Jiawei Zhang

Curriculum Vitae

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`http://www.ifmlab.org`
Last Update: May 14, 2023

Research Interests

Artificial Intelligence

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

Data Mining and Big Data

Data Fusion; Broad Learning; Graph Mining

Applications

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

Robotics

Vision based Robot Locomotion

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	*IEEE ICDM*
2018	First Year Assistant Professor Award	*FSU*
2018	Best Student Paper Runner Up Award	*ACM SIGKDD*
2016	Best Student Paper Runner Up Award	*IEEE/ACM ASONAM*
2016	SIGIR Travel Award	*ACM CIKM*
2016	IEEE Travel Award	*IEEE CIC*
2015	SIGKDD Travel Award	*ACM SIGKDD*
2015	ICDM Travel Award	*IEEE ICDM*
2014	WSDM Travel Award	*ACM WSDM*
2014	Travel Award	*UIC*

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

May 2023 **Tao Zhang**.
- Current: PhD Candidate@University of Illinois at Chicago
- PhD Prelim Exam: Towards Intelligent Named Entity Knowledge Transfer in Natural Language Understanding

May 2023 **Ziwei Fan**.
- Current: PhD Candidate@University of Illinois at Chicago
- PhD Defense Exam: Data Sparsity in Recommender Systems: Collaborative Neighbors Enrichment.

March 2023 **Lin Meng**.
- Current: PhD Candidate@Florida State University
- 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 Prelimnary Talk: Structured Knowledge Discovery from Massive Text Corpus.
October 2018	**Lei Zheng**.
	○ Current: PhD Candidate@University of Illinois at Chicago
	○ PhD Prelimnary 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

March 2023	**Baris Sen**.
	○ Current: Master Student@University of California, Davis
	○ Project: Exploring Diffusion Probabilistic Neural Networks for Co-speech Gesture Generation
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 Impact   No. citations: 5,606, h-index: 33 (By May 14, 2023)
(Source: https://scholar.google.com/citations?user=7AkZSJsAAAAJ&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. 2022.

[21] Haopeng Zhang and **Jiawei Zhang**. Centrality Meets Centroid: A Graph-based Approach for Unsupervised Document Summarization. arXiv: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. 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. 2020.

[24] **Jiawei Zhang**. Segmented GRAPH-BERT for Graph Instance Modeling. ArXiv abs/2002.03283. 2020.

[25] **Jiawei Zhang**. Graph Neural Distance Metric Learning with GRAPH-BERT. ArXiv abs/2002.03427. 2020.

[26] **Jiawei Zhang**. G5: A Universal GRAPH-BERT for Graph-to-Graph Transfer and Apocalypse Learning. ArXiv abs/2006.06183. 2020.

[27] Yixin Chen, Lin Meng* and **Jiawei Zhang**. Graph Neural Lasso for Dynamic Network Regression. ArXiv 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. 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 Multimodal 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*), Seout, 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.

[66] 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.

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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.