

**Title:**

Natural Language Processing & Deep Learning

**Abstract:**

The NLP workshop on Natural Language Processing & Deep Learning serves as a highly selective and premier international forum for researchers to discuss the frontier issues related to NLP and the related applications. This workshop will be held with the 7th International Conference on Artificial Intelligence and Security (ICAIS 2021) in July 2021 at Dublin, Ireland and the organizing committee is excited to invite you to take part in this workshop.

Today, NLP technologies are becoming one of the most active research areas due to the rapid advancement of social media and the Internet. The fields are facing many new challenges from big data and artificial intelligence research areas, such as social media analytics, business intelligence application, etc. Although word embedding and distributional representation technologies help us make achievements in NLP tasks, there are still many problems to be solved. This workshop provides an international forum for both researchers and practitioners to report their latest innovations, summarize state-of-the-art in the field, and exchange ideas, results, and visions in all aspects of NLP, such as new word vector models, Deep Learning in NLP, Machine Learning for NLP, Question Answering, NLP for Social Networks, as well as the NLP Applications. Accepted papers will have the same benefits as the main conference, and outstanding papers could be recommended to be published in SCI indexed journals.

**Scope and Topics:**

Potential topics include but are not limited to:

- ✧ Fundamentals of Language Computing
- ✧ Lexical and Compositional Semantics
- ✧ Word Segmentation & Named Entity Recognition
- ✧ Syntactic Parsing, Semantic Analysis, Discourse Analysis
- ✧ NLP for Chinese Computing
- ✧ Applications of NLP
- ✧ NLP for Mobile Computing
- ✧ Machine Translation & Multilingual Information Access
- ✧ Natural Language Generation
- ✧ Machine Learning for NLP
- ✧ Deep Learning in NLP
- ✧ Web/Text Mining & Big Data
- ✧ Information Retrieval & Question Answering
- ✧ Sentiment Analysis and Opinion Mining



- ✧ Knowledge Representation & Acquisition
- ✧ Web, Social Media and Computational Social Science
- ✧ Textual embeddings and their applications
- ✧ Information Hiding in Text & Security
- ✧ Other NLP Applications

### **Program Committee Chairs:**

**Victor S. Sheng**, University of Central Arkansas, USA

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Victor S. Sheng received the master's degree in computer science from the University of New Brunswick, Canada, in 2003 and the PhD degree in computer science from Western University, Ontario, Canada, in 2007. He is an associate professor of computer science with the University of Central Arkansas, and the founding director of Data Analytics Lab (DAL). His research interests include data mining, machine learning, and related applications. He was an associate research scientist and NSERC postdoctoral fellow in information systems in the Stern Business School, New York University. He received the best paper award runner-up from KDD'08, and the best paper award from ICDM'11. He is a PC member for a number of international conferences and a reviewer for several international journals. He is a senior member of the IEEE and a life-time member of the ACM.

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

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Dr. Zhaoxia Wang has been a data and AI scientist for 7+ years at the Institute of High Performance Computing (IHPC), Agency for Science, Technology and Research (A\*STAR), Singapore. She received her B.S. degree from the Department of Physics, East China University of Science and Technology, Shanghai, and her MS and PhD from the College of Information Technical Science, Nankai University, Tianjin, P. R. of Chin. After her PhD studies, she spent 2 years as postdoctoral researcher at Tianjin University. She was promoted to an Associate Professor of Tianjin University of Technology in 2004. From Aug. 2005 to Dec. 2005, she was awarded and funded as a visiting scholar at the School of Computer Science and the Centre of Excellence for Research in Computational Intelligence and Applications (CERCIA), University of Birmingham, UK. She worked for the National University of Singapore (NUS) from 2008 to 2011 before joining IHPC, A\*STAR. She is a member of IEEE and has been an Associate Editor of the Electronic Commerce Research and Applications (ECRA) journal since 2013. She was a member of Research Committee of Singapore Road Safety Council from 2012 to 2016. 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 10+ research as well as industry projects as Principal



Investigator (PI), co-PI and Technical Lead during her ten 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 (all the IPs are related NLP technologies) 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. She is also the PhD supervisor of NUS and NTU since 2014. 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 media content mining and analysis, safety and risk analysis, AI & CI and their applications.

**Leiming Yan**, Nanjing University of Information Science and Technology, China  
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Leiming Yan received his PhD in computer science from School of Computer Science and Engineering, Southeast University, China, in 2010. He is currently a lecturer in School of Computer and Software, Nanjing University of Information Science and Technology, China. He was a visiting scholar of Faculty of Computer Science, University of New Brunswick, Canada, from May 2015 to May 2016. His research interests include big data mining, complex networks, deep learning and NLP.

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