

**Title:**

Artificial intelligence in Climate change and disaster emergency management

Abstract:

Under the global climate warming, drought, flood, extreme temperature and other disasters show a trend of increasing frequency and aggravating impact. The loss of personnel and property caused by various extreme weather is becoming more and more serious. Improving the ability to respond to and prevent meteorological disasters, reducing the risk of natural disasters and mitigating the impact of disasters are important topics of concern to the whole society, and they are also the key to China's sustainable social and economic development. With the continuous development of digitization, networking and intelligence, how to strengthen the ability of climate change and meteorological disaster prediction, early warning, rehearsal and plan is still a problem worthy of further exploration. The workshop at climate change and disaster emergency management aims to consolidate and disseminate the latest developments and advances in the aforementioned areas. This workshop invites participation from academic, energy industry, and government researchers working in the climate change and its response, meteorological monitoring and forecasting and disaster emergency management, including technologies, theories, methods and services. This workshop will provide a platform for researchers to get together, to present a latest snapshot of the cutting-edge research, as well as to shed light on future directions in this exciting area.

Scope and Topics:

Potential topics include but are not limited to:

- ✧ Climate change and its response
- ✧ Weather forecast
- ✧ Extreme hydrological events
- ✧ Watershed water resources management
- ✧ Disaster prediction based on big data
- ✧ Agrometeorological disaster
- ✧ Disaster emergency management
- ✧ New energy weather service
- ✧ Comprehensive disaster reduction and green development...

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Bio: Zhaoxia WANG is Associate Professor at the School of Information Systems, Singapore Management University, Singapore, with more than 60 papers published in international journals and conferences. She was Scientist, Senior Scientist and Programme Manager at Institute of High Performance Computing (IHPC), Agency for Science, Technology and Research (A*STAR), Singapore, from 2011 to 2019.

She is a member of IEEE and has been an Associate Editor of the Electronic Commerce Research and Applications (ECRA) journal since 2013. She has been awarded an Adjunct Professorship of Tianjin University since 2015. As an expert in AI, data analytics, and NLP (focused on fine-grained sentiment and emotion analysis), she has successfully led and delivered more than 10 research as well as industry projects as Principal Investigator (PI), co-PI and Technical Lead during her 10+ years of working experience in Singapore since 2008, and had successfully delivered 6 projects as PI or co-PI in her early career as an associate professor from 2004 to 2008 in China. 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.

Her research interests include Natural Language Processing (NLP) and Natural Language Understanding (NLU), Machine Learning, Image Processing, Deep Language Understanding and Intelligent Robots, Casual Reasoning and Language Understanding, Text Mining, Fine-grained Sentiment and Emotion Analysis, Social Media Content Mining and Analysis, Safety and Risk Analysis, Artificial Intelligence (AI) & Computational Intelligence (CI) and their Applications. She was awarded Adjunct Professorship of Tianjin University, in 2015, and Nanjing University of Information Science and Technology, in 2018.

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Bio: Wenzheng Yu is a professor at Nanjing University of Information Science and Technology. He received his doctor's degree from Northwest A&F University in 2005. In 2006, he was engaged in doctoral research at Nanjing Agricultural University. His current research interests are climate change and its response, development of early warning and forecasting systems for meteorological disasters, and new energy meteorological services. He has presided over a number of key projects of national High technology Research and development plan and National Natural Science Foundation of China. He has served as a member of the technical planning Committee for several conferences.

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Bio: Yanbo Shen is currently a Professor in School of Public Meteorological Service Center, China Meteorological Administration. He received the Ph.D. degrees in Atmospheric Physics from Cold and Arid Regions Environmental and Engineering Research Institute, Chinese Academy of Sciences in 2005. He was a postdoctoral research fellow in Institute of Atmospheric Physics, Chinese Academy of Sciences



from 2005 to 2007. He was an associate Professor in National Climate Center (China) from 2007 to 2010. His current research interests are in wind and solar energy resources. He was involved in several projects funded by National High Technology Research and Development Program of China, and National Natural Science Foundation of China.

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Bio: Xiaoqing Gao is currently an Professor in Key Laboratory of Land Process and Climate Change, Northwest Institute of Eco-Environment and Resources, Chinese Academy of Sciences (CAS). He received the B.Sc. and Ph.D. degrees in synoptic dynamics from Lanzhou University in 1988 and 1998, and the MS degree from Lanzhou Institute of Plateau Meteorology, Chinese Academy of Sciences in 1991. He was Visiting Scientist in Institute of Atmospheric Physics, CNR(Italy) in 1996-1998. He was Senior Visiting Scientist in RIKEN(Japan) in 2000-2001 and in Oklahoma University(USA) in 2004-2005. He was the deputy director of Plateau Atmospheric Physics Research Division in Cold and Arid Environmental and Engineering Research Institute, CAS in 2008-2013. His current research interests are in Climate Change and Earth System (i.e. Climate Change and Geomagnetic Field), Land-Air Interaction and Short-term Climate Prediction, Energy Meteorology(Wind and Solar Energy Resource Assessment and Forecast, Wind Farm Layout, Impact of Wind and Solar Farms on Local and Regional Environment, etc.). He was involved in several projects funded by Ministry of Science and Technology of China, China Meteorological Administration and National Natural Science Foundation of China, and some enterprises.

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Bio: Huakun Zhou is currently an Assistant station master of the Source Area of Three Rivers' grassland ecology research station of Northwest Plateau Institute of Biology, CAS. He received the bachelor degree from department of agriculture in Qinghai University in 1992-1996. Graduated from Northwest Plateau Institute of Biology and got a master degree in 1996-1999 and the prime research is the response research about alpine grassland against global climate change in Haibei station, and received the doctor degree of science from ecology professional of Northwest Plateau Institute of Biology in 2000-2004. Conducting grassland restoration and ecology in the source region of three rivers as the lecturer of Northwest Plateau Institute of Biology, CAS from 2002 to 2007, Conducting grassland ecology in the source region of three rivers as the Associate Professor of Northwest Plateau Institute of Biology, CAS from 2007 to 2011 and Conducting grassland ecology in Tibetan Plateau as the Professor of Northwest Plateau Institute of Biology, CAS from 2011 to today. His current research interests are grassland ecology, restoration ecology and global



climate change ecology. He honoured The Scientific and Technological Progress Award of Qinghai Province in 2009 and the prime researcher of ecology of Qinghai province in 2009. He won the title of outstanding expert of Qinghai Province in 2019-2020 and the fifth batch of leading talent in scientific and technological innovation of national ten thousand persons plan in 2020.

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