen.cuit.edu.cn/info/1018/1095.htm

Jiliu Zhou received BSc degree in Electronic and Computer Science from Sichuan University in 1985, MSc degree in Electronic and Computer Science from Tsinghua University in 1988, PhD degree from Sichuan University in 1999. He was promoted full professor in 1999 at Sichuan University, and now associated with Sichuan University and Chengdu University of Information Technology as professor. He has published more than 200 journal papers, and now is the director of Collaborative Innovation Center for Image and Geospatial Information.



Xi Wu, Chengdu University of Information Technology , China

wuxi@cuit.edu.cn
http://jsjxyen.cuit.edu.cn/info/1018/1094.htm

Xi Wu is the professor in School of Computer Science, Chengdu University of Information Technology. He is also the deputy director of Collaborative Innovation Center for Image and Geospatial Information of Sichuan Province, P.R. China. His primary research area is the development of novel methods for analysis of imaging data. He has been also involved in cognitive studies cooperated with Computational intelligence since 2008 when he joined the Sichuan University and Vanderbilt University Institute of Imaging Science, Vanderbilt University for Ph.D. study. In 2012, Dr. Wu was with Oxford Centre for Functional MRI of the Brain, University of Oxford as a research intern.

Program Committee:

Jian Liu, University of Science and Technology Beijing, China
Changming Zhao, Chengdu University of Information Technology , China
Liangbo Xie, Chongqing University of Posts and Telecommunications, China
Jing Yin, Chongqing University of Technology, China
Rui Zhang, Zheng Zhou University, China
SongYang Zhang, Southwest University of Science and Technology, China