

Jiawei Zhang

Curriculum Vitae

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<http://www.ifmlab.org>
Last Update: May 5, 2023

Research Interests

Machine Learning

Deep Learning; Natural Language Processing; Graph Neural Network; Stochastic Optimization

Data Mining and Big Data

Multi-Modal Data Fusion; Fusion Learning; Graph Mining

Applications

Language Models; Document Summarization; Fake News Detection; Recommender Systems

Robotics

Vision based Robot Control

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 (IFM Lab)

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

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

Awards and Honors

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>
2016	SIGIR Travel Award	<i>ACM CIKM</i>
2016	IEEE Travel Award	<i>IEEE CIC</i>
2015	SIGKDD Travel Award	<i>ACM SIGKDD</i>
2015	ICDM Travel Award	<i>IEEE ICDM</i>
2014	WSDM Travel Award	<i>ACM WSDM</i>
2014	Travel Award	<i>UIC</i>

Grant and Project Funding

Funded Grants

4 Funded Proposals, Total Budget \$2.92M, My Share \$1.17M

- 2021-2025 **PI, III: Medium: Collaborative Research: Self-Supervised Recommender System Learning with Application Specific Adaption.**
 ◦ NSF Division of Information & Intelligent Systems
 ◦ Personal Share: \$600K/\$1.2M
- 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 **Senior Personnel, III: Small: Fusion of Heterogeneous Networks for Synergistic Knowledge Discovery.**

- NSF Division of Information & Intelligent Systems
- Total Budget: \$500K

Pending Proposals

Several Submitted Proposals, Total Budget \$600K (My Share \$600K)

July 2022 **CAREER: Self-Supervised Graph Neural Network Learning for Multi-Perspective Graph Oriented Applications.**

- Sole PI, NSF CAREER
- Personal Share/Total Budget: \$600K/\$600K

Course Teaching

2023 Spring **ECS 289G: Advanced Deep Learning.**

Department of Computer Science
UC Davis

2023 Winter **ECS 189G: Deep Learning.**

Department of Computer Science
UC Davis

2022 Spring **ECS 289G: Advanced Deep Learning.**

Department of Computer Science
UC Davis

2022 Winter **ECS 189G: Deep Learning.**

Department of Computer Science
UC Davis

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

Student Mentoring (* My Students)

Mentored Students

2022–Present **Zizhong Li***.

- Current: PhD Student@UC Davis
- Research Topic: NLP and Misinformation
- Collaborated Papers:

2021–Present **Xinhao Xiang***.

- Current: PhD Student@UC Davis
- Research Topic: Autonomous Driving
- Collaborated Papers:

2021–Present **Xiao Liu***.

- Current: PhD Student@UC Davis
- Research Topic: NLP and Summarization
- Collaborated Papers: [34], [29]

2019–Present **Haopeng Zhang***.

- Current: PhD Candidate@UC Davis
- Research Topic: NLP and Summarization
- Collaborated Papers: [23], [48], [21], [34], [29]

2018–Present **Lin Meng***.

- Current: PhD Candidate@Florida State University
- Research Topic: Graph Mining
- Collaborated Papers: [72], [71], [64], [62], [59], [27], [28]

2023–Present **Simon Draeger.**

- Current: Master Student@UC Davis
- Research Topic: Computer Vision

- 2021–2022 **Jiebei Cheng***.
 ○ Current: Master Student@UC Davis
 ○ Research Topic: Computer Vision
- 2022–Present **Ashwitha Kassetty***.
 ○ Current: Master Student@UC Davis
 ○ Research Topic: EEG Mining
- 2022–Present **Elaine Qian***.
 ○ Current: Undergraduate Student@UC Davis
 ○ Research Topic: TBD
- 2021–2022 **Zhuoheng Li***.
 ○ Current: Undergraduate Student@UC Davis
 ○ Research Topic: Computer Vision
- 2021–2022 **Siqi Wang***.
 ○ Current: Undergraduate Student@UC Davis
 ○ Research Topic: Computer Vision
- 2018–2021 **Yuxiang Ren* (Graduated PhD)**.
 ○ Current: Researcher@Huawei
 ○ Research Topic: Text Mining and Graph Mining
 ○ Collaborated Papers: [71], [65], [59], [58], [49], [39], [60], [129], [43], [44], [45], [46]
- 2018–2021 **Haeseung Jeong* (Graduated Master)**.
 ○ Current: Master@Florida State University
 ○ Research Topic: Document Classification
- 2017–2017 **Conying Xia**.
 ○ Current: Researcher@Salesforce
 ○ Research Topic: Network Embedding
 ○ Collaborated Papers: [87], [22], [23]
- 2016–2017 **Ye Liu**.
 ○ Current: Researcher@Salesforce
 ○ Research Topic: Multiple Aligned Movie Library Analysis
 ○ Collaborated Papers: [82]
- 2016–2017 **Chenwei Zhang**.
 ○ Current: Applied Scientist@Amazon
 ○ Research Topic: Deep Learning Application in Data Mining
 ○ Collaborated Papers: [82], [88], [70], [87], [22]

2015–2016 **Junxing Zhu.**

- Current: Assistant Professor@National University of Defense Technology
- Research Topic: User Resolution and Alignment across Networks
- Collaborated Papers: [85], [142], [88], [144]

2014–2016 **Qianyi Zhan.**

- Current: Assistant Professor@Jiangnan University
- Research Topic: Information Diffusion and Viral Marketing
- Collaborated Papers: [97], [98], [102], [104], [115], [100], [145], [134], [140], [141]

PhD Thesis Committee

March 2023 **Lin Meng.**

- Current: PhD Candidate@FSU
- PhD Prospectus Exam: Graph-based Applications in Online Platforms: Recommender Systems.

Feb. 2023 **Haopeng Zhang.**

- Current: PhD Candidate@UC Davis
- PhD Qualifying Exam: Graph Based Approaches for Natural Language Processing.

Nov. 2022 **Ge Shi.**

- Current: PhD Candidate@UC Davis
- PhD Qualifying Exam: Deep Learning in Neuroimaging: Approaches and Interpretability.

Nov. 2022 **Ziwei Fan.**

- Current: PhD Candidate@University of Illinois at Chicago
- PhD Prelim Exam: Data Sparsity in Recommender Systems: Collaborative Neighbors Enrichment.

Sept. 2022 **Yongheng Wang.**

- Current: PhD Candidate@ UC Davis
- PhD Qualifying Exam: Development of programmable RNA adaptors for delivery of RNA therapeutics.

Aug. 2022 **Dongjie Chen.**

- Current: PhD Candidate@ UC Davis
- PhD Qualifying Exam: Privacy-Aware Synthetic Multimedia Data Generation.

Aug. 2022 **Rex Liu.**

- Current: PhD Candidate@ UC Davis
- PhD Qualifying Exam: Human activity Recognition in Healthcare: Challenges, Approaches and Applications.

May 2022 **Zhiwei Liu.**

- Current: Researcher@Salesforce
- PhD Prelim Exam: Deep Learning for Recommender System: Towards Structures and Sequences.

- Feb. 2022 **He Huang.**
- Current: Researcher@Salesforce
 - PhD Defense Exam: Label Scarcity in Computer Vision: From Long Tail to Zero-shot.
- Dec. 2021 **Congying Xia.**
- Current: Researcher@Salesforce
 - PhD Defense Exam: Natural Language Understanding for Conversational Agents.
- Nov. 2021 **Hongjing Zhang.**
- Current: PhD Candidate@ UC Davis
 - PhD Defense Exam: Modernizing Deep Unsupervised Learning with Human Experience.
- Nov. 2021 **Yuxiang Ren.**
- Current: Researcher@Huawei
 - PhD Defense Exam: Graph Neural Network and Applications.
- Oct. 2021 **Zhiwei Liu.**
- Current: PhD Candidate@University of Illinois at Chicago
 - PhD Prelim Exam: Deep Learning for Recommender System: Towards Structures and Sequences.
- 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 Exam Committee**
- Feb 2023 **Yang Xue.**
- Current: Master Student@University of California, Davis
 - Project: Moral Foundational Characteristics of Large Language Models
- Feb 2022 **Yang Xue.**
- Current: Master Student@University of California, Davis
 - Project: GIRAFFEE HD: A High-Resolution 3D-aware Generative Model
- Dec 2021 **Celine Shenny.**
- Current: Master Student@University of California, Davis
 - Project: LDA Topic Modeling for Covid-19 News Articles
- Dec 2021 **Jailan Sabet.**
- Current: Master Student@University of California, Davis
 - Project: Classification of EEG Signals Utilizing Convolutional Neural Networks
- March 2021 **Haeseung Jeong.**
- Current: Master Student@Florida State University
 - Defense Talk: Hierarchical Attention Network for Fake News Detection
- July 2018 **Yu Zhang.**
- Current: Master Student@Florida State University
 - Defense Talk: Big Data and Movie Recommender System

Research Publication

Academic No. citations: 5,549, h-index: 33 (By May 5, 2023)
 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. <https://arxiv.org/abs/1903.03614>
- [9] **Jiawei Zhang**. IFM Lab Tutorial Series # 2: Derivative-Free Global Optimization Algorithms: Bayesian Method and Lipschitzian Approaches. First Version: March 2019. <https://arxiv.org/abs/1904.09365>
- [10] **Jiawei Zhang**. IFM Lab Tutorial Series # 3: Derivative-Free Global Optimization Algorithms: Population based Methods and Random Search Approaches. First Version: March 2019. <https://arxiv.org/abs/1904.09368>
- [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. <https://arxiv.org/abs/1906.03314>
- [12] **Jiawei Zhang**. IFM Lab Tutorial Series # 5: Basic Neural Units of the Brain: Neurons, Synapses and Action Potential. First Version: May 2019. <https://arxiv.org/abs/1906.01703>
- [13] **Jiawei Zhang**. IFM Lab Tutorial Series # 6: Cognitive Functions of the Brain: Perception, Attention and Memory. First Version: May 2019. <https://arxiv.org/abs/1907.02863>

- [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. <https://arxiv.org/abs/1908.00187>
- [15] **Jiawei Zhang**. IFM Lab Tutorial Series # 8: Robot Basics: Representation, Rotation and Velocity. First Version: November 2022. <https://arxiv.org/abs/2211.02786>
- [16] **Jiawei Zhang**. IFM Lab Tutorial Series # 9: Robot Kinematics: Motion, Kinematics and Dynamics. First Version: November 2022. <https://arxiv.org/abs/2211.15093>

Preprints (* My PhD Students)

- [17] **Jiawei Zhang**. Graph-ToolFormer: To Empower LLMs with Graph Reasoning Ability via Prompt Augmented by ChatGPT. 2023.
- [18] Haopeng Zhang, Xiao Liu, **Jiawei Zhang**. Extractive Summarization via ChatGPT for Faithful Summary Generation. arxiv.org/abs/2304.04193. 2023
- [19] Yunfan Gao, Tao Sheng, Youlin Xiang, Yun Xiong, Haofen Wang, **Jiawei Zhang**. Chat-REC: Towards Interactive and Explainable LLMs-Augmented Recommender System. arxiv.org/abs/2303.14524. 2023.
- [20] **Jiawei Zhang**. Iso-CapsNet: Isomorphic Capsule Network for Brain Graph Representation Learning. [arXiv:2206.13465](https://arxiv.org/abs/2206.13465). 2022.
- [21] Haopeng Zhang and **Jiawei Zhang**. Centrality Meets Centroid: A Graph-based Approach for Unsupervised Document Summarization. [arXiv:2103.15327](https://arxiv.org/abs/2103.15327). 2021.
- [22] 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](https://arxiv.org/abs/2004.01881). 2020.
- [23] **Jiawei Zhang**, Haopeng Zhang*, Congying Xia and Li Sun. GRAPH-BERT: Only Attention is Needed for Learning Graph Representations. [ArXiv abs/2001.05140](https://arxiv.org/abs/2001.05140). 2020.
- [24] **Jiawei Zhang**. Segmented GRAPH-BERT for Graph Instance Modeling. [ArXiv abs/2002.03283](https://arxiv.org/abs/2002.03283). 2020.
- [25] **Jiawei Zhang**. Graph Neural Distance Metric Learning with GRAPH-BERT. [ArXiv abs/2002.03427](https://arxiv.org/abs/2002.03427). 2020.
- [26] **Jiawei Zhang**. G5: A Universal GRAPH-BERT for Graph-to-Graph Transfer and Apocalypse Learning. [ArXiv abs/2006.06183](https://arxiv.org/abs/2006.06183). 2020.
- [27] Yixin Chen, Lin Meng* and **Jiawei Zhang**. Graph Neural Lasso for Dynamic Network Regression. [ArXiv abs/1907.11114](https://arxiv.org/abs/1907.11114). 2019.
- [28] **Jiawei Zhang** and Lin Meng*. GResNet: Graph Residual Network for Reviving Deep GNNs from Suspended Animation. [ArXiv abs/1909.05729](https://arxiv.org/abs/1909.05729). 2019.

Conference and Workshop Papers (* My PhD Students)

- [29] Haopeng Zhang*, Xiao Liu* and **Jiawei Zhang** . DiffuSum: Generation Enhanced Extractive Summarization with Diffusion. In: Findings of the 61st Annual Meeting of the Association for Computational Linguistics (*ACL '23*), July 9-14, 2023. Toronto, Canada.
- [30] Ziwei Fan, Ke Xu, Zhang Dong, Hao Peng, **Jiawei Zhang** and Philip S. Yu. Graph Collaborative Signals Denoising and Augmentation for Recommendation. In: Proceedings of the 46th International ACM SIGIR Conference on Research and Development in Information Retrieval (*SIGIR '23*), July 23-27, 2023, Taipei, Taiwan. Hybrid Conference.
- [31] Xixi Wu, Yun Xiong, Yao Zhang, Yizhu Jiao, **Jiawei Zhang**, Yangyong Zhu, Philip S. Yu. ConsRec: Learning Consensus Behind Interactions for Group Recommendation. In: Proceedings of the 2023 ACM Web Conference (*Web '23*), April 30-May 4, 2023, Austin, TX, USA.
- [32] Lin Meng*, Yuxiang Ren* and **Jiawei Zhang**. Decoupling Graph Neural Network with Contrastive Learning for Fraud Detection. In: Proceedings of the 28th International Conference on Database Systems for Advanced Applications (*DASFAA '23*), April 17-20, 2023, Tianjin, China.
- [33] Beichen Kang, Xiaosu Wang, Yun Xiong, Yao Zhang, Chaofan Zhou, Yangyong Zhu, **Jiawei Zhang** and Chunlei Tang. Automatic ICD Coding Based on Segmented ClinicalBERT with Hierarchical Tree Structure Learning. In: Proceedings of the 28th International Conference on Database Systems for Advanced Applications (*DASFAA '23*), April 17-20, 2023, Tianjin, China.
- [34] Haopeng Zhang*, Xiao Liu* and **Jiawei Zhang**. HEGEL: Hpyergraph Transformer for Long Document Summarization. In: Proceedings of the 2022 Conference on Empirical Methods in Natural Language Processing (*EMNLP '22*), Abu Dhabi, December 7–11, 2022.
- [35] Li Sun, Zhongbao Zhang, Junda Ye, Hao Peng, **Jiawei Zhang**, Sen Su and Philip S. Yu. A Self-supervised Mixed-curvature Graph Neural Network. In: Proceedings of the 36th AAAI Conference on Artificial Intelligence (*AAAI '22*), Virtual Conference, February 22 - March 1, 2022.
- [36] Lin Meng*, Haoran Yang and **Jiawei Zhang**. Stage Evolving Graph Neural Network based Dynamic Recommendation with Life Cycles. In: Proceedings of the International Joint Conference on Neural Networks (*IJCNN '22*), Padova, Italy. July 18-23, 2022.
- [37] Zhiwei Liu, Lin Meng*, Fei Jiang, **Jiawei Zhang** and Philip S. Yu. Deoscillated Graph Collaborative Filtering. Workshop on Topology, Algebra, and Geometry in Machine Learning (TAG-ML). In: 39th International Conference on Machine Learning (*ICML '22*), Baltimore, MD, USA. July 17-23, 2022.
- [38] Xing Jia, Yun Xiong, **Jiawei Zhang**, Yao Zhang, Yangyong Zhu, and Philip S. Yu. Few-Shot Radiology Report Generation via Knowledge Transfer and Multi-modal Alignment. In: Proceedings of the 2022 International Conference on

Bioinformatics and Biomedicine (*BIBM '22*), Las Vegas, NV, December 6-8, 2022.

- [39] 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.
- [40] 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.
- [41] 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.
- [42] 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.
- [43] 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.
- [44] 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.
- [45] 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.
- [46] 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.
- [47] Xing Jia, Yun Xiong, Jiawei Zhang, Blackley Suzanne, Yangyong Zhu and Chunlei Tang. Radiology Report Generation for Rare Diseases via Few-shot Transformer. In: Proceedings of the 2021 International Conference on Bioinformatics and Biomedicine (*BIBM '21*), Virtual Event, December 9-12, 2021.

- [48] 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.
- [49] 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.
- [50] 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.
- [51] 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.
- [52] 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.
- [53] **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.
- [54] 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.
- [55] 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.
- [56] **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.
- [57] 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.
- [58] 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.

- [59] 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.
- [60] 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.
- [61] 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*), Seoul, South Korea, December 16-19, 2020.
- [62] 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.
- [63] 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.
- [64] 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.
- [65] 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.
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Invited Talks

- Apr. 2022 Deep Learning on Graphs: Graph Neural Network Research and Applications, Jilin University
- 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 2019.
- US National Science Foundation, IIS Medium Panel 2019, 2020, 2023.

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*

Workshop Organizing Committee

- The 3rd Heterogeneous information network analysis and applications (HENA): 2019 CIKM
- The 4th Heterogeneous information network analysis and applications (HENA): 2021 KDD

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, 2022
- SIGIR Conference on Research and Development in Information Retrieval (*SIGIR*): 2020, 2021, 2022
- 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, 2022
- International Conference on Data Mining (*ICDM*): 2017, 2018, 2019, 2020, 2021, 2022, 2023
- International Conference on Information and Knowledge Management (*CIKM*): 2015, 2016, 2017, 2018, 2019, 2021, 2022
- International Conference on Web Search and Data Mining (*WSDM*): 2021, 2022
- SIAM Data Mining Conference (*SDM*): 2018, 2019, 2020, 2021, 2022
- IEEE International Conference on Big Data (*BigData*): 2021, 2022

Journal Reviewer

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

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Available upon request.