Meng Jiang, Ph.D.

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Work Experience

Assistant Professor   2017 – *present*

University of Notre Dame

Department of Computer Science and Engineering

Interdisciplinary Center for Network Science and Applications

Postdoctoral Research Associate   2015 – 2017

University of Illinois at Urbana-Champaigin

Department of Computer Science

The Data and Information Systems Laboratory

Education

Ph.D.   Tsinghua University, Computer Science   2015

Title: *Modeling Complex User Behaviors in Social Media*

Committee: Shiqiang Yang (chair), Xindong Wu, Philip S. Yu, Peng Cui

B.S.   Tsinghua University, Computer Science   2010

Honors and Awards

Global Gateway Faculty Research Award	2019
Tutorial Honorarium, ACM CIKM	2016
Tutorial Honorarium, IEEE ICDM	2015
Best Paper Finalist, ACM SIGKDD	2014
Travel Award, ACM SIGKDD	2014
Travel Award, PAKDD	2014
National Graduate Research Fellowship of China	2014
Sohu Graduate Research Fellowship	2013

Scholar Pages

Google Scholar: `https://scholar.google.com/citations?user=LZIPfCkAAAAJ`

Citations	1520
h-index	18
i10-index	21

DBLP: `https://dblp.org/pers/hd/j/Jiang_0001:Meng`

*(@ indicate supervised graduate students. * indicate supervised undergraduate students.)*

PUBLICATIONS

Book Chapters

BC2 **Jiang, M**. "Behavior Modeling in Social Networks" Encyclopedia of Social Network Analysis and Mining, Springer, New York, NY, 2017.

BC1 **Jiang, M.**, Cui, P. "Mining User Behaviors in Large Social Networks" Chapter 4, Big Data in Complex and Social Networks, Chapman & Hall/CRC Big Data Series, 2016.
  I conceived the idea and wrote the paper.

Refereed Journal Papers (6 TKDEs, etc.)

J12 Zhou, S., Hu, Z., Gu, W., **Jiang, M.**, Zhang, X.P. "Artificial Intelligence based Smart Energy Community Management: A Reinforcement Learning Approach" *CSEE Journal of Power and Energy Systems.* 5:1, 1-10, March 2019. (IF=[new journal])
  I made 3% contribution. Dr. Zhou conceived the idea, implemented the system, and completed the experiments. I joined the discussion and edited the paper.

J11 Kuang, K., **Jiang, M.**, Cui, P., Luo, H., Yang, S. "Effective Promotional Strategies Selection in Social Media: A Data-Driven Approach" *IEEE Transactions on Big Data.* 4:4, 487-501, December 2018. (IF=[new journal])
  I made 40% contribution. I conceived the idea and design the study. Mr. Kuang completed the experiments. Mr. Kuang and I wrote the paper.

J10 Shang, J., Liu, J., **Jiang, M.**, Ren, X., Voss, C.R., Han, J. "Automated Phrase Mining from Massive Text Corpora" *IEEE Transactions on Knowledge and Data Engineering.* 30:10, 1825-1837, October 2018. (IF=2.775)
  I made 5% contribution. Mr. Shang conceived the idea in consultation with myself. Mr. Shang implemented the system, completed the experiments, and wrote the paper.

J9 Shang, J., **Jiang, M.**, Tong, W., Xiao, J., Peng, J., Han, J. "DPPred: An Effective Prediction Framework with Concise Discriminative Patterns" *IEEE Transactions on Knowledge and Data Engineering.* 30:7, 1226-1239, July 2018. (IF=2.775)
  I made 25% contribution. Mr. Shang conceived the idea in consultation with myself. Mr. Shang implemented the system, completed the experiments, and wrote the paper.

J8 Gui, H., Liu, J., Tao, F., **Jiang, M.**, Norick, B., Kaplan, L., Han, J. "Embedding Learning with Events in Heterogeneous Information Networks" *IEEE Transactions on Knowledge and Data Engineering.* 29:11, 2428-2441, July 2017. (IF=2.775)
  Ms. Gui conceived the idea in consultation with myself. Ms. Gui, Dr. Liu, and I implemented the system and completed the experiments. Ms. Gui wrote the paper.

J7 **Jiang, M.**, Cui, P., Beutel, A., Faloutsos, C., Yang, S. "Inferring Lockstep Behavior from Connectivity Pattern in Large Graphs" *Knowledge and Information Systems.* 48:2, 399-428, August 2016. (IF=2.247)
  I conceived the idea in consultation with Dr. Faloutsos. I designed the study, completed the experiments, and wrote the paper.

J6 **Jiang, M.**, Cui, P., Beutel, A., Faloutsos, C., Yang, S. "Catching Synchronized Behaviors in Large Networks: A Graph Mining Approach" *ACM Transactions on Knowledge Discovery from Data - Special Issue on SIGKDD 2014.* 10:4, 35:1-35:27, July 2016. (IF=1.000)
   I conceived the idea in consultation with Dr. Faloutsos. I designed the study, completed the experiments, and wrote the paper.

J5 **Jiang, M.**, Beutel, A., Cui, P., Hooi, B., Yang, S., Faloutsos, C. "Spotting Suspicious Behaviors in Multimodal Data: A General Metric and Algorithms" *IEEE Transactions on Knowledge and Data Engineering.* 28:8, 2187-2200, April 2016. (IF=2.775)
   I conceived the idea in consultation with Dr. Faloutsos. I designed the study, completed the experiments, and wrote the paper.

J4 **Jiang, M.**, Cui, P., Yang, S. "Suspicious Behavior Detection: Current Trends and Future Directions" *IEEE Intelligent Systems.* 31:1, 31-39, January-February 2016. (IF=2.596)
   I conceived the idea in consultation with Dr. Cui. I designed the survey and wrote the paper. Dr. Cui edited the paper.

J3 **Jiang, M.**, Cui, P., Chen, X., Wang, F., Zhu, W., Yang, S. "Social Recommendation with Cross-Domain Transferable Knowledge" *IEEE Transactions on Knowledge and Data Engineering.* 27:11, 3084-3097, November 2015. (IF=2.775)
   I conceived the idea in consultation with Dr. Cui. I designed the study, completed the experiments, and wrote the paper. Mr. Chen helped the experiments.

J2 **Jiang, M.**, Cui, P., Wang, F., Zhu, W., Yang, S. "Scalable Recommendation with Social Contextual Information" *IEEE Transactions on Knowledge and Data Engineering.* 26:11, 2789-2802, November 2014. (IF=2.775)
   I conceived the idea in consultation with Dr. Cui. I designed the study, completed the experiments, and wrote the paper. Dr. Cui edited the paper.

J1 Liu, L., Zhu, F., **Jiang, M.**, Han, J., Sun, L., Yang, S. "Mining Diversity on Social Media Networks" *Multimedia Tools and Applications.* 56:1, 179-205, January 2012. (IF=1.541)
   Ms. Liu conceived the idea in consultation with myself. Ms. Liu, her colleague Dr. Zhu, and I implemented the system and completed the experiments.

Refereed Conference Papers (9 KDDs research track, etc.)

C31 @Jiang, T., @Zhao, T., Qin, B., Liu, T., Chawla, N.V., **Jiang, M.** "Multi-input Multi-output Sequence Labeling for Joint Extraction of Fact and Condition Tuples from Scientific Text" in Proceedings of *Conference on Empirical Methods in Natural Language Processing* (EMNLP), 2019. (in press, acceptance rate 23%)
   I made 30% contribution and Mr. Jiang made 60%. I conceived the idea. Mr. Jiang designed the study, implemented the system, and did the experiments. I wrote the introduction. Mr. Jiang wrote the rest of the paper.

C30 Wang, T., Xu, X., Xiong, J., **Jiang, M.**, Shi, Y. "MSU-Net: Multiscale Statistical U-Net forReal-time 3D Cardiac MRI Video Segmentation" in Proceedings of *International Conference on Medical Image Computing and Computer Assisted Intervention* (MICCAI), October 2019. (in press, acceptance rate 31%)

I made 5% contribution. I joined the discussions, re-wrote the introduction section, and reviewed the rest of the paper.

C29 @Wang, D., @Jiang, T., Chawla, N.V., **Jiang, M.** "TUBE: Embedding Behavior Outcomes for Predicting Success" in Proceedings of *ACM SIGKDD International Conference on Knowledge Discovery and Data Mining* (KDD), August 2019. (in press, research track with oral presentation, acceptance rate 9.2%=110/1200)

I made 30% contribution and Mr. Wang made 60%. I conceived the idea. Mr. Wang designed the study, implemented the system, and did the experiments. I wrote the introduction and part of method sections. Mr. Wang wrote the rest of the paper.

C28 @Jiang, T., @Zhao, T., Qin, B., Liu, T., Chawla, N.V., **Jiang, M.** "The Role of Condition: A Novel Scientific Knowledge Graph Representation and Construction Model" in Proceedings of *ACM SIGKDD International Conference on Knowledge Discovery and Data Mining* (KDD), August 2019. (in press, research track with poster presentation, acceptance rate 14.2%=170/1200)

I made 30% contribution and Mr. Jiang made 60%. I conceived the idea. Mr. Jiang designed the study, implemented the system, and did the experiments. I wrote the introduction. Mr. Jiang wrote the rest of the paper.

C27 @Wang, X., @Zhang, H., @Li, Q., Shi, Y., **Jiang, M.** "A Novel Unsupervised Approach for Precise Temporal Slot Filling from Incomplete and Noisy Temporal Contexts" in Proceedings of *The Web Conference* (TheWebConf), May 2019. (acceptance rate 18.0%=225/1247)

I made 75% contribution and Ms. Wang made 20%. I conceived the idea, designed the study, and implemented the system. Ms. Wang did the experiments. Ms. Wang and I wrote the paper.

C26 *Yu, W., Li, Z., @Zeng, Q., **Jiang, M.** "Tablepedia: Automating PDF Table Reading in an Experimental Evidence Exploration and Analytic System" in Proceedings of *The Web Conference* (TheWebConf), May 2019. (acceptance rate 44.8%=26/58)

I made 30% contribution and Mr. Yu made 60%. I conceived the idea and designed the study. Mr. Yu (junior) implemented the system and did the experiments. Mr. Yu and I wrote the paper.

C25 @Zhao, T., *Malir, M., **Jiang, M.** "Actionable Objective Optimization for Suspicious Behavior Detection on Large Bipartite Graphs" in Proceedings of *IEEE International Conference on Big Data* (BigData), December 2018. (acceptance rate 18.9%=98/518)

I made 40% contribution and Mr. Zhao made 40%. I conceived the idea and designed the study. Mr. Zhao implemented the system. Mr. Malir (sophomore) did the experiments. Mr. Zhao and I wrote the paper.

C24 Tao, F., Zhang, C., Chen, X., **Jiang, M.**, Hanratty, T., Kaplan, L., Han, J. "Doc2Cube: Allocating Documents to Text Cube without Labeled Data" in Proceedings of *IEEE International Conference on Data Mining* (ICDM), November 2018. (acceptance rate 11.1%=105/948)

I made 3% contribution. Mr. Tao conceived the idea in consultation with myself. Mr. Tao did the experiments and wrote the paper.

C23 Ding, Y., Liu, J., Xiong, J., **Jiang, M.**, Shi, Y. "Optimizing Boiler Control in Real-Time with Machine Learning for Sustainability" in Proceedings of *ACM International Conference on Information and Knowledge Management* (CIKM), October 2018. (industry track, acceptance rate 26.0%=34/130)

I made 3% contribution. Mr. Ding conceived the idea in consultation with myself. Mr. Ding implemented the system, completed the experiments, and wrote the paper.

C22 Zhao, S., **Jiang, M.**, Liu, M., Qin, B., Liu, T. "CausalTriad: Toward Pseudo Causal Relation Discovery and Hypotheses Generation from Medical Text Data" in Proceedings of *ACM International Conference on Bioinformatics, Computational Biology, and Health Informatics* (BCB), August-September 2018. (acceptance rate 31.1%=46/148)

I made 20% contribution. Mr. Zhao conceived the idea in consultation with myself. Mr. Zhao implemented the system, completed the experiments, and wrote the paper.

C21 @Wang, D., **Jiang, M.**, @Wang, X., @Zhao, T., @Zeng, Q., Chawla, N.V. "A Project Showcase for Planning Research Work towards Publishable Success" in Proceedings of *ACM SIGKDD International Conference on Knowledge Discovery and Data Mining* (KDD), August 2018. (demo track)

I made 20% contribution. I conceived the idea. Mr. Wang implemented the system, did the experiments, and wrote the paper.

C20 @Wang, D., **Jiang, M.**, @Zeng, Q., @Eberhart, Z., Chawla, N.V. "Multi-Type Itemset Embedding for Learning Behavior Success" in Proceedings of *ACM SIGKDD International Conference on Knowledge Discovery and Data Mining* (KDD), August 2018. (acceptance rate 10.9%=107/983)

I made 70% contribution and Mr. Wang made 20%. I conceived the idea and designed the study. Mr. Wang implemented the system and did the experiments.

C19 **Jiang, M.**, Li, Q., Zhang, X., Qu, M., Hanratty, T., Gao, J., Han, J. "TruePIE: Discovering Reliable Patterns in Pattern-Based Information Extraction" in Proceedings of *ACM SIGKDD International Conference on Knowledge Discovery and Data Mining* (KDD), August 2018. (acceptance rate 10.9%=107/983)

I made 40% contribution and Dr. Li made 40%. Dr. Li and I are co-first authors. I conceived the idea. Dr. Li did the experiments, and wrote the paper.

C18 Zhang, C., Tao, F., Chen, X., Shen, J., **Jiang, M.**, Sadler, B., Vanni, M., Han, J. "TaxoGen: Constructing Topical Concept Taxonomy by Adaptive Term Embedding and Clustering" in Proceedings of *ACM SIGKDD International Conference on Knowledge Discovery and Data Mining* (KDD), August 2018. (acceptance rate 10.9%=107/983)

I made 3% contribution. Mr. Zhang conceived the idea in consultation with myself. Mr. Zhang did the experiments and wrote the paper.

C17 Zhao, S., **Jiang, M.**, Yuan, Q., Qin, B., Liu, T., Zhai, C.X. "ContextCare: Incorporating Contextual Information Networks to Representation Learning in Medical Forum Data" in Proceedings of *International Joint Conference on Artificial Intelligence* (IJCAI), August 2017. (acceptance rate 26.0%=660/2540)

I made 30% contribution and Mr. Zhao made 60%. Mr. Zhao conceived the idea in consultation with myself. Mr. Zhao implemented the system and completed the experiments. I wrote the introduction section. Mr. Zhao wrote the rest of the paper.

C16 **Jiang, M.**, Shang, J., Cassidy, T., Ren, X., Kaplan, L., Hanratty, T., Han, J. "MetaPAD: Meta Patten Discovery from Massive Text Corpora" in Proceedings of *ACM SIGKDD International Conference on Knowledge Discovery and Data Mining* (KDD), August 2017. (acceptance rate 13.7%=130/748)
I conceived the idea, designed the study, did the experiments, and wrote the paper. Dr. Han edited the paper.

C15 Kuang, K., Cui, P., Li, B., **Jiang, M.**, Yang, S., Wang, F. "Estimating Treatment Effect in the Wild via Differentiated Confounder Balancing" in Proceedings of *ACM SIGKDD International Conference on Knowledge Discovery and Data Mining* (KDD), August 2017. (acceptance rate 13.7%=130/748)
Mr. Kuang conceived the idea in consultation with myself. Mr. Kuang implemented the system and completed the experiments. Mr. Kuang wrote the paper.

C14 Ren, X., Shen, J., Qu, M., Wang, X., Wu, Z., Zhu, Q., **Jiang, M.**, Tao, F., Sinha, S., Liem, D., Ping, P., Weinshilboum, R., Han, J. "LifeNet: A Structured Network-Based Knowledge Exploration and Analytics System for Life Sciences" in Proceedings of *Annual Meeting of the Association for Computational Linguistics* (ACL), July-August 2017. (demo track)
Mr. Ren conceived the idea. Mr. Shen implemented the system and completed the experiments. Mr. Ren wrote the paper. I edited the paper.

C13 Kuang, K., Cui, P., Li, B., **Jiang, M.**, Yang, S., Wang, F. "Treatment Effect Estimation with Data-Driven Variable Decomposition" in Proceedings of *AAAI Conference on Artificial Intelligence* (AAAI), February 2017. (acceptance rate 24.6%=638/2590)
Mr. Kuang conceived the idea in consultation with myself. Mr. Kuang implemented the system and completed the experiments. Mr. Kuang wrote the paper.

C12 Kuang, K., **Jiang, M.**, Cui, P., Yang, S. "Steering Social Media Promotions with Effective Strategies" in Proceedings of *IEEE International Conference on Data Mining* (ICDM), November 2016. (acceptance rate 19.6%=177/904)
I conceived the idea. Mr. Kuang implemented the system and completed the experiments. Mr. Kuang and I wrote the paper.

C11 Gui, H., Liu, J., Tao, F., **Jiang, M.**, Norick, B., Han, J. "Large-Scale Embedding Learning in Heterogeneous Event Data" in Proceedings of *IEEE International Conference on Data Mining* (ICDM), November 2016. (acceptance rate 19.6%=177/904)
Ms. Gui conceived the idea in consultation with myself. Ms. Gui, her colleague Dr. Liu, and I implemented the system and completed the experiments. Ms. Gui wrote the paper. I edited the paper.

C10 **Jiang, M.**, Faloutsos, C., Han, J. "CatchTartan: Representing and Summarizing Dynamic Multicontextual Behaviors" in Proceedings of *ACM SIGKDD International Conference on Knowledge Discovery and Data Mining* (KDD), August 2016. (acceptance rate 8.9%=70/784)
I conceived the idea, designed the study, did the experiments, and wrote the paper.

C9 **Jiang, M.**, Cui, P., Yuan, N.J., Xie, X., Yang, S. "Little is Much: Bridging Cross-Platform Behaviors through Overlapped Crowds" in Proceedings of *AAAI Conference on Artificial Intelligence* (AAAI), February 2016. (acceptance rate 25.8%=550/2132)

I conceived the idea in consultation with Dr. Cui. I designed the study, completed the experiments, and wrote the paper.

C8 **Jiang, M.**, Beutel, A., Cui, P., Hooi, B., Yang, S., Faloutsos, C. "A General Suspiciousness Metric for Dense Blocks in Multimodal Data" in Proceedings of *IEEE International Conference on Data Mining* (ICDM), November 2015. (acceptance rate 18.1%=146/807)

I conceived the idea in consultation with Dr. Beutel. I designed the study, completed the experiments, and wrote the paper. Dr. Beutel edited the paper.

C7 **Jiang, M.**, Cui, P., Beutel, A., Faloutsos, C., Yang, S. "CatchSync: Catching Synchronized Behavior in Large Directed Graphs" in Proceedings of *ACM SIGKDD International Conference on Knowledge Discovery and Data Mining* (KDD), August 2014. (selected as **best paper finalist**, acceptance rate 14.6%=151/1036)

I conceived the idea in consultation with Dr. Faloutsos. I designed the study, did the experiments, and wrote the paper. Drs. Beutel and Faloutsos edited the paper.

C6 **Jiang, M.**, Cui, P., Wang, F., Xu, X., Zhu, W., Yang, S. "FEMA: Flexible Evolutionary Multi-Faceted Analysis for Dynamic Behavioral Pattern Discovery" in Proceedings of *ACM SIGKDD International Conference on Knowledge Discovery and Data Mining* (KDD), August 2014. (acceptance rate 14.6%=151/1036)

I conceived the idea in consultation with Drs. Cui and Wang. I designed the study, completed the experiments, and wrote the paper.

C5 **Jiang, M.**, Cui, P., Beutel, A., Faloutsos, C., Yang, S. "Inferring Strange Behavior from Connectivity Pattern in Social Networks" in Proceedings of *Pacific-Asia Conference on Knowledge Discovery and Data Mining* (PAKDD), April 2014. (oral long, acceptance rate 10.8%=40/371)

I conceived the idea, designed the study, did the experiments, and wrote the paper.

C4 **Jiang, M.**, Cui, P., Beutel, A., Faloutsos, C., Yang, S. "Detecting Suspicious Following Behavior in Multimillion-Node Social Networks" in Proceedings of *International Conference on World Wide Web* (WWW), April 2014. (poster track, acceptance rate 48.7%=110/226)

I conceived the idea, designed the study, did the experiments, and wrote the paper.

C3 **Jiang, M.**, Cui, P., Wang, F., Yang, Q., Zhu, W., Yang, S. "Social Recommendation across Multiple Relational Domains" in Proceedings of *ACM International Conference on Information and Knowledge Management* (CIKM), October 2012. (acceptance rate 13.4%=146/1088)

I conceived the idea in consultation with Dr. Wang. I designed the study, completed the experiments, and wrote the paper. Dr. Cui edited the paper.

C2 **Jiang, M.**, Cui, P., Liu, R., Yang, Q., Wang, F., Zhu, W., Yang, S. "Social Contextual Recommendation" in Proceedings of *ACM International Conference on Information and Knowledge Management* (CIKM), October 2012. (acceptance rate 13.4%=146/1088)

I conceived the idea in consultation with Dr. Cui. I designed the study, completed the experiments, and wrote the paper. Dr. Cui edited the paper.

C1 Liu, L., Tang, J., Han, J., **Jiang, M.**, Yang, S. "Mining Topic-Level Influence in Heterogeneous Networks" in Proceedings of *ACM International Conference on Information and Knowledge Management* (CIKM), October 2010. (acceptance rate 13.3%=126/945)

Ms. Liu conceived the idea in consultation with myself. Ms. Liu and I implemented the system and completed the experiments.

Refereed Workshop Papers

W4 @Jiang, T., @Zhao, T., Qin, B., Liu, T., Chawla, N.V., **Jiang, M.** "Constructing Information-Lossless Biological Knowledge Graphs from Conditional Statements" in the 18th *International Workshop on Data Mining in Bioinformatics* (BioKDD) in conjunction with *ACM SIGKDD International Conference on Knowledge Discovery and Data Mining* (KDD), 2019.
    Mr. Jiang conceived the idea and wrote the paper. I edited the paper.

W3 @Wang, D., **Jiang, M.**, @Wang, X., Chawla, N.V., Brunts, P. "Multifaceted Event Analysis on Cross-Media Network Data" in the *International Workshop on Heterogeneous Networks Analysis and Mining* (HeteroNAM) in conjunction with *ACM Conference on Web Search and Data Mining* (WSDM), February 2018.
    I conceived the idea in consultation with Mr. Wang. Mr. Wang designed the study, completed the experiments, and wrote the paper. I edited the paper.

W2 Chen, L.W., Mangipudi, B., Bandlamudi, J., Sehgal, R., Hao, Y., **Jiang, M.** "Integrating Knowledge from Latent and Explicit Features for Triple ScoringTeam Radicchio's Triple Scorer at WSDM Cup 2017" in the 10th *ACM Conference on Web Search and Data Mining Notebook Papers* (WSDM), February 2017.
    I joined the discussion and edited the paper.

W1 **Jiang, M.** "Catching Social Media Advertisers with Strategy Analysis" in the 1st *International Workshop on Computational Methods for CyberSafety* in conjunction with *ACM International Conference on Information and Knowledge Management* (CIKM), 2016.

Refereed Tutorials

T6 **Jiang, M.**, Kumar, S., Subrahmanian, V.S., Faloutsos, C. "Data-Driven Approaches towards Malicious Behavior Modeling" at the *ACM SIGKDD International Conference on Knowledge Discovery and Data Mining* (KDD), August 2017.

T5 Shang, J., **Jiang, M.**, Ren, X., Han, J. "Mining Entity-Relation-Attribute Structures from Massive Text Data" at the *ACM SIGKDD International Conference on Knowledge Discovery and Data Mining* (KDD), August 2017.

T4 Ren, X., **Jiang, M.**, Shang, J., Han, J. "Building Structured Databases of Factual Knowledge from Massive Text Data" at the *ACM SIGMOD International Conference on Management of Data* (SIGMOD), May 2017.

T3 Ren, X., **Jiang, M.**, Shang, J., Han, J. "Constructing Structured Information Networks from Massive Text Corpora" at the *International World Wide Web Conference* (WWW), April 2017.

T2 **Jiang, M.**, Cui, P., Han, J. "Data-Driven Behavioral Analytics: Observations, Representations and Models" at the *ACM International Conference on Information and Knowledge Management* (CIKM), October 2016.

T1 **Jiang, M.**, Cui, P. "Behavior Modeling in Social Networks: From Micro to Macro" at the *IEEE International Conference on Data Mining* (ICDM), November 2015.

PUBLICATIONS UNDER REVIEW

Refereed Journal Papers

JR6 **Jiang, M.**, Ammerman, B.A., @Zeng, Q., Jacobucci, R. 'Phrase-level Pairwise Topic Modeling to Uncover Helpful Peer Responses to Online Suicidal Crises" under review at *Scientific Reports*. (IF=4.525)

JR5 Gu, W., Hu, Z., **Jiang, M.**, Zhou, S. 'AI based Integrated Energy System Management: A Deep Reinforcement Learning Approach" under review at *Applied Energy*. (IF=7.900)

JR4 @Wang, D., @Zeng, Q., Chawla, N.V., **Jiang, M.** "Modeling Complementarity in Behavior Data with Multi-Type Itemset Embedding" under review at *Transactions on Intelligent Systems and Technology*. (IF=3.190)

JR3 @Wang, X., **Jiang, M.** "Precise Temporal Slot Filling via Truth Finding with Data-Driven Commonsense" under review at *Knowledge and Information Systems*. (IF=2.247)

JR2 Zhao, S., **Jiang, M.**, Qin, B., Liu, T., Zhai, C.X., Wang, F. "Structural and Textual Information Fusion for Symptom and Disease Representation Learning" under review at *IEEE Transactions on Knowledge and Data Engineering*. (IF=2.775)

JR1 Kuang, K., Cui, P., Li, B., **Jiang, M.**, Yang, S. "Treatment Effect Estimation via Differentiated Confounder Balancing and Regression" under review at *Transactions on Knowledge Discovery from Data*. (minor revision, IF=1.000)

Refereed Conference Papers

CR8 @Wang, D., @Zhao, T., @Jiang, T., Chawla, N.V., **Jiang, M.** "Evolutionary Graph Neural Networks", under review at *AAAI Conference on Artificial Intelligence* (AAAI), 2020.

CR7 @Jiang, T., @Zhao, T., Qin, B., Liu, T., Chawla, N.V., **Jiang, M.** "Canonicalizing Open Knowledge Bases with Multi-layered Meta-graph Neural Network", under review at *AAAI Conference on Artificial Intelligence* (AAAI), 2020.

CR6 Tang, P., **Jiang, M.**, Xia, N., Pitera, J., Welser, J., Chawla, N.V. "Multilabel Patent Categorization with Non-local Attention-based Graph Convolutional Network", under review at *AAAI Conference on Artificial Intelligence* (AAAI), 2020.

CR5 Zhang, C., Yao, H., **Jiang, M.**, Li, Z., Chawla, N.V. "Few-Shot Knowledge Base Completion", under review at *AAAI Conference on Artificial Intelligence* (AAAI), 2020.

CR4 @Zeng, Q., *Yu, M., *Peng, W., @Jiang, T., Weninger, T., **Jiang, M.** "Handling the Variety of Distant Labeling Methods for Recognizing Scientific Concepts", under review at *ACM International Conference on Web Search and Data Mining* (WSDM), 2020.

CR3 @Zhao, T., *Deng, C., *Yu, K., @Jiang, T., @Wang, D., **Jiang, M.** "Learning with Bipartite Graph Anomaly Losses", under review at *ACM International Conference on Web Search and Data Mining* (WSDM), 2020.

CR2 @Jiang, T., *Zhang, Z., @Zhao, T., Qin, B., Liu, T., Chawla, N.V., **Jiang, M.** "CTGA: Graph-based Biomedical Literature Search", under review at *IEEE International Conference on Bioinformatics and Biomedicine* (BIBM), 2019.

CR1 Yao, H., Zhang, C., Wei, Y., **Jiang, M.**, Wang, S., Chawla, N.V., Li, Z. "Graph Few-shot Learning via Knowledge Transfer", under review at *Annual Conference on Neural Information Processing Systems* (NeurIPS), 2019.

Refereed Workshop Papers

WR3 @Ding, Y., @Wang, D., **Jiang, M.** "Preserving Composition and Crystal Structure Information of Chemical Compounds in Atomic Embedding", under review at *International Workshop on Big Data Tools, Methods, and Use Cases for Innovative Scientific Discovery* (BTSD) in conjunction with *IEEE International Conference on Big Data* (BigData), 2019.

WR2 @Zeng, Q., @Zhang, H., Xiong, J., Shi, Y., **Jiang, M.** "HiGrowth: Facilitating Student Learning on Data Science by Growing Faceted Concept Hierarchy from Paper Texts", under review at *Workshop on Graph-Based Natural Language Processing* (TextGraphs) in conjunction with *Conference on Empirical Methods in Natural Language Processing* (EMNLP), 2019.

WR1 *Ma, Y., @Zeng, Q., @Jiang, T., Cai, L., **Jiang, M.** "A Study of Person Entity Extraction and Profiling from Classical Chinese Historiography", under review at *International Workshop on EntitY REtrieval* (EYRE) in conjunction with *ACM International Conference on Information and Knowledge Management* (CIKM), 2019.

Sponsored Programs

"CRII: III: Beyond Similarity Learning: Complementarity Learning for Contextual Behavior Modeling"
TBD
Funding Vehicle: NSF (Recommended: Highly Competitive)
Amount: **$174,956**
Role: **Sole P.I.**

"SHF: Medium: Collaborative Research: Semantically-Enhanced Software Traceability for Supporting Human-Centric Tasks"
August 15, 2019 - August 14, 2023
Funding Vehicle: NSF (Competitive)

Amount: \$850,449 (My part: **\$283,483**)
Role: **Co-P.I.** with ND Profs. Huang and Metoyer (Comp. Sci. & Eng.)

"Digital Empires: Structured Biographical and Social Network Analysis of Early Chinese Empires"
May 1, 2019 - August 31, 2020
Funding Vehicle: Notre Dame RGG
Amount: \$43,811 (My part: **\$30,281**)
Role: **Co-P.I.** with ND Prof. Cai (History)

"Representation Learning for Modeling and Predicting User Engagement and Propensity for Conversion Through the Engagement Funnel"
January 21, 2019 - May 20, 2020
Funding Vehicle: Conde Nast
Amount: \$148,400 (My part: **\$74,200**)
Role: **Co-P.I.** with ND Prof. Chawla (Comp. Sci. & Eng.)

"III: Medium: Collaborative Research: StructNet: Constructing and Mining Structure-Rich Information Networks for Scientific Research"
July 1, 2017 - June 30, 2021
Funding Vehicle: NSF
Amount: \$1,200,000
Role: Postdoctoral researcher supported by PI Jiawei Han (UIUC)

"III: Small: Multi-Dimensional Structuring, Summarizing and Mining of Social Media Data"
August 1, 2016 - July 31, 2020
Funding Vehicle: NSF
Amount: \$500,000
Role: Postdoctoral researcher supported by PI Jiawei Han (UIUC)

INVITED TALKS

Yahoo! Research, New York City, New York, July 2019

IBM TJ Watson Laboratory, Yorktown Heights, New York, October 2018

Nanjing University, Nanjing, Jiangsu, December 2017

Zhejiang University, Hangzhou, Zhejiang, November 2017

Tsinghua University, Beijing, November 2017

Binghamton University, Binghamton, New York, March 2017

Georgia State University, Atlanta, Georgia, March 2017

University of Oregon, Eugene, Oregon, March 2017

Rensselaer Polytechnic Institute, Troy, New York, February 2017

University of Maryland, Baltimore County, Baltimore, Maryland, February 2017

Temple University, Philadelphia, Pennsylvania, January 2017

The Ohio State University, Columbus, Ohio, October 2016

University of Massachusetts Boston, Boston, Massachusetts, November 2015

Master Student Graduated

Xueying Wang, *Graduated May 2019*

Past Student Supervision

Matthew Malir, *Undergraduate Student* (Janurary–May 2018)

Sebastian Miner, *Undergraduate Student* (Janurary–May 2018)

Wenhao Yu, *Visiting Undergraduate Student* (May–August 2018)

Yu Shu, *Visiting Undergraduate Student* (May–August 2018)

Matthew Schoenbauer, *Undergraduate Student* (September 2018–May 2019)

Tina Wu, *Undergraduate Student* (September 2018–May 2019)

Zijian Hu, *Visiting Master Student* (July–August 2019)

Yihong Ma, *Visiting Undergraduate Student* (May–August 2019)

Chuchen Deng, *Visiting Undergraduate Student* (May–August 2019)

Zhihan Zhang, *Visiting Undergraduate Student* (July–August 2019)

Xin Liu, *Visiting Undergraduate Student* (July–August 2019)

Mengxia Yu, *Visiting Undergraduate Student* (July–August 2019)

Wei Peng, *Visiting Undergraduate Student* (July–August 2019)

Kaifeng Yu, *Visiting Undergraduate Student* (July–August 2019)

Yang Zhou, *Visiting Undergraduate Student* (July–August 2019)

Current Student Supervision

Daheng Wang, *Ph.D. Student* (since September 2017), co-ad. with Prof. Chawla

Qingkai Zeng, *Ph.D. Student* (since January 2018)

Tong Zhao, *Ph.D. Student* (since September 2018)

Tianwen Jiang, *Visiting Ph.D. Student* (since September 2018), one-year program

Wenhao Yu, *Ph.D. Student* (since September 2019)

Yifan Ding, *Master Student* (since September 2018)

Jiaming Li, *Master Student* (since September 2019)

Professional Activities

Organizing Committee

2019 Publication Chair, ACM International Conference on Knowledge Management (CIKM)
    Publicity Chair, Int'l Conf. on Computational Data and Social Networks (CSoNet)

2018 Co-Chair, Workshop on Misinformation and Misbehavior Mining on the Web at
    International Conference on Web Search and Data Mining (WSDM)

2016 Co-Chair, Special session on Big Behavioral Data Analytics at IEEE International
Conference on Data Science and Advanced Analytics (DSAA)

Program Committee

2019 ACM SIGKDD Int'l Conf. on Knowledge Discovery and Data Mining (KDD)
International World Wide Web Conference (WWW)
AAAI Conference on Artificial Intelligence (AAAI)
International Joint Conference on Artificial Intelligence (IJCAI)
Conference on Empirical Methods in Natural Language Processing (EMNLP)
ACM International Conference on Knowledge Management (CIKM)
International Conference on Web Search and Data Mining (WSDM)
SIAM Conference on Data Mining (SDM)
Pacific-Asia Conference on Knowledge Discovery and Data Mining (PAKDD)
Int'l Conf. Series on Advances in Social Network Analysis and Mining (ASONAM)

2018 ACM SIGKDD Int'l Conf. on Knowledge Discovery and Data Mining (KDD)
International World Wide Web Conference (WWW)
AAAI Conference on Artificial Intelligence (AAAI)
Conference on Empirical Methods in Natural Language Processing (EMNLP)
ACM International Conference on Knowledge Management (CIKM)
International Conference on Web Search and Data Mining (WSDM)
SIAM Conference on Data Mining (SDM)
ACM International Conference on Multimedia (MM)
Pacific-Asia Conference on Knowledge Discovery and Data Mining (PAKDD)
Workshop on Graph Techniques for Adversarial Activity Analytics (GTA3)
Workshop on Social Influence Analysis and Mining Actionable Insights from Social
Networks (SocInf+MAISoN)

2017 AAAI Conference on Artificial Intelligence (AAAI)
ACM International Conference on Knowledge Management (CIKM)
ACM International Conference on Multimedia (MM)
Pacific-Asia Conference on Knowledge Discovery and Data Mining (PAKDD)

Journal Reviewer

IEEE Access (*Access*)
Artificial Intelligence Journal (*AI Journal*)
Data Mining and Knowledge Discovery (*DMKD*)
Decision Sciences Journal (*DSJ*)
Frontiers of Computer Science (*FCS*)
International Journal of Information Technology and Decision Making (*IJITDM*)
Information Sciences (*INS*)
Information Systems (*InfoSys*)
Information Processing and Management (*IPM*)
IEEE Intelligent Systems (*IS*)
Journal of Computers (*JCP*)
Journal of Machine Learning Research (*JMLR*)
INFORMS Journal on Computing (*JOC*)
Knowledge and Information Systems (*KAIS*)
Neurocomputing (*NEUCOM*)
Pattern Recognition (*PR*)
Scientific Reports (*SciReports*)
IEEE Transactions on Big Data (*TBD*)
IEEE Transactions on Information Forensics and Security (*TIFS*)

KSII Transactions on Internet and Information Systems (*TIIS*)
ACM Transactions on Intelligent Systems and Technology (*TIST*)
ACM Transactions on Knowledge Discovery from Data (*TKDD*)
IEEE Transactions on Knowledge and Data Engineering (*TKDE*)
ACM Trans. on Multimedia Comp. Comm. and App. (*TOMCCAP*)
IEEE Transactions on Neural Networks and Learning Systems (*TNNLS*)
World Wide Web Journal (*WWWJ*)