

# Jiawei Zhang

## Curriculum Vitae

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Last Update: September 2, 2020

## Research Interests

### Machine Learning

Deep Learning; Broad Learning; Graph Neural Network; Stochastic Optimization

### Data Mining and Big Data

Information Fusion; Graph Mining; Heterogeneous Information Networks

### Applications

Social Network Studies; Fake News Detection; Smart City; Bioinformatics

## Professional Experiences

2017–Present **Assistant Professor.**  
Department of Computer Science, Florida State University

2017–Present **Founder and Director.**  
Information Fusion and Mining Laboratory  
◦ 5 PhD Student Members

## Education

- 2012–2017 **Ph.D. in Computer Science.**  
University of Illinois at Chicago, Chicago, IL, USA  
◦ *Thesis:* Fusion of Heterogeneous Information Networks for Synergistic Knowledge Discovery  
◦ *Advisor:* Philip S. Yu, Ph.D.
- 2008–2012 **B.S. in Computer Science.**  
Nanjing University, Nanjing, Jiangsu, China

## Research Experiences

- 2013–2017 **Graduate Research Assistant, University of Illinois at Chicago, Chicago, IL.**  
◦ *Advisor:* Philip S. Yu, Ph.D.
- 2016 **Research Intern, Yahoo! Research, Sunnyvale, CA.**  
◦ *Mentors:* Jianhui Chen, Ph.D. and Yi Chang, Ph.D.
- 2015 **Research Intern, IBM T. J. Watson Research Center, Yorktown Heights, NY.**  
◦ *Mentor:* Charu Aggarwal, Ph.D.

- 2014 **Research Intern, Microsoft Research**, Mountain View, CA.  
◦ *Mentor:* Yuanhua Lv, Ph.D.

## Awards and Honors

2018	First Year Assistant Professor Award	<i>Florida State University</i>
2018	Best Student Paper Runner Up Award	<i>ACM SIGKDD</i>
2016	Best Student Paper Runner Up Award	<i>IEEE/ACM ASONAM</i>
2016	SIGIR Student Travel Award	<i>ACM CIKM</i>
2016	IEEE Student Travel Award	<i>IEEE CIC</i>
2015	SIGKDD Student Travel Award	<i>ACM SIGKDD</i>
2015	ICDM Student Travel Award	<i>IEEE ICDM</i>
2014	WSDM Student Travel Award	<i>ACM WSDM</i>
2014	Student Travel Award	<i>University of Illinois at Chicago</i>

## Grant Proposals

### Funded Proposals

3 Funded Proposals, Total Budget \$1.72M (My Share \$570K)

- June 2018 **III: Medium: Collaborative Research: An Extensible Heterogeneous Network Embedding Framework with Application Specific Adaptation.**  
◦ PI, NSF Division of Information & Intelligent Systems  
◦ Personal Share: \$550K/\$1.2M
- March 2018 **CRC: Cyberspace Fake News Article and Creator Detection via a Multi-Perspective Approach.**  
◦ sole-PI, FSU Council on Research and Creativity  
◦ Personal Share: \$20K
- March 2015 **III: Small: Fusion of Heterogeneous Networks for Synergistic Knowledge Discovery.**  
◦ co-PI, NSF Division of Information & Intelligent Systems  
◦ Total Budget: \$500K

### Pending Proposals

3 Submitted Proposals, Total Budget \$2.3M (My Share \$1.7M)

- July 2019 **CAREER: Graph Neural Networks for Multi-Perspective Representation Learning.**  
◦ Sole PI, NSF CAREER  
◦ Personal Share/Total Budget: \$600K/\$600K

Sept. 2019 **III: Medium: Collaborative Research: Data Adaptive Recommender System Learning via Multi-Modal Heterogeneous Information Fusion.**

- PI, NSF Division of Information & Intelligent Systems
- Personal Share: \$600K/\$1.2M

Nov. 2019 **III: Small: Isomorphic Neural Network for Brain Graph Representation Learning and Classification.**

- Sole PI, NSF Division of Information & Intelligent Systems
- Personal Share: \$500K/\$500K

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## Course Teaching

2020 Spring **CIS 5930-0003: Deep Learning and Applications.**

Department of Computer Science  
Florida State University

2019 Fall **COP 4710-0001 Databases.**

Department of Computer Science  
Florida State University

2019 Spring **CIS 5930-0002: Advanced Data Mining.**

Department of Computer Science  
Florida State University

2018 Fall **COP 4710-0001 Databases.**

Department of Computer Science  
Florida State University

2018 Spring **CIS 5930-0004: Social Network Mining.**

Department of Computer Science  
Florida State University

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## Student Mentoring

### Mentored Students

2019–Present **Haopeng Zhang.**

- Current: PhD Student@Florida State University
- Research Topic: Text Mining
- Collaborated Papers: [18]

2018–Present **Lin Meng.**

- Current: PhD Student@Florida State University
- Research Topic: Graph Mining
- Collaborated Papers: [46], [45], [38], [37], [23], [22]

- 2018–Present **Yuxiang Ren.**
- Current: PhD Student@Florida State University
  - Research Topic: Text Mining and Graph Mining
  - Collaborated Papers: [45], [39], [37], [36], [27], [26], [25], [16], [15]
- 2019–2019 **Haoran Yang.**
- Current: BS Student@Nanjing University
  - Research Topic: Recommender Systems
  - Collaborated Papers:
- 2017–2017 **Conying Xia.**
- Current: PhD Candidate@University of Illinois at Chicago
  - Research Topic: Network Embedding
  - Collaborated Papers: [61], [17], [18]
- 2016–2017 **Chenwei Zhang.**
- Current: Applied Scientist@Amazon
  - Research Topic: Deep Learning Application in Data Mining
  - Collaborated Papers: [56], [62], [44], [61], [17]
- 2015–2016 **Junxing Zhu.**
- Current: Assistant Professor@National University of Defense Technology
  - Research Topic: User Resolution and Alignment across Networks
  - Collaborated Papers: [59], [109], [62], [112]
- 2014–2016 **Qianyi Zhan.**
- Current: Assistant Professor@Jiangnan University
  - Research Topic: Information Diffusion and Viral Marketing
  - Collaborated Papers: [71], [72], [76], [78], [89], [74], [111], [103], [106], [107]
- PhD Thesis Committee**
- October 2019 **Soumak Mookherjee.**
- Current: PhD Candidate@Florida State University
  - PhD Area Exam: Generalization of Deep Neural Network.
- April 2019 **Lei Zheng.**
- Current: PhD Candidate@University of Illinois at Chicago
  - PhD Dissertation Defense Talk: Deep Learning for Recommender Systems
- April 2019 **Chenwei Zhang.**
- Current: PhD Candidate@University of Illinois at Chicago
  - PhD Dissertation Defense Talk: Structured Knowledge Discovery from the Massive Text Corpus
- Feb 2019 **Xinyue Liu.**
- Current: PhD Candidate@Worcester Polytechnic Institute
  - PhD Dissertation Defense Talk: On Graph Discovery and Synthesis

- Feb 2019 **Chenwei Zhang.**
- Current: PhD Candidate@University of Illinois at Chicago
  - PhD Preliminary Talk: Structured Knowledge Discovery from Massive Text Corpus.
- October 2018 **Lei Zheng.**
- Current: PhD Candidate@University of Illinois at Chicago
  - PhD Preliminary Talk: Recommender System Build with Deep Learning.
- April 2018 **Xinyue Liu.**
- Current: PhD Candidate@Worcester Polytechnic Institute
  - PhD Defense Proposal Talk: Synergistic Graph Discovery and Generation
- March 2018 **Haixu Wang.**
- Current: PhD Candidate@Florida State University
  - PhD Candidacy Talk: Network Origins of Aggregate Volatility and Macroeconomic Tail Risks
- Master Thesis Committee**
- July 2018 **Yu Zhang.**
- Current: Master Student@Florida State University
  - Defense Talk: Big Data and Movie Recommender System

## Research Publication

Academic No. citations: 2,362, h-index: 23 (By September 2, 2020)  
Impact (Source: <https://scholar.google.com/citations?user=7AkZSJAAAAJ&hl=en>)

### Books

- [1] **Jiawei Zhang** and Philip S. Yu. Broad Learning through Fusions: An Application on Social Networks. ISBN 978-3-030-12527-1. Springer. 2019.

### Book Chapters

- [2] **Jiawei Zhang** and Philip S. Yu. Broad Learning based Social Community Detection. Springer.
- [3] **Jiawei Zhang.** Chapter 6: Fusion Learning on Heterogeneous Social Networks. Heterogeneous Information Network Analysis and Applications (Data Analytics), Chuan Shi and Philip S. Yu, Springer.
- [4] **Jiawei Zhang** and Philip S. Yu. Chapter: Cross-Platform Social Network Analysis. Encyclopedia of Social Network Analysis and Mining 2nd Edition, 2016.

### Survey Papers

- [5] **Jiawei Zhang.** Social Network Fusion and Mining: A Survey. May 2018.
- [6] **Jiawei Zhang.** Link Prediction across Heterogeneous Social Networks: A Survey.

- [7] Philip S. Yu, **Jiawei Zhang**. On Mining Big Data and Social Network Analysis. July 2014.

### Tutorial Articles

- [8] **Jiawei Zhang**. IFM Lab Tutorial Series # 1: Gradient Descent based Optimization Algorithms for Deep Learning Models Training. First Version: February 2019.
- [9] **Jiawei Zhang**. IFM Lab Tutorial Series # 2: Derivative-Free Global Optimization Algorithms: Bayesian Method and Lipschitzian Approaches. First Version: March 2019.
- [10] **Jiawei Zhang**. IFM Lab Tutorial Series # 3: Derivative-Free Global Optimization Algorithms: Population based Methods and Random Search Approaches. First Version: March 2019.
- [11] **Jiawei Zhang**. IFM Lab Tutorial Series # 4: Secrets of the Brain: An Introduction to the Brain Anatomical Structure and Biological Function. First Version: April 2019.
- [12] **Jiawei Zhang**. IFM Lab Tutorial Series # 5: Basic Neural Units of the Brain: Neurons, Synapses and Action Potential. First Version: May 2019.
- [13] **Jiawei Zhang**. IFM Lab Tutorial Series # 6: Cognitive Functions of the Brain: Perception, Attention and Memory. First Version: May 2019.
- [14] **Jiawei Zhang**. IFM Lab Tutorial Series # 7: Graph Neural Networks for Small Graph and Giant Network Representation Learning: An Overview. First Version: July 2019.

### Preprints (\* My PhD Students)

- [15] Jiyang Bai, Yuxiang Ren\* and **Jiawei Zhang**. Ripple Walk Training: A Subgraph-based training framework for Large and Deep Graph Neural Networks. ArXiv abs/2002.07206. 2020.
- [16] Yuxiang Ren\* and **Jiawei Zhang**. HGAT: Hierarchical Graph Attention Network for Fake News Detection. ArXiv abs/2002.04397. 2020.
- [17] Congying Xia, Chenwei Zhang, Hoang Nguyen, **Jiawei Zhang** and Philip Yu. CG-BERT: Conditional Text Generation with BERT for Generalized Few-shot Intent Detection. ArXiv abs/2004.01881. 2020.
- [18] **Jiawei Zhang**, Haopeng Zhang\*, Congying Xia and Li Sun. GRAPH-BERT: Only Attention is Needed for Learning Graph Representations. ArXiv abs/2001.05140. 2020.
- [19] **Jiawei Zhang**. Segmented GRAPH-BERT for Graph Instance Modeling. ArXiv abs/2002.03283. 2020.
- [20] **Jiawei Zhang**. Graph Neural Distance Metric Learning with GRAPH-BERT. ArXiv abs/2002.03427. 2020.

- [21] **Jiawei Zhang**. G5: A Universal GRAPH-BERT for Graph-to-Graph Transfer and Apocalypse Learning. ArXiv abs/2006.06183. 2020.
- [22] Yixin Chen, Lin Meng\* and **Jiawei Zhang**. Graph Neural Lasso for Dynamic Network Regression. ArXiv abs/1907.11114. 2019.
- [23] **Jiawei Zhang** and Lin Meng\*. GResNet: Graph Residual Network for Reviving Deep GNNs from Suspended Animation. ArXiv abs/1909.05729. 2019.
- [24] Jiyang Bai and **Jiawei Zhang**. BGADAM: Boosting based Genetic-Evolutionary ADAM for Deep Convolutional Neural Network Optimization. ArXiv abs/1908.08015. 2019.
- [25] Jiyang Bai, Yuxiang Ren\* and **Jiawei Zhang**. DEAM: Accumulated Momentum with Discriminative Weight for Stochastic Optimization. ArXiv abs/1907.11307. 2019.

### Conference and Workshop Papers (\* My PhD Students)

- [26] Yuxiang Ren\*, Hao Zhu, **Jiawei Zhang**, Peng Dai and Liefeng Bo. EnsemFDet: An Ensemble Approach to Fraud Detection based on Bipartite Graph. In: Proceedings of the 37th IEEE International Conference on Data Engineering (ICDE '21), Chania Crete, Greece. April 19-22, 2021.
- [27] Yuxiang Ren\*, Bo Wang, **Jiawei Zhang** and Yi Chang. Adversarial Active Learning based Heterogeneous Graph Neural Network for Fake News Detection. In: Proceedings of the 20th IEEE International Conference on Data Mining (ICDM '20), Sorrento, Italy, November 17-20, 2020.
- [28] Li Sun, Zhongbao Zhang, **Jiawei Zhang**, Feiyang Wang, Yang Du, Sen Su and Philip S. Yu. PERFECT: A Hyperbolic Embedding for Joint Social Network Alignment. In: Proceedings of the 20th IEEE International Conference on Data Mining (ICDM '20), Sorrento, Italy, November 17-20, 2020.
- [29] Yizhu Jiao, Yun Xiong, **Jiawei Zhang**, Yao Zhang, Tianqi Zhang and Yangyong Zhu. Sub-graph Contrast for Scalable Self-Supervised Graph Representation Learning. In: Proceedings of the 20th IEEE International Conference on Data Mining (ICDM '20), Sorrento, Italy, November 17-20, 2020.
- [30] Tianqi Zhang, Yun Xiong, **Jiawei Zhang**, Yao Zhang, Yizhu Jiao and Yangyong Zhu. CommDGI: Community Detection Oriented Deep Graph Infomax. In: Proceedings of the 29th ACM International Conference on Information and Knowledge Management (CIKM '20), Online, October 19-23, 2020.
- [31] **Jiawei Zhang**. Get Rid of Suspended Animation Problem: Deep Diffusive Neural Network on Graph Semi-Supervised Classification. Workshop on Graph Representation Learning and Beyond (GRL+). In: 37th International Conference on Machine Learning (ICML '20), Online, July 12-18, 2020.
- [32] Zhiwei Yang, Hechang Chen, **Jiawei Zhang**, Jing Ma and Yi Chang. Attention-based Multi-level Feature Fusion for Named Entity Recognition. In: Proceedings

of the 29th International Joint Conference on Artificial Intelligence (*IJCAI '20*), Yokohama, Japan, July 11-17, 2020.

- [33] Fuxin Ren, Zhongbao Zhang, **Jiawei Zhang**, Sen Su, Li Sun, Guozhen Zhu and Congying Guo. BANANA: when Behavior ANALysis meets social Network Alignment. In: Proceedings of the 29th International Joint Conference on Artificial Intelligence (*IJCAI '20*), Yokohama, Japan, July 11-17, 2020.
- [34] **Jiawei Zhang**, Bowen Dong and Philip S. Yu. FAKEDETECTOR: Effective Fake News Detection with Deep Diffusive Neural Network. In: Proceedings of the 36th IEEE International Conference on Data Engineering (*ICDE '20*), Dallas, Texas, USA, April 20-24, 2020.
- [35] Yu Li, **Jiawei Zhang** and Yi Chang. Learning Signed Network Embedding via Graph Attention. In: Proceedings of the Thirty-Fourth AAAI Conference on Artificial Intelligence (*AAAI '20*), New York City, New York, USA, February 7-12, 2020.
- [36] Yuxiang Ren\*, Bo Liu, Chao Huang, Peng Dai, Liefeng Bo and **Jiawei Zhang**. Heterogeneous Deep Graph Infomax. Workshop of Deep Learning on Graphs: Methodologies and Applications co-located with the Thirty-Fourth AAAI Conference on Artificial Intelligence (*AAAI '20*), New York City, New York, USA, February 7-12, 2020.
- [37] Yuxiang Ren\*, Lin Meng\* and **Jiawei Zhang**. Scalable Heterogeneous Social Network Alignment through Synergistic Graph Partition. In: Proceedings of the 31st ACM Conference on Hypertext and Social Media (*HT '20*), July 13-15 2020.
- [38] Lin Meng\* and **Jiawei Zhang**. IsoNN: Isomorphic Neural Network for Graph Representation Learning and Classification. Graph Representation Learning Workshop of the 33rd Conference on Neural Information Processing Systems (*NIPS '19*), Vancouver, Canada, December 8-14, 2019.
- [39] Yuxiang Ren\*, Charu C. Aggarwal and **Jiawei Zhang**. Meta Diagram based Active Social Networks Alignment. In: Proceedings of the 35th IEEE International Conference on Data Engineering (*ICDE '19*), Macau SAR, China, April 8-12, 2019.
- [40] Yu Li, Ying Wang, Tingting Zhang, **Jiawei Zhang** and Yi Chang. Learning Network Embedding with Community Structural Information. In: Proceedings of the 28th International Joint Conference on Artificial Intelligence (*IJCAI '19*), Macau SAR, China, August 10-16, 2019.
- [41] Lei Zheng, Ziwei Fan, Chun-Ta Lu, **Jiawei Zhang** and Philip S. Yu. Gated Spectral Units: Modeling Co-evolving Patterns for Sequential Recommendation. In: Proceedings of the 42nd International ACM SIGIR Conference on Research and Development in Information Retrieval (*SIGIR '19*), Paris, France, July 21-25, 2019.
- [42] Lei Zheng, Chaozhuo Li, Chun-Ta Lu, **Jiawei Zhang** and Philip S. Yu. Deep Distribution Network: Addressing the Data Sparsity Issue for Top-N Recommendation.



- In: Proceedings of the 42nd International ACM SIGIR Conference on Research and Development in Information Retrieval (*SIGIR '19*), Paris, France, July 21-25, 2019.
- [43] Yizhu Jiao, Yun Xiong, **Jiawei Zhang** and Yangyong Zhu. Collective Link Prediction Oriented Network Embedding with Hierarchical Graph Attention. In: Proceedings of the 28th ACM International Conference on Information and Knowledge Management (*CIKM '19*), Beijing, China, November 3-7, 2019.
  - [44] Bowen Dong, **Jiawei Zhang**, Chenwei Zhang, Yang Yang and Philip S. Yu. Missing Entity Synergistic Completion across Multiple Isomeric Online Knowledge Libraries. In: Proceedings of the 2019 International Joint Conference on Neural Networks (*IJCNN '19*), Budapest, Hungary, July 14-19, 2019.
  - [45] Lin Meng\*, Yuxiang Ren\*, **Jiawei Zhang**, Fanghua Ye and Philip S. Yu. Deep Heterogeneous Social Network Alignment. In: Proceedings of the 5th IEEE International Conference on Collaboration and Internet Computing (*CIC '19*), Los Angeles, CA, USA, December 12-14, 2019.
  - [46] Lin Meng\*, Jiyang Bai, **Jiawei Zhang**. LATTE: Application Oriented Network Embedding. In: Proceedings of the 36th IEEE International Conference on Data Engineering (*BigData '19*), Los Angeles, CA, USA, December 9-12, 2019.
  - [47] **Jiawei Zhang**, Bowen Dong and Philip S. Yu. Effective Fake News Detection with Deep Diffusive Neural Network. In: Proceedings of the 36th IEEE International Conference on Data Engineering (*BigData '19*), Los Angeles, CA, USA, December 9-12, 2019.
  - [48] Zhiwei Liu, Lei Zheng, **Jiawei Zhang**, Jiayu Han and Philip S. Yu. JSCN: Joint Spectral Convolutional Network for Cross Domain Recommendation. In: Proceedings of the 36th IEEE International Conference on Data Engineering (*BigData '19*), Los Angeles, CA, USA, December 9-12, 2019.
  - [49] Pengyang Wang, Yanjie Fu, **Jiawei Zhang**, Pengfei Wang, Yu Zheng and Charu Aggarwal. You Are How You Drive: Peer and Temporal-Aware Representation Learning for Driving Behavior Analysis. In: Proceedings of the 24th ACM SIGKDD Conference on Knowledge Discovery and Data Mining (*KDD '18*), London, UK, August 19-23, 2018.
  - [50] Limeng Cui, Zhensong Chen, **Jiawei Zhang**, Philip S. Yu, Yong Shi and Lifang He. Multi-view Collective Tensor Decomposition for Cross-modal Hashing. In: Proceedings of the ACM International Conference on Multimedia Retrieval (*ICMR '18*), Yokohama, Japan, June 11-14, 2018.
  - [51] Lifang He, Chun-Ta Lu, Yong Chen, **Jiawei Zhang**, Linlin Shen, Philip S. Yu and Fei Wang. A Self-Organizing Tensor Architecture for Multi-View Clustering. In: Proceedings of the 2018 IEEE International Conference on Data Mining (*ICDM '18*), Singapore, November 17-20, 2018.

- [52] Lei Zheng, Chun-Ta Lu, Fei Jiang, **Jiawei Zhang** and Philip S. Yu. Spectral Collaborative Filtering. In: Proceedings of the 12th ACM Conference on Recommender Systems (*RecSys '18*), Vancouver, Canada, October 2-7, 2018.
- [53] Limeng Cui, Zhensong Chen, **Jiawei Zhang**, Lifang He, Yong Shi and Philip S. Yu. Data Fusion for Cross-modal Retrieval Using Tensor Modeling. In: Proceedings of the 2018 IEEE International Conference on Image Processing (*ICIP '18*), Athens, Greece, October 7-10, 2018.
- [54] Kunpeng Liu, Pengyang Wang, **Jiawei Zhang**, Guannan Liu, Yanjie Fu and Sajal K. Das. Incorporating Interaction Coupling among Multi-View Spatiotemporal Contexts for Mobike Destination Prediction. In: Proceedings of the SIAM International Conference on Data Mining (*SDM '18*), San Diego, California, USA, May 3-5, 2018.
- [55] Pengyang Wang, **Jiawei Zhang**, Guannan Liu, Yanjie Fu and Charu C. Aggarwal. Ensemble-Spotting: Prioritizing Vibrant Communities via POI Embedding with Multi-view Spatial Graphs. In: Proceedings of the SIAM International Conference on Data Mining (*SDM '18*), San Diego, California, USA, May 3-5, 2018.
- [56] Ye Liu, **Jiawei Zhang**, Chenwei Zhang and Philip S. Yu. Data-driven Blockbuster Planning on Online Movie Knowledge Library. In: Proceedings of the 2018 IEEE International Conference on Big Data (*BigData '18*).
- [57] **Jiawei Zhang**, Jianhui Chen, Shi Zhi, Yi Chang, Philip S. Yu and Jiawei Han. Link Prediction across Aligned Networks with Sparse Low Rank Matrix Estimation. In: Proceedings of the 2017 IEEE International Conference on Data Engineering (*ICDE '17*), San Diego, California, USA, April 19-22, 2017.
- [58] **Jiawei Zhang**, Philip S. Yu, Yuanhua Lv. Enterprise Social Community Detection via Hierarchical Information Fusion. In: Proceedings of the 2017 IEEE International Conference on Data Engineering (*ICDE '17*), San Diego, California, USA, April 19-22, 2017.
- [59] **Jiawei Zhang**, Jianhui Chen, Junxing Zhu, Yi Chang, and Philip S. Yu. Link Prediction with Cardinality Constraints. In: Proceedings of the 10th ACM International WSDM Conference (*WSDM '17*), Cambridge, UK, February 6-10, 2017.
- [60] **Jiawei Zhang**, Philip S. Yu, Yuanhua Lv. Enterprise Employee Training via Project Team Formation. In: Proceedings of the 10th ACM International WSDM Conference (*WSDM '17*), Cambridge, UK, February 6-10, 2017.
- [61] **Jiawei Zhang**, Congying Xia, Chenwei Zhang, Limeng Cui, Yanjie Fu and Philip S. Yu. BL-MNE: Emerging Heterogeneous Social Network Embedding through Broad Learning with Aligned Autoencoder. In: Proceedings of the IEEE International Conference on Data Mining (*ICDM '17*), New Orleans, Louisiana, USA, November 18-21, 2017.

- [62] Zhu Junxing, **Jiawei Zhang**, Lifang He, Quanyuan Wu, Bin Zhou, Chenwei Zhang and Philip S. Yu. Broad Learning based Multi-Source Collaborative Recommendation. In: Proceedings of the 2017 International Conference on Information and Knowledge Management (*CIKM '17*), Singapore, November 6-10, 2017.
- [63] **Jiawei Zhang**, Limeng Cui, Philip S. Yu and Yuanhua Lv. BL-ECD: Broad Learning based Enterprise Community Detection via Hierarchical Structure Fusion. In: Proceedings of the 2017 International Conference on Information and Knowledge Management (*CIKM '17*), Singapore, November 6-10, 2017.
- [64] **Jiawei Zhang**, Charu Aggarwal and Philip S. Yu. Rumor Initiator Detection in Infected Signed Network. In: Proceedings of the 37th IEEE International Conference on Distributed Computing Systems (*ICDCS '17*), Atlanta, GA, USA, June 5-8, 2017.
- [65] Limeng Cui, **Jiawei Zhang**, Zhensong Chen, Yong Shi, and Philip S. Yu. Inverse Extreme Learning Machine for Learning with Label Proportions. In: Proceedings of the 2017 IEEE International Conference on Big Data (*IEEE BigData 2017*), Boston, MA, USA, December 11-14, 2017.
- [66] Lichao Sun, Xiaokai Wei , **Jiawei Zhang**, Lifang He, Philip S. Yu, and Witawas Srisa-an. PUDroid: Positive and Unlabeled Learning to Detect Zero-day Android Malware. In: Proceedings of the 2017 IEEE International Conference on Big Data (*IEEE BigData 2017*), Boston, MA, USA, December 11-14, 2017.
- [67] **Jiawei Zhang**, Philip S. Yu, Charu C. Aggarwal and Limeng Cui. Social Attitude Expression Prediction in Signed Networks. In: Proceedings of the 6th IEEE International Congress on Big Data (*IEEE BigData Congress '17*), Honolulu, Hawaii, USA, June 25-30, 2017.
- [68] **Jiawei Zhang**, and Philip S. Yu. PCT: Partial Co-Alignment of Social Networks. In: Proceedings of the 25th International World Wide Web Conference (*WWW '16*), Montreal, Canada, April 11-15, 2016.
- [69] Qingbo Hu, Sihong Xie, **Jiawei Zhang**, Qiang Zhu and Philip S. Yu. HeteroSales: Utilizing Heterogeneous Social Networks to Identify the Next Enterprise Customer. In: Proceedings of the 25th International World Wide Web Conference (*WWW '16*), Montreal, Canada, April 11-15, 2016.
- [70] **Jiawei Zhang**, Xiao Pan, Moyin Li and Philip S. Yu. Bicycle-Sharing System Expansion: Station Re-Deployment through Crowd Planning. In: Proceedings of the 24th ACM SIGSPATIAL International Conference on Advances in Geographic Information Systems (*SIGSPATIAL '16*), San Francisco Bay Area, California, USA, October 31-November 3, 2016.
- [71] **Jiawei Zhang**, Philip S. Yu, Yuanhua Lv and Qianyi Zhan. Information Diffusion at Workplace. In: Proceedings of the 25th ACM International Conference on Information and Knowledge Management (*CIKM '16*), Indianapolis, Indiana, USA, October 24-28, 2016.

- [72] **Jiawei Zhang**, Qianyi Zhan, Lifang He, Charu C. Aggarwal and Philip S. Yu. Trust Hole Identification in Signed Networks. In: Proceedings of the 2016 European Conference on Machine Learning and Principles and Practice of Knowledge Discovery (*ECML-PKDD '16*), Riva del Garda, Italy, September 19-23, 2016.
- [73] Guixiang Ma, Lifang He, Bokai Cao, **Jiawei Zhang**, Philip S. Yu, and Ann B. Ragin. Multi-Graph Clustering based on Interior-Node Topology with Applications to Brain Networks. In: Proceedings of the 2016 European Conference on Machine Learning and Principles and Practice of Knowledge Discovery (*ECML-PKDD '16*), Riva del Garda, Italy, September 19-23, 2016.
- [74] Qianyi Zhan, **Jiawei Zhang**, Philip S. Yu, Sherry Emery and Junyuan Xie. Inferring Social Influence of Anti-Tobacco Mass Media Campaigns. In: Proceedings of the IEEE International Conference on Bioinformatics and Biomedicine (*BIBM '16*), Shenzhen, China, December 15-18, 2016.
- [75] **Jiawei Zhang**, Xiangnan Kong and Philip S. Yu. Social Badge System Analysis. In: Proceedings of the 2016 IEEE/ACM International Conference on Advances in Social Networks Analysis and Mining (*ASONAM '16*), San Francisco, CA, USA, 18-21 August, 2016. (**Best Student Paper Runner Up**)
- [76] **Jiawei Zhang**, Senzhang Wang, Qianyi Zhan and Philip S. Yu. Intertwined Viral Marketing in Social Networks. In: Proceedings of the 2016 IEEE/ACM International Conference on Advances in Social Networks Analysis and Mining (*ASONAM '16*), San Francisco, CA, USA, 18-21 August, 2016.
- [77] Xiao Pan, **Jiawei Zhang**, Fengjiao Wang and Philip S. Yu. Distance-based Social Discovery with Posterior Privacy Verification. In: Proceedings of the 2016 IEEE International Conference on Big Data (*IEEE BigData 2016*), Washington D.C., USA, 5-8, December 2016.
- [78] Qianyi Zhan, **Jiawei Zhang**, Philip S. Yu and Junyuan Xie. Discover Tipping Users For Cross Network Influencing. In: Proceedings of the IEEE 17th International Conference on Information Reuse and Integration (*IRI '16*), Pittsburgh, PA, USA, July 28-30, 2016. (Invited Paper)
- [79] Weixiang Shao, **Jiawei Zhang**, Lifang He and Philip S. Yu. Multi-Source Multi-View Clustering via Discrepancy Penalty. In: Proceedings of the International Joint Conference on Neural Networks (*IJCNN '16*), Vancouver, Canada, July 24-29, 2016.
- [80] **Jiawei Zhang** and Philip S. Yu. Trip Route Planning for Bicycle-Sharing Systems. In: Proceedings of the 2nd IEEE International Conference on Collaboration and Internet Computing (*IEEE CIC '16*), Pittsburgh, PA, USA, November 1-3, 2016.
- [81] **Jiawei Zhang**, Xiao Pan, Moyin Li and Philip S. Yu. Bicycle-Sharing System Analysis and Trip Prediction. In: Proceedings of the 17th International Conference on Mobile Data Management (*MDM '16*), Porto, Portugal, June 13-16, 2016.

- [82] **Jiawei Zhang**, Philip S. Yu and Yuanhua Lv. Organizational Chart Inference. In: Proceedings of the 21st ACM SIGKDD Conference on Knowledge Discovery and Data Mining (*KDD '15*), Sydney, Australia, August 10-13, 2015.
- [83] **Jiawei Zhang**, and Philip S. Yu. Multiple Anonymized Social Networks Alignment. In: Proceedings of the IEEE International Conference on Data Mining (*ICDM '15*), Atlantic City, NJ, USA, November 14-17, 2015.
- [84] **Jiawei Zhang** and Philip S. Yu. Integrated Anchor and Social Link Predictions across Partially Aligned Social Networks. In: Proceedings of the International Joint Conference on Artificial Intelligence (*IJCAI '15*), Buenos Aires, Argentinean, July 25-31, 2015.
- [85] **Jiawei Zhang**, Yuanhua Lv and Philip S. Yu. Enterprise Social Link Recommendation. In: Proceedings of the 24th ACM International Conference on Information and Knowledge Management (*CIKM '15*), Melbourne, Australia, October 19-23, 2015.
- [86] **Jiawei Zhang** and Philip S. Yu. Community Detection for Emerging Networks. In: Proceedings of the 15th SIAM International Conference on Data Mining (*SDM '15*), Vancouver, British Columbia, Canada, April 30-May 2, 2015.
- [87] **Jiawei Zhang**, Weixiang Shao, Senzhang Wang, Xiangnan Kong and Philip S. Yu. PNA: Partial Network Alignment with Generic Stable Matching. In: Proceedings of the 16th IEEE International Conference on Information Reuse and Integration (*IEEE IRI '15*), San Francisco, CA, USA, August 13-15, 2015. (Invited Paper)
- [88] **Jiawei Zhang** and Philip S. Yu. MCD: Mutual Clustering across Multiple Heterogeneous Networks. In: Proceedings of IEEE BigData Congress (*IEEE BigData Congress '15*), New York City, NY, June 27-July 2, 2015. (Invited Paper)
- [89] Qianyi Zhan, **Jiawei Zhang**, Senzhang Wang, Philip S. Yu and Junyuan Xie. Influence Maximization across Partially Aligned Heterogeneous Social Networks. In: Proceedings of the 19th Pacific-Asia Conference on Knowledge Discovery and Data Mining (*PAKDD '15*), Ho Chi Minh City, Vietnam, May 19-22, 2015.
- [90] Senzhang Wang, Honghui Zhang, **Jiawei Zhang**, Philip S. Yu and Zhoujun Li. Inferring Diffusion Networks with Structure Transfer. In: Proceedings of the 20th International Conference on Database Systems for Advanced Applications (*DASFAA '15*), Hanoi, Vietnam, April 20-23, 2015.
- [91] **Jiawei Zhang**, Philip S. Yu and Zhi-Hua Zhou. Meta-path based Multi-network Collective Link Prediction. In: Proceedings of the 20th ACM SIGKDD Conference on Knowledge Discovery and Data Mining (*KDD '14*), New York City, NY, August 24-27, 2014.
- [92] **Jiawei Zhang**, Xiangnan Kong and Philip S. Yu. Transferring Heterogeneous Links across Location-Based Social Networks. In: Proceedings of the 7th International ACM Conference on Web Search and Data Mining (*WSDM '14*), New York City, NY, February 24-28, 2014.

- [93] Songchang Jin, **Jiawei Zhang**, Philip S. Yu, Shuqiang Yang and Aiping Li. Synergistic Partitioning in Multiple Large Scale Social Networks. In: Proceedings of the 2014 IEEE International Conference on Big Data (*IEEE BigData '14*), Washington, DC, October 27-30, 2014.
- [94] **Jiawei Zhang**, Xiangnan Kong and Philip S. Yu. Predicting Social Links for New Users across Aligned Heterogeneous Social Networks. In: Proceedings of the 13th IEEE International Conference on Data Mining (*ICDM '13*), Dallas, Texas, December 7-10, 2013.
- [95] Xiangnan Kong, **Jiawei Zhang** and Philip S. Yu. Inferring Anchor Links across Heterogeneous Social Networks. In: Proceedings of the 22nd ACM International Conference on Information and Knowledge Management (*CIKM '13*), San Francisco, CA, October 27-November 1, 2013.

### Journal Papers (\* My PhD Students)

- [96] Yuxiang Ren\*, Charu C. Aggarwal and **Jiawei Zhang** and Philip S. Yu. Activelter: Meta Diagram based Active Learning in Social Networks Alignment. TKDE. 2019.
- [97] Senzhang Wang, Hao Chen, Jiannong Cao, **Jiawei Zhang** and Philip S. Yu. Locally Balanced Inductive Matrix Completion for Demand-Supply Inference in Stationless Bike-Sharing Systems. TKDE. 2019.
- [98] Sina Sajadmanesh, Sogol Bazargani, **Jiawei Zhang** and Hamid R. Rabiee. Continuous-Time Relationship Prediction in Dynamic Heterogeneous Information Networks. TKDD. 2019.
- [99] Xiao Pan, Ma Ang, **Jiawei Zhang** and Lei Wu. Approximate Similarity Measurements on Multi-Attributes Trajectories Data. IEEE Access. 2019.
- [100] Limeng Cui, **Jiawei Zhang**, Lifang He and Philip S. Yu. Multi-view collective tensor decomposition for cross-modal hashing. IJMIR. 2019.
- [101] **Jiawei Zhang** and Philip S. Yu. Broad Learning: An Emerging Area in Social Network Analysis. SIGKDD Explorations. 2018.
- [102] Taisong Li, **Jiawei Zhang**, Philip Yu, Yan Zhang and Yonghong Yan Deep Dynamic Network Embedding for Link Prediction. IEEE Access. 2018.
- [103] Qianyi Zhan, **Jiawei Zhang** and Philip S. Yu. Integrated Anchor and Social Link Predictions across Multiple Social Networks. KAIS. 2018.
- [104] Pengyang Wang, Yanjie Fu, **Jiawei Zhang**, Xiaolin Li and Dan Lin. Learning Urban Community Structures: A Collective Embedding Perspective with Periodic Spatial-temporal Mobility Graphs. TIST. 2018.
- [105] Chuan Shi, Yitong Li, **Jiawei Zhang** and Yizhou Sun, Philip S. Yu. A Survey of Heterogeneous Information Network Analysis. TKDE. 2017.
- [106] Qianyi Zhan, **Jiawei Zhang**, Philip S. Yu and Junyuan Xie. Community Detection for Emerging Social Networks. WWW Journal. 2017.

- [107] Qianyi Zhan, **Jiawei Zhang**, Philip S. Yu, Sherry Emery and Junyuan Xie. Inferring Social Influence of Anti-Tobacco Mass Media Campaigns. NanoBioscience. 2017.
- [108] Weiwei Shi, Yongxin Zhu, Philip S. Yu, **Jiawei Zhang**, Tian Huang, Chang Wang, and Yufeng Chen. Effective Prediction of Missing Data on Apache Spark over Multivariable Time Series. TBD. 2017.
- [109] Junxing Zhu, **Jiawei Zhang**, Quanyuan Wu, Bin Zhou, Xiaokai Wei and Philip S. Yu. Constrained Active Learning for Anchor Link Prediction across Heterogeneous Social Networks. Sensors. 2017.
- [110] **Jiawei Zhang**, Songchang Jin and Philip S. Yu. Mutual Community Detection across Multiple Partially Aligned Social Networks. STBD. 2017.
- [111] **Jiawei Zhang**, Qianyi Zhan and Philip S. Yu. Concurrent Alignment of Multiple Anonymized Social Networks with Generic Stable Matching. AISC. 2016.
- [112] Junxing Zhu, **Jiawei Zhang**, Chenwei Zhang, Quanyuan Wu, Yan Jia, Bin Zhou and Philip S. Yu CHRS: Cold Start Recommendation across Multiple Heterogeneous Information Networks. IEEE Access. 2015.

## Invited Talks

- Feb. 2019 Broad Learning through Fusions, University of Pittsburgh
- Jan. 2019 Broad Learning through Fusions, Worcester Polytechnic Institute
- Dec. 2018 Broad Learning through Fusions, Fudan University
- Dec. 2018 Broad Learning through Fusions, Beijing University of Posts and Telecommunications
- Nov. 2017 An Introduce to Network Embedding Methods, Florida State University
- Oct. 2017 Social Network Mining: An Introduction, Florida State University
- April 2017 Fusion of Heterogeneous Social Networks for Synergistic Knowledge Discovery, Florida State University
- March 2017 Fusion of Heterogeneous Social Networks for Synergistic Knowledge Discovery, University of Louisiana at Lafayette
- March 2017 Fusion of Heterogeneous Social Networks for Synergistic Knowledge Discovery, Indiana University Purdue University Indianapolis
- Feb. 2017 Fusion of Heterogeneous Social Networks for Synergistic Knowledge Discovery, Indiana University Bloomington
- Feb. 2017 Fusion of Heterogeneous Social Networks for Synergistic Knowledge Discovery, Rensselaer Polytechnic Institute
- Feb. 2017 Fusion of Heterogeneous Social Networks for Synergistic Knowledge Discovery, University Alabama at Birmingham
- Feb. 2017 Fusion of Heterogeneous Social Networks for Synergistic Knowledge Discovery, New Jersey Institute of Technology
- Feb. 2017 Fusion of Heterogeneous Social Networks for Synergistic Knowledge Discovery, Temple University
- Aug. 2016 Link Prediction with Cardinality Constraint, Yahoo! Research

- May 2016 Fusion of Heterogeneous Social Networks for Synergistic Knowledge Discovery
- Aug. 2014 Enterprise Social Network Analysis and Social Link Recommendation, Microsoft Research

## Professional Services

### Funding Review Panel

- Swiss National Science Foundation Panel August 2019.
- US National Science Foundation, IIS Medium Panel April 2019.

### Transaction Information Director and Specialist

- ACM Transactions on Knowledge Discovery from Data (TKDD) August 2014 to September 2017.

### Conference Session Chair

- IEEE/ACM International Conference on Advances in Social Networks Analysis and Mining, Session 7C: Adversarial/Trust 2, *ASONAM 2016*

### Senior Program Committee

- AAAI Conference on Artificial Intelligence (AAAI): 2021

### Program Committee

- SIGKDD Conference of Knowledge Discovery and Data Mining (*KDD*): 2018, 2019, 2020
- SIGIR Conference on Research and Development in Information Retrieval (*SIGIR*): 2020
- International World Wide Web Conference (*WWW*): 2017, 2018, 2019, 2020
- AAAI Conference on Artificial Intelligence (AAAI): 2019, 2020
- International Joint Conference on Artificial Intelligence (*IJCAI*): 2018, 2019
- International Conference on Data Mining (*ICDM*): 2017, 2018, 2019, 2020
- International Conference on Information and Knowledge Management (*CIKM*): 2015, 2016, 2017, 2018, 2019
- International Conference on Web Search and Data Mining (*WSDM*): 2021
- SIAM Data Mining Conference (*SDM*): 2018, 2019, 2020

### Journal Reviewer

- IEEE Transactions on Knowledge and Data Engineering *TKDE* 2014, 2017, 2019
- ACM Transactions on Knowledge Discovery from Data *TKDD* 2013, 2015, 2016