

# Jiawei Zhang

## Curriculum Vitae

Room 169 Love Building

1017 Academic Way

Tallahassee, FL 32304

☎ +1 (312) 823-9343

✉ [jiawei@ifmlab.org](mailto:jiawei@ifmlab.org)

<http://www.ifmlab.org>

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## 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

- 2021–Present **Assistant Professor.**  
Department of Computer Science, University of California, Davis
- 2017–2021 **Assistant Professor.**  
Department of Computer Science, Florida State University
- 2017–Present **Founder and Director.**  
Information Fusion and Mining Laboratory

## Education

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

## Intern and 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

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|------|--------------------------------------|------------------------|
| 2020 | Best Student Paper Runner Up Award   | <i>IEEE ICDM</i>       |
| 2018 | First Year Assistant Professor Award | <i>FSU</i>             |
| 2018 | Best Student Paper Runner Up Award   | <i>ACM SIGKDD</i>      |
| 2016 | Best Student Paper Runner Up Award   | <i>IEEE/ACM ASONAM</i> |

## Grant Proposals

### Funded Proposals

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

- 2018-2022 **PI, III: Medium: Collaborative Research: An Extensible Heterogeneous Network Embedding Framework with Application Specific Adaptation.**  
◦ NSF Division of Information & Intelligent Systems  
◦ Personal Share: \$550K/\$1.2M
- 2018-2019 **sole-PI, CRC: Cyberspace Fake News Article and Creator Detection via a Multi-Perspective Approach.**  
◦ FSU Council on Research and Creativity  
◦ Personal Share: \$20K
- 2015-2019 **co-PI, III: Small: Fusion of Heterogeneous Networks for Synergistic Knowledge Discovery.**  
◦ NSF Division of Information & Intelligent Systems  
◦ Total Budget: \$500K

## Course Teaching

- 2021 Spring **CIS 5725-0001: Advanced Database Systems.**  
Department of Computer Science  
Florida State University
- 2020 Fall **COP 4710-0001: Databases.**  
Department of Computer Science  
Florida State University
- 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: [16], [30]

2018–Present **Lin Meng.**

- Current: PhD Student@Florida State University
- Research Topic: Graph Mining
- Collaborated Papers: [54], [53], [46], [44], [41], [20], [21]

2018–Present **Yuxiang Ren.**

- Current: PhD Student@Florida State University
- Research Topic: Text Mining and Graph Mining
- Collaborated Papers: [53], [47], [41], [40], [31], [22], [42], [104], [26], [27], [28], [29]

2017–2017 **Conying Xia.**

- Current: PhD Candidate@University of Illinois at Chicago
- Research Topic: Network Embedding
- Collaborated Papers: [69], [15], [16]

2016–2017 **Chenwei Zhang.**

- Current: Applied Scientist@Amazon
- Research Topic: Deep Learning Application in Data Mining
- Collaborated Papers: [64], [70], [52], [69], [15]

2015–2016 **Junxing Zhu.**

- Current: Assistant Professor@National University of Defense Technology
- Research Topic: User Resolution and Alignment across Networks
- Collaborated Papers: [67], [117], [70], [120]

- 2014–2016 **Qianyi Zhan.**
- Current: Assistant Professor@Jiangnan University
  - Research Topic: Information Diffusion and Viral Marketing
  - Collaborated Papers: [79], [80], [84], [86], [97], [82], [119], [111], [114], [115]
- PhD Thesis Committee**
- April 2021 **Yuxiang Ren.**
- Current: PhD Candidate@Florida State University
  - PhD Prospectus Exam: Mining on Graphs: Graph Neural Network and Applications.
- Feb. 2021 **Congying Xia.**
- Current: PhD Candidate@University of Illinois at Chicago
  - PhD Prelim Exam: Natural Language Understanding for Conversational Agents.
- Feb. 2021 **He Huang.**
- Current: PhD Candidate@University of Illinois at Chicago
  - PhD Prelim Exam: Label Scarcity in Computer Vision: From Long Tail to Zero-shot.
- Feb. 2021 **Daniel Bis.**
- Current: PhD Candidate@Florida State University
  - PhD Area Exam: Layered Multistep Bidirectional Long Short-Term Memory Networks for Biomedical Word Sense Disambiguation.
- 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

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## Research Publication

Academic No. citations: 3,203, h-index: 26 (By August 28, 2021)

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] 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.
- [16] **Jiawei Zhang**, Haopeng Zhang\*, Congying Xia and Li Sun. GRAPH-BERT: Only Attention is Needed for Learning Graph Representations. ArXiv abs/2001.05140. 2020.
- [17] **Jiawei Zhang**. Segmented GRAPH-BERT for Graph Instance Modeling. ArXiv abs/2002.03283. 2020.
- [18] **Jiawei Zhang**. Graph Neural Distance Metric Learning with GRAPH-BERT. ArXiv abs/2002.03427. 2020.
- [19] **Jiawei Zhang**. G5: A Universal GRAPH-BERT for Graph-to-Graph Transfer and Apocalypse Learning. ArXiv abs/2006.06183. 2020.
- [20] Yixin Chen, Lin Meng\* and **Jiawei Zhang**. Graph Neural Lasso for Dynamic Network Regression. ArXiv abs/1907.11114. 2019.
- [21] **Jiawei Zhang** and Lin Meng\*. GResNet: Graph Residual Network for Reviving Deep GNNs from Suspended Animation. ArXiv abs/1909.05729. 2019.

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

- [22] 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.
- [23] Li Sun, Zhongbao Zhang, **Jiawei Zhang**, Feiyang Wang, Hao Peng, Sen Su and Philip S. Yu. Hyperbolic Variational Graph Neural Network for Modeling Dynamic

- Graphs. In: Proceedings of the 35th AAAI Conference on Artificial Intelligence (AAAI '21), Virtual Conference, February 2-9, 2021.
- [24] Ziwei Fan, Zhiwei Liu, Jiawei Zhang, Yun Xiong, Lei Zheng and Philip Yu. Continuous-Time Sequential Recommendation with Temporal Graph Collaborative Transformer. In: Proceedings of the 30th ACM International Conference on Information and Knowledge Management. (CIKM '21), Online Conference Hosted in Gold Coast, Queensland, Australia. November 1-5, 2021.
  - [25] Qingqin Wang, Yun Xiong, Yao Zhang, **Jiawei Zhang** and Yangyong Zhu. AutoCite: Multi-Modal Representation Fusion for Contextual Citation Generation. In: Proceedings of the 14th ACM International Conference on Web Search and Data Mining (WSDM '21), Jerusalem, Israel. March 8-12, 2021.
  - [26] Yuxiang Ren\*, Jiyang Bai and **Jiawei Zhang**, Peng Dai and Liefeng Bo. Label Contrastive Coding based Graph Neural Network for Graph Classification. In: Proceedings of the 26th International Conference on Database Systems for Advanced Applications (DASFAA '21), Hybrid Conference. April 11-14, 2021.
  - [27] Jiyang Bai, Yuxiang Ren\* and **Jiawei Zhang**. Ripple Walk Training: A Subgraph-based training framework for Large and Deep Graph Neural Networks. In: Proceedings of the International Joint Conference on Neural Networks (IJCNN '21), Virtual Event, July 18-22, 2021.
  - [28] Jiyang Bai, Yuxiang Ren\* and **Jiawei Zhang**. BGADAM: Boosting based Genetic-Evolutionary ADAM for Deep Convolutional Neural Network Optimization. In: Proceedings of the International Joint Conference on Neural Networks (IJCNN '21), Virtual Event, July 18-22, 2021.
  - [29] Yuxiang Ren\* and **Jiawei Zhang**. Fake News Detection on News-Oriented Heterogeneous Information Networks through Hierarchical Graph Attention. In: Proceedings of the International Joint Conference on Neural Networks (IJCNN '21), Virtual Event, July 18-22, 2021.
  - [30] Haopeng Zhang\* and **Jiawei Zhang**. Text Graph Transformer for Document Classification. In: Proceedings of the 2020 Conference on Empirical Methods in Natural Language Processing (EMNLP '20). November 16-20, 2020.
  - [31] 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.
  - [32] 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.
  - [33] 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.
- [34] 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.
  - [35] **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.
  - [36] 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.
  - [37] 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.
  - [38] **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.
  - [39] 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.
  - [40] 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.
  - [41] 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.
  - [42] Jiyang Bai, Yuxiang Ren\* and **Jiawei Zhang**. DEAM: Accumulated Momentum with Discriminative Weight for Stochastic Optimization. In: Proceedings of the 2020 IEEE/ACM International Conference on Advances in Social Network Analysis and Mining (*ASONAM '20*), December 7-10, 2020.
  - [43] Xing Jia, Yun Xiong, **Jiawei Zhang**, Yao Zhang and Yangyong Zhu. Few-shot Radiology Report Generation for Rare Diseases. In: Proceedings of the 2020



International Conference on Bioinformatics and Biomedicine (*BIBM '20*), Seout, South Korea, December 16-19, 2020.

- [44] Lin Meng, Ning Yan, Masood Mortazavi and **Jiawei Zhang**. Discovering Localized Information for Heterogeneous Graph Node Representation Learning. In: Proceedings of the 6th IEEE International Conference on Collaboration and Internet Computing. (*CIC '20*), Virtual Conference, December 1-3, 2020.
- [45] Congying Xia, Chenwei Zhang, **Jiawei Zhang**, Tingting Liang, Hao Peng and Philip S. Yu. Low-shot Learning in Natural Language Processing. In: Proceedings of the 2nd IEEE International Conference on Cognitive Machine Intelligence. (*CogMI '20*), Virtual Conference, December 1-3, 2020.
- [46] 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.
- [47] 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.
- [48] 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.
- [49] 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.
- [50] 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.
- [51] 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.
- [52] 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.

- [53] 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.
- [54] 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.
- [55] **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.
- [56] 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.
- [57] 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.
- [58] 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.
- [59] 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.
- [60] 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.
- [61] 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.
- [62] 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.

- [63] 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.
- [64] 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*).
- [65] **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.
- [66] **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.
- [67] **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.
- [68] **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.
- [69] **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.
- [70] 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.
- [71] **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.
- [72] **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.
- [73] 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.

- [74] 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.
- [75] **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.
- [76] **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.
- [77] 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.
- [78] **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.
- [79] **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.
- [80] **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.
- [81] 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.
- [82] 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.
- [83] **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**)

- [84] **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.
- [85] 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.
- [86] 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)
- [87] 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.
- [88] **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.
- [89] **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.
- [90] **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.
- [91] **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.
- [92] **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.
- [93] **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.

- [94] **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.
- [95] **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)
- [96] **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)
- [97] 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.
- [98] 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.
- [99] **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.
- [100] **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.
- [101] 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.
- [102] **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.
- [103] 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)

- [104] Yuxiang Ren\*, Charu C. Aggarwal and **Jiawei Zhang** and Philip S. Yu. Activelter: Meta Diagram based Active Learning in Social Networks Alignment. in IEEE Transactions on Knowledge and Data Engineering, vol. 33, no. 5, pp. 1848-1860, 1 May 2021, doi: 10.1109/TKDE.2019.2947908.
- [105] 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. in IEEE Transactions on Knowledge and Data Engineering, vol. 32, no. 12, pp. 2374-2388, 1 Dec. 2020, doi: 10.1109/TKDE.2019.2922636.
- [106] Sina Sajadmanesh, Sogol Bazargani, **Jiawei Zhang** and Hamid R. Rabiee. Continuous-Time Relationship Prediction in Dynamic Heterogeneous Information Networks. ACM Trans. Knowl. Discov. Data 13, 4, Article 44 (August 2019), 31 pages. DOI:<https://doi.org/10.1145/3333028>.
- [107] Xiao Pan, Ma Ang, **Jiawei Zhang** and Lei Wu. Approximate Similarity Measurements on Multi-Attributes Trajectories Data. in IEEE Access, vol. 7, pp. 10905-10915, 2019, doi: 10.1109/ACCESS.2018.2889475.
- [108] Limeng Cui, **Jiawei Zhang**, Lifang He and Philip S. Yu. Multi-view collective tensor decomposition for cross-modal hashing. Int J Multimed Info Retr 8, 47?59 (2019). <https://doi.org/10.1007/s13735-018-0164-0>.
- [109] Qianyi Zhan, **Jiawei Zhang** and Philip S. Yu. Integrated Anchor and Social Link Predictions across Multiple Social Networks. Knowl Inf Syst 60, 303?326 (2019). <https://doi.org/10.1007/s10115-018-1210-1>.
- [110] **Jiawei Zhang** and Philip S. Yu. Broad Learning: An Emerging Area in Social Network Analysis. ACM SIGKDD Explorations Newsletter Volume 20 Issue 1 June 2018 pp 24?50 <https://doi.org/10.1145/3229329.3229333>.
- [111] Taisong Li, **Jiawei Zhang**, Philip Yu, Yan Zhang and Yonghong Yan. Deep Dynamic Network Embedding for Link Prediction. in IEEE Access, vol. 6, pp. 29219-29230, 2018, doi: 10.1109/ACCESS.2018.2839770.
- [112] 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. ACM Transactions on Intelligent Systems and Technology Volume 9 Issue 6 November 2018 Article No.: 63pp 1?28 <https://doi.org/10.1145/3209686>.
- [113] 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. in IEEE Transactions on Big Data, vol. 4, no. 4, pp. 473-486, 1 Dec. 2018, doi: 10.1109/TBDDATA.2017.2719703.
- [114] Chuan Shi, Yitong Li, **Jiawei Zhang** and Yizhou Sun, Philip S. Yu. A Survey of Heterogeneous Information Network Analysis. in IEEE Transactions on Knowledge and Data Engineering, vol. 29, no. 1, pp. 17-37, 1 Jan. 2017, doi: 10.1109/TKDE.2016.2598561.

- [115] Qianyi Zhan, **Jiawei Zhang**, Philip S. Yu and Junyuan Xie. Community Detection for Emerging Social Networks. World Wide Web Volume 20 Issue 6 November 2017 pp 1409-1441 <https://doi.org/10.1007/s11280-017-0441-5>.
- [116] Qianyi Zhan, **Jiawei Zhang**, Philip S. Yu, Sherry Emery and Junyuan Xie. Inferring Social Influence of Anti-Tobacco Mass Media Campaigns. in IEEE Transactions on NanoBioscience, vol. 16, no. 5, pp. 356-366, July 2017, doi: 10.1109/TNB.2017.2707075.
- [117] 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 (Basel). 2017 Aug 3;17(8):1786. doi: 10.3390/s17081786. PMID: 28771201; PMCID: PMC5580167.
- [118] **Jiawei Zhang**, Songchang Jin and Philip S. Yu. Mutual Community Detection across Multiple Partially Aligned Social Networks. STBD. 2017.
- [119] 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. in IEEE Access, vol. 5, pp. 15283-15299, 2017, doi: 10.1109/ACCESS.2017.2726339.
- [120] **Jiawei Zhang**, Qianyi Zhan and Philip S. Yu. Concurrent Alignment of Multiple Anonymized Social Networks with Generic Stable Matching. Theoretical Information Reuse and Integration. 2016.

## Invited Talks

- Feb. 2021 Deep Learning on Graphs: Graph Neural Network Research and Applications, University of California, Davis
- 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 Panelist

- 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, 2022

### Program Committee

- SIGKDD Conference of Knowledge Discovery and Data Mining (*KDD*): 2018, 2019, 2020, 2021
- SIGIR Conference on Research and Development in Information Retrieval (*SIGIR*): 2020, 2021
- 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, 2021
- International Conference on Information and Knowledge Management (*CIKM*): 2015, 2016, 2017, 2018, 2019, 2021
- International Conference on Web Search and Data Mining (*WSDM*): 2021

- SIAM Data Mining Conference (*SDM*): 2018, 2019, 2020, 2021

#### Journal Reviewer

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