Ziyu Guan

CONTACT
INFORMATION

Room 119, district 4 of the main hall,
Xidian University,
Xi'an, China, 710071

Tel: +86-2988202354
Fax: +86-2988202354
E-mail: zyguan@xidian.edu.cn

SHORT BIO

Ziyu Guan is currently a full professor in Xidian University. His research work is focused on social media computing, with an emphasis on developing novel machine learning and data mining techniques for exploiting the wisdom of crowd in social media, to solve application problems such as recommendation, retrieval, etc. He has published over 70 high quality journal/conference papers, out of which 41 papers were published in leading journals/conferences, such as IEEE TKDE, IEEE TIP, VLDB, SIGMOD, SIGIR, ICDE, CVPR, WWW, AAAI, IJCAI and SIGKDD. According to Google Scholar, his research work has been cited over 1600 times (h-index 21). In 2015, he acquired support from the National Excellent Youth Science Foundation (China). He is an associated editor for Neurocomputing and the International Journal of Machine Learning and Cybernetics. He has served or is serving as (senior) program committees members of related leading international conferences, e.g., SIGKDD, AAAI, IJCAI, NeurIPS, ICML, ICLR, SIGIR.

WORKING
EXPERIENCE

Xidian University   Dec., 2017 - present
Professor, School of Computer Science and Technology

Northwest University of China   Jan., 2014 - Nov. 2017
Professor, College of Information Science and Technology

Northwest University of China   Sep., 2012 - Dec., 2013
Researcher, College of Information Science and Technology

University of California at Santa Barbara (UCSB)   Aug., 2010 - Aug., 2012
Assistant project scientist, Department of Computer Science
Advisor: Prof. Xifeng Yan

EDUCATION

Zhejiang University   Sept., 2004 - Mar. 2010
PhD in Computer Science and Technology
Advisor: Prof. Chun Chen

Zhejiang University   Sept., 2000 - Jul., 2004
BS in Computer Science and Technology

RESEARCH
INTERESTS

Deep learning: Deep neural networks mimic the hierarchical structures in human brains. Their expressive power is exponentially better than shallow models, and has the potential to better capture the complex mapping from low level data features to high level semantics. Deep learning is intrinsically learning a high level representation for the data, and is also called deep representation learning. Deep learning necessitates large-scale training data. However, labeling large-scale training data is very time-consuming. In this direction, I am focused on weakly supervised training of neural networks for multimedia computing using weakly labeled data, to improve the performance of neural networks.

Recommender systems: recommender systems help online users find items (e.g. movies, products) they are interested in. With the rapid development of online social media, the problem of rec-

ommendation has been examined in different contexts. I am currently focused on using multi-modal side information (e.g., text, images) for recommendation and developing graph neural networks suitable for capturing complex user behaviors and side information for social media recommendation problems.

Attributed graph mining: real life networks contain not only link structures, but also attributes on vertices and/or edges. For example, in a social network people could buy various products; in a computer network computers could raise different attacking alerts. Studying how different attributes are distributed in a graph is important for revealing the relationships and patterns involving attributes and the graph structure which are hidden in the graph dataset. I have been focused on fundamental correlation mining and "interesting area" mining in this context, e.g. measuring the correlation between an attribute and the graph structure. I have designed and implemented efficient and scalable tools for assisting people to analyze and mine patterns in attributed graphs. Currently, I am interested in the dynamic aspects of structural correlation.

Medical images + AI: In view of limited medical resources, it is desirable to develop AI models which can diagnose according to patients' medial imaging data. On the one hand, AI models could learn from top expert doctors and replicate their experiences to lower-level hospitals and clinics; on the other hand, the AI models can also help senior doctors to reduce their workload. In this direction, I am focused on automatic diagnosis of small intestine diseases, facial paralysis and oral mucosal diseases, in collaboration with top hospitals in China such as Ruijin Hospital affiliated to Shanghai Jiaotong University.

E-commerce Advertising: In e-commerce platforms, advertising is a very important component that is beneficial for not only online merchants and the platform, but also the users (improving user experience by showing them proper ads). Thus, it is important to make the advertising system smart. In collaboration with Alibaba group, I am currently investigating two research questions: (1) how to build a bidding system which can help merchants bid user queries automatically and optimize the profits of both merchants and the platform; (2) how to make the results of advertising interpretable.

INVITED BOOK CHAPTERS

1. **Ziyu Guan**, Xifeng Yan. Measuring Structural Correlations in Graphs, Chapter 2 of Computational Network Theory: Theoretical Foundations and Applications, Wiley VCH, 2015.

JOURNAL PUBLICATIONS

1. Cai Xu, **Ziyu Guan** (corresponding author), Wei Zhao, Quanzhou Wu, Meng Yan, Long Chen, and Qiguang Miao. *Recommendation by Users' Multi-modal Preferences for Smart City Applications.* IEEE Transactions on Industrial Informatics (**TII**), accepted, 2020.

2. Yaming Yang, Hongmin Liu (corresponding author), **Ziyu Guan**, Xiaofei He, and Gaoliang Liu. *CoHomo: A cluster-attribute correlation aware graph clustering framework.* Neurocomputing, accepted, 2020.

3. Wei Zhao, Cai Xu (corresponding author), **Ziyu Guan** (corresponding author), Ying Liu. *Multi-view Concept Learning via Deep Matrix Factorization.* IEEE Transactions on Neural Networks and Learning Systems (**TNNLS**), accepted, 2020.

4. Shuwen Xiao, Zhou Zhao, Zijian Zhang, **Ziyu Guan**, Deng Cai. *Query-biased Self-attentive Network for Query-focused Video Summarization.* IEEE Transactions on Image Processing (**TIP**), accepted, 2020.

5. Wanqing Zhao, Shaobo Zhang, **Ziyu Guan**, Hangzai Luo, Lei Tang, Jinye Peng, Jianping Fan. *6D object pose estimation via viewpoint relation reasoning.* Neurocomputing, accepted, 2020.

6. Pengfei Xu, Fei Xie, Tongsheng Su, Zhaoxin Wan, Zhaoyong Zhou, Xiaoyu Xin, **Ziyu Guan** (corresponding author). *Automatic Evaluation of Facial Nerve Paralysis by Dual-Path LSTM with Deep Differentiated Network.* Neurocomputing, accepted, 2020.

7. Wei Zhao, **Ziyu Guan** (corresponding author), Yuhui Huang, Tingting Xi, Huan Sun, Zhiheng Wang, Xiaofei He. *Discerning Influence Patterns with Beta-Poisson Factorization in Microblogging Environments.* IEEE Transactions on Knowledge and Data Engineering (**TKDE**), Vol. 32, No. 6, pages 1092-1103, 2020.

8. Yu Zhu, Jinghao Lin, Shibi He, Beidou Wang, **Ziyu Guan**, Haifeng Liu, Deng Cai. *Addressing the Item Cold-start Problem by Attribute-driven Active Learning.* IEEE Transactions on Knowledge and Data Engineering (**TKDE**), Vol. 32, No. 4, pages 631-644, 2020.

9. Zhou Yang, Heli Sun, Jianbin Huang, Zhongbin Sun, Hui Xiong, Shaojie Qiao, **Ziyu Guan**, Xiaolin Jia. *An Efficient Destination Prediction Approach Based on Future Trajectory Prediction and Transition Matrix Optimization.* IEEE Transactions on Knowledge and Data Engineering (**TKDE**), Vol. 32, No. 2, pages 203-217, 2020.

10. Wei Zhao, Shulong Tan, **Ziyu Guan** (corresponding author), Boxuan Zhang, Maoguo Gong, Zhengwen Cao, Quan Wang. *Learning to map social network users by unified manifold alignment on hypergraph.* IEEE Transactions on Neural Networks and Learning Systems (**TNNLS**), Vol. 29, No. 12, pages 5834-5846, 2018.

11. Wei Zhao, **Ziyu Guan** (corresponding author), Long Chen, Xiaofei He, Deng Cai, Beidou Wang, Quan Wang. *Weakly-supervised Deep Embedding for Product Review Sentiment Analysis.* IEEE Transactions on Knowledge and Data Engineering (**TKDE**), Vol. 30, No. 1, pages 185-197, 2018.

12. Peng Luo, Jinye Peng, **Ziyu Guan**, Jianping Fan. *Dual regularized multi-view non-negative matrix factorization for clustering.* Neurocomputing, Vol. 294, pages 1-11, 2018.

13. Jinye Peng, Peng Luo, **Ziyu Guan**, Jianping Fan. *Graph-regularized multi-view semantic subspace learning.* International Journal of Machine Learning and Cybernetics, Volume 10, Issue 5, pages 879-895, 2017.

14. Yu Zhu, **Ziyu Guan**, Shulong Tan, Haifeng Liu, Deng Cai, Xiaofei He. *Heterogeneous hypergraph embedding for document recommendation.* Neurocomputing, Vol. 216, pages 150-162, 2016.

15. Wei Zhao, **Ziyu Guan**, Zhengwen Cao, Zheng Liu. *Mining and Harvesting High Quality Topical Resources from the Web.* Chinese Journal of Electronics, Vol. 25, No. 1, pages 48-57, 2016.

16. Wei Zhao, Zheng Liu, **Ziyu Guan** (corresponding author), Binbin Lin, Deng Cai. *Orthogonal Projective Sparse Coding for Image Representation.* Neurocomputing, Vol. 173, pages 270-277, 2016.

17. **Ziyu Guan**, Lijun Zhang, Jinye Peng, Jianping Fan. *Multi-view Concept Learning for Data Representation.* IEEE Transactions on Knowledge and Data Engineering (**TKDE**), Vol. 27, No. 11, pages 3016-3028, 2015.

18. **Ziyu Guan**, Shengqi Yang, Huan Sun, Mudhakar Srivatsa, Xifeng Yan. *Fine-Grained Knowledge Sharing in Collaborative Environments.* IEEE Transactions on Knowledge and Data Engineering (**TKDE**), Vol. 27, No. 8, pages 2163-2174, 2015.

19. Wei Zhao, **Ziyu Guan** (corresponding author), Zheng Liu. *Ranking on heterogeneous manifolds for tag recommendation in social tagging services.* Neurocomputing, Vol. 148, pages 521-534, 2015.

20. Shulong Tan, Yang Li, Huan Sun, **Ziyu Guan** (corresponding author), Xifeng Yan, Jiajun Bu, Chun Chen, Xiaofei He. *Interpreting the public sentiment variations on twitter.* IEEE Transactions on Knowledge and Data Engineering (**TKDE**), Vol. 26, No. 5, pages 1158-1170, 2014

21. **Ziyu Guan**, Gengxin Miao, Russell McLoughlin, Xifeng Yan, Deng Cai. *Co-Occurrence Based Diffusion for Expert Search on the Web.* IEEE Transactions on Knowledge and Data Engineering (**TKDE**), Vol. 25, No. 5, pages 1001-1014, 2013

22. Jian Wu, **Ziyu Guan**, Qing Zhang, Ambuj Singh, Xifeng Yan. *Static and Dynamic Structural Correlations in Graphs.* IEEE Transactions on Knowledge and Data Engineering (**TKDE**), Vol. 25, No. 9, pages 2147-2160, 2013.

23. Longfei Zhang, **Ziyu Guan**, Alexander Hauptmann. *The co-attention model for tiny activity analysis.* Neurocomputing, Vol. 105, pages 51-60, 2013.

24. Can Wang, Xiaofei He, Jiajun Bu, Zhengguang Chen, Chun Chen, **Ziyu Guan**. *Image representation using Laplacian regularized nonnegative tensor factorization.* Pattern Recognition, Vol. 44, No. 10, pages 2516-2526, 2011.

25. **Ziyu Guan**, Can Wang, Zhengguang Chen, Jiajun Bu, Chun Chen. *Efficient Face Recognition Using Tensor Subspace Regression.* Neurocomputing, Vol. 73, No. 13, pages 2744-2753, 2010.

26. Can Wang, **Ziyu Guan**, Chun Chen, Jiajun Bu, Junfeng Wang and Huaizhong Lin. *On-line Topical Importance Estimation: An effective focused crawling algorithm combining link and content analysis.* Journal of Zhejiang University, Vol. 10, No. 8, pages 1114-1124, 2009.

SELECTED
CONFERENCE
PUBLICATIONS

1. Wanqing Zhao, Shaobo Zhang, **Ziyu Guan** (corresponding author), Wei Zhao, Jinye Peng, Jianping Fan. *Learning deep network for detecting 3D object keypoints and 6D poses.* Proceedings of the 2020 IEEE Conference on Computer Vision and Pattern Recognition (**CVPR**), pages 14134-14142, 2020.

2. Long Chen, **Ziyu Guan** (corresponding author), Qibin Xu, Qiong Zhang, Huan Sun, Guangyue Lu, Deng Cai. *Question-driven Purchasing Propensity Analysis for Recommendation.* Proceedings of the 34th AAAI Conference on Artificial Intelligence (**AAAI**), pages 35-42, 2020.

3. Yu Zhu, Yu Gong, Qingwen Liu, Yingcai Ma, Wenwu Ou, Junxiong Zhu, Beidou Wang, **Ziyu Guan**, Deng Cai. *Query-based Interactive Recommendation by Meta-Path and Adapted Attention-GRU.* Proceedings of the 28th ACM international conference on Information and knowledge management (**CIKM**), pages 2585-2593, 2019.

4. Cai Xu, **Ziyu Guan** (corresponding author), Wei Zhao, Hongchang Wu, Yunfei Niu, Beilei Ling. *Adversarial Incomplete Multi-view Clustering.* Proceedings of the 28th International Joint Conference on Artificial Intelligence (**IJCAI**), pages 3933-3939, 2019.

5. Wei Zhao, Boxuan Zhang, Beidou Wang, **Ziyu Guan** (corresponding author), Wanxian Guan, Guang Qiu, Wei Ning, Jiming Chen, Hongmin Liu. *Personalized Attraction Enhanced Sponsored Search with Multi-task Learning.* Proceedings of the 25th ACM SIGKDD conference on knowledge discovery and data mining (**SIGKDD**), pages 2632-2642, 2019.

6. Yu Gong, Yu Zhu, Lu Duan, Qingwen Liu, **Ziyu Guan** (corresponding author), Fei Sun, Wenwu Ou, Kenny Zhu. *Exact-K Recommendation via Maximal Clique Optimization.* Proceedings of the 25th ACM SIGKDD conference on knowledge discovery and data mining (**SIGKDD**), pages 617-626, 2019.

7. Jun Zhao, Zhou Zhou, **Ziyu Guan** (corresponding author), Wei Zhao, Ning Wei, Guang Qiu, Xiaofei He. *IntentGC: a Scalable Graph Convolution Framework Fusing Heterogeneous Information for Recommendation.* Proceedings of the 25th ACM SIGKDD conference on knowledge discovery and data mining (**SIGKDD**), pages 2347-2357, 2019.

8. Jie Zhao, **Ziyu Guan**, Huan Sun. *Riker: Mining Rich Keyword Representations for Interpretable Product Question Answering.* Proceedings of the 25th ACM SIGKDD conference on knowledge discovery and data mining (**SIGKDD**), pages 1389-1398, 2019.

9. Long Chen, **Ziyu Guan** (corresponding author), Wei Zhao, Wanqing Zhao, Xiaopeng Wang, Zhou Zhao, Huan Sun. *Answer Identification from Product Reviews for User Questions by Multi-task Attentive Networks.* Proceedings of the 33rd AAAI Conference on Artificial Intelligence (**AAAI**), 2019.

10. Beidou Wang, Xin Guo, Martin Ester, **Ziyu Guan**, Bandeep Singh, Yu Zhu, Jiajun Bu, Deng Cai. *Device-Aware Rule Recommendation for the Internet of Things.* Proceedings of the 27th ACM international conference on Information and knowledge management (**CIKM**), pages 2037-2045, 2018.

11. Jun Zhao, Guang Qiu, **Ziyu Guan**, Wei Zhao, Xiaofei He. *Deep reinforcement learning for sponsored search real-time bidding.* Proceedings of the 24th ACM SIGKDD conference on knowledge discovery and data mining (**SIGKDD**), pages 1021-1030, 2018.

12. Cai Xu, **Ziyu Guan** (corresponding author), Wei Zhao, Yunfei Niu, Quan Wang, Zhiheng Wang. *Deep Multi-View Concept Learning.* Proceedings of the 27th International Joint Conference on Artificial Intelligence (**IJCAI**), pages 2898-2904, 2018.

13. **Ziyu Guan**, Fei Xie, Wanqing Zhao, Xiaopeng Wang, Long Chen, Wei Zhao, Jinye Peng. *Tag-based Weakly-supervised Hashing for Image Retrieval.* Proceedings of the 27th International Joint Conference on Artificial Intelligence (**IJCAI**), pages 3776-3782, 2018.

14. Yu Zhu, Junxiong Zhu, Jie Hou, Yongliang Li, Beidou Wang, **Ziyu Guan**, Deng Cai. *A brand-level ranking system with the customized attention-GRU model.* Proceedings of the 27th International Joint Conference on Artificial Intelligence (**IJCAI**), pages 3947-3953, 2018.

15. Pengfei Xu, Lei Wang, **Ziyu Guan**, Xia Zheng, Xiaojiang Chen, Zhanyong Tang, Dingyi Fang, Xiaoqing Gong, Zheng Wang. *Evaluating brush movements for Chinese calligraphy: a computer vision based approach.* Proceedings of the 27th International Joint Conference on Artificial Intelligence (**IJCAI**), pages 1050-1056, 2018.

16. Xiaohan Zhao, Bo Zong, **Ziyu Guan**, Kai Zhang, Wei Zhao. *Substructure Assembling Network for Graph Classification.* Proceedings of the 32nd AAAI Conference on Artificial Intelligence (**AAAI**), pages 4514-4521, 2018.

17. Jie Zhao, Yu Su, **Ziyu Guan**, Huan Sun. *An End-to-End Deep Framework for Answer Triggering with a Novel Group-Level Objective.* Proceedings of the 2017 Conference on Empirical Methods in Natural Language Processing, 2017.

18. Yu Zhu, Hao Li, Yikang Liao, Beidou Wang, **Ziyu Guan**, Haifeng Liu, Deng Cai. *What to Do Next: Modeling User Behaviors by Time-LSTM.* Proceedings of the 26th International Joint Conference on Artificial Intelligence (**IJCAI**), 2017.

19. Wanqing Zhao, **Ziyu Guan**, Hangzai Luo, Jinye Peng, Jianping Fan. *Deep Multiple Instance Hashing for Object-based Image Retrieval.* Proceedings of the 26th International Joint Conference on Artificial Intelligence (**IJCAI**), 2017.

20. Beidou Wang, Martin Ester, Yikang Liao, Jiajun Bu, Yu Zhu, **Ziyu Guan**, Deng Cai. *The Million Domain Challenge: Broadcast Email Prioritization by Cross-domain Recommendation.* Proceedings of the 22nd ACM SIGKDD conference on knowledge discovery and data mining (**SIGKDD**), pages 1895-1904, 2016.

21. **Ziyu Guan**, Long Chen, Wei Zhao, Yi Zheng, Shulong Tan, Deng Cai. *Weakly-supervised Deep Learning for Customer Review Sentiment Classification.* Proceedings of the 25th International Joint Conference on Artificial Intelligence (**IJCAI**), pages 3719-3725, 2016.

22. Beidou Wang, Martin Ester, Jiajun Bu, Yu Zhu, **Ziyu Guan**, Deng Cai. *Which to View: Personalized Prioritization for Broadcast Emails.* Proceedings of the 25th international conference on World wide web (**WWW**), pages 1181-1190, 2016.

23. Shulong Tan, **Ziyu Guan**, Deng Cai, Xuzhen Qin, Jiajun Bu, Chun Chen. *Mapping Users across Networks by Manifold Alignment on Hypergraph.* Proceedings of the Twenty-Eighth AAAI Conference on Artificial Intelligence (**AAAI**), pages 159-165, 2014.

24. Nan Li, **Ziyu Guan**, Lijie Ren, Jian Wu, Jiawei Han, Xifeng Yan. *gIceberg: Towards Iceberg Analysis in Large Graphs.* Proceedings of the 29th IEEE International Conference on Data Engineering (**ICDE**), pages 1021-1032, 2013.

25. Gengxin Miao, **Ziyu Guan**, Louise Moser, Xifeng Yan, Shu Tao, Nikos Anerousis. *Latent Association Analysis of Document Pairs.* Proceedings of the 18th ACM SIGKDD conference on knowledge discovery and data mining (**SIGKDD**), pages 1415-1423, 2012.

26. **Ziyu Guan**, Xifeng Yan, Lance M. Kaplan. *Measuring Two-Event Structural Correlations on Graphs.* Proceedings of the 38th international conference on very large databases (**VLDB**), pages 1400-1411, 2012.

27. Jiejun Xu, Vishwakarma Singh, **Ziyu Guan**, B.S. Manjunath. *Unified hypergraph for image ranking in a multimodal context.* Proceedings of the IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP), pages 2333-2336, 2012.

28. **Ziyu Guan**, Jian Wu, Qing Zhang, Ambuj Singh, Xifeng Yan. *Assessing and Ranking Structural Correlations in Graphs.* Proceedings of the 2011 international conference on management of data (**SIGMOD**), pages 937-948, 2011.

29. Arijit Khan, Nan Li, Xifeng Yan, **Ziyu Guan**, Supriyo Chakraborty, Shu Tao. *Neighbor-hood Based Fast Graph Search in Large Networks.* Proceedings of the 2011 international conference on management of data (**SIGMOD**), pages 901-912, 2011.

30. **Ziyu Guan**, Can Wang, Kun Yang, Jiajun Bu, Chun Chen, Deng Cai. *Document Recommendation in Social Tagging Services.* Proceedings of the 19th international conference on World wide web (**WWW**), pages 391-400, 2010.

31. Jun Zhao, Jiajun Bu, Chun Chen, **Ziyu Guan**, Can Wang, Cheng Zhang. *Learning a user-thread alignment manifold for thread recommendation in online forum.* Proceedings of the 19th ACM international conference on Information and knowledge management (**CIKM**), pages 559-568, 2010.

32. **Ziyu Guan**, Jiajun Bu, Qiaozhu Mei, Chun Chen and Can Wang. *Personalized Tag Recommendation Using Graph-based Ranking on Multi-type Interrelated Objects.* Proceedings of the 32nd annual international ACM SIGIR conference (**SIGIR**), pages 540-547, 2009.

33. Junfeng Wang, Chun Chen, Can Wang, Jian Pei, Jiajun Bu, **Ziyu Guan**, Wei Vivian Zhang. *Can We Learn a Template-Independent Wrapper for News Article Extraction from a Single Training Site?* Proceedings of the 15th ACM SIGKDD conference on knowledge discovery and data mining (**SIGKDD**), pages 1345-1354, 2009.

34. Can Wang, Junfeng Wang, Chun Chen, Li Lin, **Ziyu Guan**, Junyan Zhu, Cheng Zhang, Jiajun Bu. *Learning to Extract Web News Title in Template Independent Way.* Proceedings of the 4th International Conference on Rough Sets and Knowledge Technology (RSKT), pages 192-199, 2009.

35. Junfeng Wang, Xiaofei He, Can Wang, Jian Pei, Jiajun Bu, Chun Chen, **Ziyu Guan**, Lu Gang. *News Article Extraction with Template-Independent Wrapper.* Proceedings of the 18th international conference on World Wide Web (**WWW**), pages 1085-1086, 2009.

36. **Ziyu Guan**, Can Wang, Chun Chen, Jiajun Bu and Junfeng Wang. *Guide Focused Crawler Efficiently and Effectively Using On-line Topical Importance Estimation.* Proceedings of the 31st annual international ACM SIGIR conference (**SIGIR**), pages 757-758, 2008.

GRANTS

- Key Program of Natural Science Foundation of China, 2020-2024, 3,010,000 rmb, PI
- General Program of Natural Science Foundation of China, 2019-2022, 620,000 rmb, PI
- Program of National Excellent Youth Science Foundation of China, 2016-2018, 1,500,000 rmb, PI
- General Program of Natural Science Foundation of China, 2014-2017, 790,000 rmb, PI

PROFESSIONAL ACTIVITIES

Associated Editor:
- Neurocomputing, 2015-
- International Journal of Machine Learning and Cybernetics (JMLC), 2015-

Senior Program Committee Member:
- 2021 International Joint Conferences on Artificial Intelligence (IJCAI)

- 2020 International Joint Conferences on Artificial Intelligence (IJCAI)
- 2019 International Joint Conferences on Artificial Intelligence (IJCAI)
- 2018 International Joint Conferences on Artificial Intelligence (IJCAI)
- 2017 International Joint Conferences on Artificial Intelligence (IJCAI)

Program Committee Member:
- 2021 AAAI Conference on Artificial Intelligence (AAAI)
- 2021 the International Conference on Learning Representations (ICLR)
- 2021 the ACM International Web Search and Data Mining conference (WSDM)
- 2021 SIAM International Conference on Data Mining (SDM)
- 2020 the Annual Conference on Neural Information Processing Systems (NeurIPS)
- 2020 the International ACM SIGIR Conference on Research and Development in Information Retrieval (SIGIR)
- 2020 AAAI Conference on Artificial Intelligence (AAAI)
- 2020 SIAM International Conference on Data Mining (SDM)
- 2020 the Conference on Information and Knowledge Management (CIKM)
- 2019 the Annual Conference on Neural Information Processing Systems (NeurIPS)
- 2019 AAAI Conference on Artificial Intelligence (AAAI)
- 2019 SIAM International Conference on Data Mining (SDM)
- 2019 the International Conference on Machine Learning (ICML)
- 2018 the Annual Conference on Neural Information Processing Systems (NIPS)
- 2018 AAAI Conference on Artificial Intelligence (AAAI)
- 2018 the International Conference on Machine Learning (ICML)
- 2018 the Conference on Information and Knowledge Management (CIKM)
- 2018 International Conference on MultiMedia Modeling (MMM)
- 2017 the Annual Conference on Neural Information Processing Systems (NIPS)
- 2017 the ACM International Conference on Information and Knowledge Management (CIKM)
- 2017 International Conference on Behavioral, Economic, and Socio-cultural Computing (BESC)
- 2017 AAAI Conference on Artificial Intelligence (AAAI)
- 2017 SIAM International Conference on Data Mining (SDM)
- 2017 the Thirtieth Annual Conference on Neural Information Processing Systems (NIPS)
- 2017 International Conference on MultiMedia Modeling (MMM)
- 2016 the Thirtieth Annual Conference on Neural Information Processing Systems (NIPS)
- 2016 SIAM international conference on data mining (SDM)
- 2015 the 21st ACM SIGKDD conference on knowledge discovery and data mining (SIGKDD)
- 2015 international joint conferences on artificial intelligence (IJCAI)
- 2015 SIAM international conference on data mining (SDM)
- 2014 international conference on behavioral, economic, and socio-cultural computing (BESC)
- 2014 SIAM international conference on data mining (SDM)
- 2012 the 4th asian conference on machine learning (ACML)

Conference Organizing Chair:
- 2016 Pacific Rim Conference on Multimedia (PCM)

Conference External Reviewer:
- 2012 the 18th ACM SIGKDD conference on knowledge discovery and data mining (SIGKDD)
- 2012 the 21st international conference on World Wide Web (WWW)
- 2011 the 20th ACM international conference on information and knowledge management (CIKM)
- 2011 international conference on management of data (SIGMOD)
- 2011 the 11th SIAM international conference on data mining (SDM)
- 2011 IEEE international conference on data mining (ICDM)

Journal Reviewer:
- IEEE Transactions on Cybernetics (TCyb)
- IEEE Transactions on Neural Networks and Learning Systems (TNNLS)
- IEEE Transactions on Knowledge and Data Engineering (TKDE)
- ACM Transactions on Knowledge Discovery from Data (TKDD)
- Information Sciences
- Signal Processing
- Information Systems
- Neurocomputing