Research Publications - Data Mining Research Group at CS, UIUC

2018

1. Jingbo Shang, Jialu Liu, Meng Jiang, Xiang Ren, Clare R Voss, Jiawei Han, "Automated Phrase Mining from Massive Text Corpora", IEEE Transactions on Knowledge and Data Engineering, 30(10):1825-1837, 2018

2. Xuan Wang, Yu Zhang, Qi Li, Cathy Wu, and Jiawei Han, "PENNER: Pattern-enhanced Nested Named Entity Recognition in Biomedical Literature", Proc. 2018 Int. Conf. on Bioinformatics and Biomedicine (BIBM'18), Madrid, Spain, Dec. 2018

3. Qi Li, Xuan Wang, Yu Zhang, Fei Ling, Cathy Wu, and Jiawei Han, "Pattern Discovery for Wide-Window Open Information Extraction in Biomedical Literature", Proc. 2018 Int. Conf. on Bioinformatics and Biomedicine (BIBM'18), Madrid, Spain, Dec. 2018

4. Shi Zhi, Fan Yang, Zheyi Zhu, Qi Li, Zhaoran Wang, and Jiawei Han, "Dynamic Truth Discovery on Numerical Data", in Proc of 2018 IEEE Int. Conf. on Data Mining (ICDM'18), Singapore, Nov. 2018

5. Carl Yang, Yichen Feng, Pan Li, Yu Shi, and Jiawei Han, "Meta-Graph Based HIN Spectral Embedding: Methods, Analyses, and Insights", in Proc of 2018 IEEE Int. Conf. on Data Mining (ICDM'18), Singapore, Nov. 2018

6. Fangbo Tao, Chao Zhang, Xiushi Chen, Meng Jiang, Tim Hanratty, Lance Kaplan, and Jiawei Han, "Doc2Cube: Automated Document Allocation to Text Cube via Dimension-Aware Joint Embedding", in Proc of 2018 IEEE Int. Conf. on Data Mining (ICDM'18), Singapore, Nov. 2018

7. Doris Xin, Ahmed El-Kishky, De Liao, Brandon Norick, and Jiawei Han, "Active Learning on Heterogeneous Information Networks: A Multi-armed Bandit Approach", in Proc of 2018 IEEE Int. Conf. on Data Mining (ICDM'18), Singapore, Nov. 2018

8. Xuan Wang, Yu Zhang, Xiang Ren, Yuhao Zhang, Marinka Zitnik, Jingbo Shang, Curtis Langlotz, and Jiawei Han, "Cross-type Biomedical Named Entity Recognition with Deep Multi-Task Learning", Bioinformatics (accepted), Oct. 2018

9. Jingbo Shang, Lyuan Liu, Xiaotao Gu, Xiang Ren, Teng Ren and Jiawei Han, "Learning Named Entity Tagger using Domain-Specific Dictionary", in Proc of 2018 Conf. on Empirical Methods in Natural Language Processing (EMNLP'18), Brussels, Belgium, Oct. 2018

10. Lyuan Liu, Xiang Ren, Jingbo Shang, Xiaotao Gu, Jian Peng and Jiawei Han, "Efficient Contextualized Representation: Language Model Pruning for Sequence Labeling", in Proc of 2018 Conf. on Empirical Methods in Natural Language Processing (EMNLP'18), Brussels, Belgium, Oct. 2018

11. Quan Yuan, Xiang Ren, Wenqi He, Chao Zhang, Xinhe Geng, Lifu Huang, Heng Ji, Chin-Yew Lin and Jiawei Han, "Open-Schema Event Profiling for Massive Text Corpora", in Proc of 2018 ACM Int. Conf. on Information and Knowledge Management (CIKM'18), Turin, Italy, Oct. 2018

12. Yu Meng, Jialing Shen, Chao Zhang and Jiawei Han, "Weakly-Supervised Neural Text Classification", in Proc of 2018 ACM Int. Conf. on Information and Knowledge Management (CIKM'18), Turin, Italy, Oct. 2018

13. Jingbo Shang, Jialing Shen, Tianhang Sun, Xingbang Liu, Anja Gruenheid, Flip Korn, Adam Lelkes, Cong Yu and Jiawei Han, "Investigating Rumor News Using Agreement-Aware Search", in Proc of 2018 ACM Int. Conf. on Information and Knowledge Management (CIKM'18), Turin, Italy, Oct. 2018

14. Carl Yang, Mengxiong Liu, Frank He, Xikun Zhang, Jian Peng, and Jiawei Han, "Similarity Modeling on Heterogeneous Networks via Automatic Path Discovery", in Proc of 2018 European Conf. on Machine Learning and Principles and Practice of Knowledge Discovery in Databases (ECMLPKDD'18), Dublin, Ireland, Sept. 2018

15. Carl Yang, Mengxiong Liu, Vincent W. Zheng and Jiawei Han, "Node, Motif and Subgraph: Leveraging Network Functional Blocks Through Structural Convolution", in Proc of 2018 IEEE/ACM Int. Conf. on Social Networks Analysis and Mining (ASONAM'18), Barcelona, Spain, Aug. 2018

16. Xuan Wang, Yu Zhang, Qi Li, Yinyin Chen and Jiawei Han, "Open Information Extraction with Meta-pattern Discovery in Biomedical Literature", in Proc of 2018 ACM Conf. on Bioinformatics, Computational Biology, and Health Informatics (ACM-BCB'18), Washington, DC, August 2018

17. Jingbo Shang, Chao Zhang, Jialing Shen, Jiawei Han, "Towards Multidimensional Analysis of Text Corpora", Proc. of 2018 ACM SIGKDD Int. Conf. on Knowledge Discovery and Data Mining (KDD'18), (Conference Tutorial), London, UK, Aug. 2018

18. Jingbo Shang, Qi Zhu, Jialing Shen, Xuan Wang, Xiaotao Gu, Lance Kaplan, Timothy Hanratty and Jiawei Han, "AutoNet: Automated Network Construction and Exploration System from Domain-Specific Corpora", in Proc of 2018 ACM SIGKDD Int. Conf. on Knowledge Discovery and Data Mining (KDD'18), (demo paper), London, UK, August 2018

19. Jialing Shen, Jinfeng Xiao, Yu Zhang, Carl Yang, Jingbo Shang, Jinda Han, Saurabh Sinha, Peipei Ping, Richard Weinshilboum, Zhiyong Lu and Jiawei Han, "SetSearch+: Entity-Set-Aware Search and Mining for Scientific Literature", in Proc of 2018 ACM SIGKDD Int. Conf. on Knowledge Discovery and Data Mining (KDD'18), (demo paper), London, UK, August 2018

20. Hanwen Zha, Jialing Shen, Keqian Li, Warren Greiff, Michelle Vanni, Jiawei Han and Xileng Yan, "FTS: Faceted Taxonomy Construction and Search for Scientific Publications", in Proc of 2018 ACM SIGKDD Int. Conf. on Knowledge Discovery and Data Mining (KDD'18), (demo paper), London, UK, August 2018

21. Carl Yang, Xiaolin Shi, Jie Luo and Jiawei Han, "I Know You’ll Be Back: Interpretable New User Clustering and Churn Prediction on a Mobile Social Application", in Proc of 2018 ACM SIGKDD Int. Conf. on Knowledge Discovery and Data Mining (KDD'18), London, UK, August 2018

22. Chao Zhang, Fangbo Tao, Xiushi Chen, Jialing Shen, Meng Jiang, Brian Sadler, Michelle Vanni and Jiawei Han, "TaxoGen: Constructing Topical Concept Taxonomy by Adaptive Term Embedding and Clustering", in Proc of 2018 ACM SIGKDD Int. Conf. on Knowledge Discovery and Data Mining (KDD’18), London, UK, August 2018

23. Qi Li, Meng Jiang, Xikun Zhang, Meng Gu, Timothy Hanratty, Jing Gao and Jiawei Han, "TruePIE: Discovering Reliable Patterns in Pattern-Based Information Extraction", in Proc of 2018 ACM SIGKDD Int. Conf. on Knowledge Discovery and Data Mining (KDD’18), London, UK, August 2018

24. Jialing Shen, Ziqi Wu, Dongming Lei, Chao Zhang, Xiang Ren, Michelle T. Vanni, Brian M. Sadler and Jiawei Han, "HiExpan: Task-Guided Taxonomy Construction by Hierarchical Tree Expansion", in Proc of 2018 ACM SIGKDD Int. Conf. on Knowledge Discovery and Data Mining (KDD’18), London, UK, August 2018
25. Yu Shi, Qi Zhu, Fang Guo, Chao Zhang and Jiawei Han, "Easing Embedding Learning by Comprehensive Transcription of Heterogeneous Information Networks", in Proc. of 2018 ACM SIGKDD Int. Conf. on Knowledge Discovery and Data Mining (KDD'18), London, UK, August 2018
26. Yuchen Li, Zhenghui Lou, Yu Shi and Jiawei Han, "Temporal Motifs in Heterogeneous Information Networks", in Proc. of 2018 Int. Workshop on Mining and Learning with Graphs (MLG’18), co-located with KDD’18, London, UK, August 2018
27. Xiang Ren and Jiawei Han, Mining Structures of Factual Knowledge from Text: An Effort-Light Approach, Morgan & Claypool Publishers, 2018. (Ren’s thesis: 2018 ACM SIGKDD Dissertation Award)
28. Yunming Mao, Xiang Ren, Jiaming Shen, Xiaotao Gu and Jiawei Han, “End-to-End Reinforcement Learning for Automatic Taxonomy Induction”, in Proc. of 2018 Annual Meeting of the Association for Computational Linguistics (ACL’18), Melbourne, Australia, July 2018
29. Jiaming Shen, Jinfeng Xiao, Xinwei He, Jingbo Shang, Saurabh Sinha and Jiawei Han, "Entity Set Search of Scientific Literature: An Unsupervised Ranking Approach", in Proc. of 2018 Int. ACM SIGIR Conf. on Research and Development in Information Retrieval (SIGIR’18), Ann Arbor, MI, July 2018
30. Ahmed El-Kishky, Frank Xu, Aston Zhang, Stephen Macke and Jiawei Han, "Entropy-Based Subword Mining for Word Embeddings", in Proc. of the 2nd Workshop on Subword and Character Level Models in NLP (SCLeM’18) (at NAACL 2018), New Orleans, LA, June 2018
31. Yu Shi, Huan Gui, Qi Zhu, Lance Kaplan,Jiawei Han, "AspEm: Embedding Learning by Aspects in Heterogeneous Information Networks," in Proc. of 2018 ACM SIGKDD Int. Conf. on Knowledge Discovery and Data Mining (KDD’18), San Diego, CA, May 2018
32. Meng Qu, Xiang Ren, Yu Zhang, and Jiawei Han, “Weakly-supervised Relation Extraction by Pattern-enhanced Embedding Learning”, Proc. of 2018 Int. Conf. on World-Wide Web (WWW’18), Lyon, France, Apr. 2018
33. Qi Zhu, Xiang Ren, Jingbo Shang, Yu Zhang, Frank F. Xu and Jiawei Han, "Open Information Extraction with Global Structure Constraints", (poster paper), Proc. of 2018 Int. Conf. on World-Wide Web (WWW’18), Lyon, France, Apr. 2018 (received WWW’18 best poster award honorable mentioning)
34. Carli Yang, Chao Zhang, Jiawei Han, Xuewen Chen, Jieping Ye, "Did You Enjoy the Ride: Understanding Passenger Experience via Network Embedding", Proc. of 2018, IEEE International Conference on Data Engineering, Paris, France, April 2018
35. Liyuan Liu, Jingbo Shang, Frank Xu, Xiang Ren, Huan Gui, Jian Peng and Jiawei Han, “Empower Sequence Labeling with Task-Aware Neural Language Model”, in Proc. of 2018 AAAI Conf. on Artificial Intelligence (AAAI’18), New Orleans, LA, Feb. 2018
36. Chao Zhang, Mengxia Liu, Chengchao Liu, Carli Yang, Luming Zhang, Jiawei Han, “Spatiotemporal Activity Modeling Under Data Scarcity: A Graph-Regularized Cross-Modal Embedding Approach", in Proc. of 2018 AAAI Conf. on Artificial Intelligence (AAAI’18), New Orleans, LA, Feb. 2018
37. Wanzheng Zhu, Chao Zhang, Shuchao Yao, Xiaobin Gao, Jiawei Han, “A Spherical Hidden Markov Model for Semantics-Rich Human Mobility Modeling”, in Proc. of 2018 AAAI Conf. on Artificial Intelligence (AAAI’18), New Orleans, LA, Feb. 2018
38. Zeqiu Wu, Xiang Ren, Frank F. Xu, Ji Li and Jiawei Han, "Indirect Supervision for Relation Extraction using Question-Answer Pairs", in Proc. of 2018 ACM Int. Conf. on Web Search and Data Mining (WSDM’18), Los Angeles, CA, Feb. 2018
39. Meng Qu, Jian Tang, and Jiawei Han, "Curriculum Learning for Heterogeneous Star Network Embedding via Deep Reinforcement Learning", in Proc. of 2018 ACM Int. Conf. on Web Search and Data Mining (WSDM’18), Los Angeles, CA, Feb. 2018
40. Jiawei Han, “On the Power of Massive Text Data", (keynote speech), in Proc. of 2018 ACM Int. Conf. on Web Search and Data Mining (WSDM’18), Los Angeles, CA, Feb. 2018
41. Chenguang Wang, Yangqiu Song, Haoran Li, Ming Zhang, and Jiawei Han, “Unsupervised Meta-path Selection for Text Similarity Measure based on Heterogeneous Information Networks”, Data Mining and Knowledge Discovery (DMKD), to appear 2018
42. Jingbo Shang, Jialiu Liu, Meng Jiang, Xiang Ren, Clare R Voss, Jiawei Han, “Automated Phrase Mining from Massive Text Corpora”, accepted by IEEE Transactions on Knowledge and Data Engineering, Feb., 2018

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1. Jingbo Shang, Meng Jiang, Wenzhu Tong, Jinfeng Xiao, Jian Peng, Jiawei Han. “DPPred: An Effective Prediction Framework with Concise Discriminative Patterns”, accepted by IEEE Transactions on Knowledge and Data Engineering, Sept. 2017
2. Adit Krishnan, Aravind Sankar, Shi Zhi, Jiawei Han, “Unsupervised Concept Categorization and Extraction from Scientific Document Titles”, in Proc. of 2017 ACM Int. Conf. on Information and Knowledge Management (CIKM’17), Singapore, Nov. 2017
3. Meng Qu, Jian Tang, Jingbo Shang, Xiang Ren, Ming Zhang, Jiawei Han. “An Attention-based Collaboration Framework for Multi-View Network Representation Learning”, in Proc. of 2017 ACM Int. Conf. on Information and Knowledge Management (CIKM’17), Singapore, Nov. 2017
4. Chenguang Wang, Yangqiu Song, Haoran Li, Yizhou Sun, Ming Zhang, Jiawei Han, “Second-Order Heterogeneous Information Network Similarity for Text”, in Proc of 2017 ACM Int. Conf. on Information and Knowledge Management (CIKM’17), Singapore, Nov. 2017
5. Quan Yuan, Jingbo Shang, Xin Cao, Chao Zhang, Xinhe Geng, Jiawei Han, “Detecting Multiple Periods and Periodic Patterns in Event Time Sequences”, in Proc of 2017 ACM Int. Conf. on Information and Knowledge Management (CIKM’17), Singapore, Nov. 2017
6. Shi Zhi, Yucheng Sun, Jiayi Liu, Chao Zhang, Jiawei Han, “ClaimVerif: A Real-time and Claim Verification System Using the Web and Fact Databases” (system demo), in Proc of 2017 ACM Int. Conf. on Information and Knowledge Management (CIKM’17), Singapore, Nov. 2017
7. Mengxiong Liu, Zhongchao Liu, Chao Zhang, Keyang Zhang, Quan Yuan, Lance Kaplan, Jiawei Han, “Urbanity: A System for Interactive Exploration of Urban Dynamics from Streaming Human Sensing Data” (system demo), in Proc of 2017 ACM Int. Conf. on Information and Knowledge Management (CIKM’17), Singapore, Nov. 2017
8. Huan Gui, Jialiu Liu, Fangbo Tao, Meng Jiang, Brandon Norick, Lance Kaplan and Jiawei Han, “Embedding Learning with Events in Heterogeneous Information Networks”, IEEE Transactions on Knowledge and Data Engineering, 29(11): 2428-2441, 2017
9. Jiaming Shen, Zeqiu Wu, Dongming Lei, Jingbo Shang, Xiang Ren, Jiawei Han, “SetExpan: Corpus-based Set Expansion via Context Feature Selection and Rank Ensemble”, in Proc of 2017 European Conf. on Machine Learning and Practice of Knowledge Discovery in Databases (ECMLPKDD’17), Skopje, Macedonia, Sept. 2017
10. Liyuan Liu, Xiang Ren, Qi Zhu, Shi Zhi, Huan Gui, Heng Ji and Jiawei Han, “Heterogeneous Supervision for Relation Extraction: A Representation Learning Approach”, in Proc of 2017 Conf. on Empirical Methods in Natural Language Processing (EMNLP’17), Copenhagen, Denmark, Sept. 2017
11. Honglei Zhuang, Chi Wang, Fangbo Tao, Lance Kaplan and Jiawei Han, “Identifying Semantically Deviating Outlier Documents”, in Proc of 2017 Conf. on Empirical Methods in Natural Language Processing (EMNLP’17), Copenhagen, Denmark, Sept. 2017
12. Meng Jiang, Jingbo Shang, Taylor Cassidy, Xiang Ren, Lance Kaplan, Timothy Hanratty and Jiawei Han, "MetaPAD: Meta Pattern Discovery from Massive Text Corpora", in Proc. of 2017 ACM SIGKDD Int. Conf. on Knowledge Discovery and Data Mining (KDD’17), Halifax, Nova Scotia, Canada, Aug. 2017.

13. Yu Shi, Po-Wei Chan, Honglei Zhuang, Huan Gui and Jiawei Han, "PREP: Path-Based Relevance from a Probabilistic Perspective in Heterogeneous Information Networks", in Proc. of 2017 ACM SIGKDD Int. Conf. on Knowledge Discovery and Data Mining (KDD’17), Halifax, Nova Scotia, Canada, Aug. 2017.

14. Meng Qu, Xiang Ren and Jiawei Han, "Automatic Synonym Discovery with Knowledge Bases", in Proc. of 2017 ACM SIGKDD Int. Conf. on Knowledge Discovery and Data Mining (KDD’17), Halifax, Nova Scotia, Canada, Aug. 2017.

15. Carl Yang, Lanxiao Bai, Chao Zhang, Quan Yuan and Jiawei Han, "Bridging Collaborative Filtering and Semi-Supervised Learning: A Neural Approach for POI recommendation", in Proc. of 2017 ACM SIGKDD Int. Conf. on Knowledge Discovery and Data Mining (KDD’17), Halifax, Nova Scotia, Canada, Aug. 2017.

16. Chao Zhang, Liuyuan Liu, Dongming Lei, Quan Yuan, Honglei Zhuang, Tim Hanratty and Jiawei Han, "TrioVecEvent: Embedding-Based Online Local Event Detection in Geo-Tagged Tweet Streams", in Proc. of 2017 ACM SIGKDD Int. Conf. on Knowledge Discovery and Data Mining (KDD’17), Halifax, Nova Scotia, Canada, Aug. 2017.

17. Chao Zhang, Keyang Zhang, Quan Yuan, Fangbo Tao, Luming Zhang, Tim Hanratty, Jiawei Han, "ReAct: Online Multimodal Embedding for Recency-Aware Spatiotemporal Activity Modeling", in Proc. of 2017 ACM SIGIR Conf. on Research & Development in Information Retrieval (SIGIR’17), Tokyo, Japan, Aug. 2017.

18. Jingbo Shang, Xiang Ren, Meng Jiang, and Jiawei Han, "Mining Entity-Relation-Attribute Structures from Massive Text Data" (conference tutorial), Proc. of 2017 ACM SIGKDD Int. Conf. on Knowledge Discovery and Data Mining (KDD’17), Halifax, Nova Scotia, Canada, August 2017.

19. Chao Zhang, Dongming Lei, Quan Yuan, Honglei Zhuang, Lance Kaplan, Shaowen Wang, Jiawei Han, "GeoBurst+: Effective and Real-Time Local Event Detection in Geo-Tagged Tweet Streams", accepted by ACM Transactions on Intelligent Systems and Technology (ACM-TIST), 2017.

20. Xiuli Ma, Guanguyu Zhou, Jingbo Shang, Jingjing Wang, Jian Peng, and Jiawei Han, "Detection of Complexes in Biological Networks through Diversified Dense Subgraphs Mining", Journal of Computational Biology, 24 (9): 923–941, 2017.

21. Xiang Ren, Jiaming Shen, Meng Qu, Xuan Wang, Zeqiu Wu, Qi Zhu, Meng Jiang, Fangbo Tao, Saurabh Sinha, David Liem, Peipei Ping, Richard Weinshilboum and Jiawei Han, "LifeNet: A Structured Network-Based Knowledge Exploration and Analytics System for Life Sciences", Proc. of 2017 Annual Meeting of the Association for Computational Linguistics (ACL’17), (system demo), Vancouver, Canada, July 2017.


23. Xiang Ren, Meng Jiang, Jingbo Shang and Jiawei Han, "Building Structured Databases of Factual Knowledge from Massive Text Corpora", (conference tutorial), Proc. of 2017 ACM SIGMOD Int. Conf. on Management of Data (SIGMOD’17), June 2017.


25. Xiang Ren, Zeqiu Wu, Wenqi He, Meng Qu, Clare Voss, Heng Ji, Tarek Abdelzaher and Jiawei Han, "CoType: Joint Extraction of Typed Entities and Relations with Knowledge Bases", in Proc. of 2017 World-Wide Web Conf. (WWW’17), Perth, Australia, Apr. 2017.

26. Chao Zhang, Keyang Zhang, Quan Yuan, Haoruo Peng, Yu Zheng, Tim Hanratty, Shaowen Wang and Jiawei Han, "Regions, Periods, Activities: Uncovering Urban Dynamics via Cross-Modal Representation Learning", in Proc. of 2017 World-Wide Web Conf. (WWW’17), Perth, Australia, Apr. 2017.

27. Xiang Ren, Meng Jiang, Jingbo Shang and Jiawei Han, "Constructing Structured Information Networks from Massive Text Corpora", (conference tutorial), Proc. of 2017 World-Wide Web Conf. (WWW’17), Perth, Australia, Apr. 2017.

28. Chao Zhang, Quan Yuan, and Jiawei Han, "Bringing Semantics to Spatiotemporal Data Mining: Challenges, Methods, and Applications" (Conference tutorial), Proc. of 2017 IEEE Int. Conf. on Data Engineering (ICDE’17), San Diego, California, Apr. 2017.

29. Xiang Ren, Yuanhua Lv, Kuansan Wang and Jiawei Han, "Comparative Document Analysis for Large Text Corpora", in Proc. of 2017 ACM Int. Conf. on Web Search and Data Mining (WSDM’17), Cambridge UK, Feb. 2017.

30. Quan Yuan, Wei Zhang, Chao Zhang, Xinhe Geng, Gao Cong and Jiawei Han, "Periodic Region Detection for Mobility Modeling of Social Media Users", in Proc. of 2017 ACM Int. Conf. on Web Search and Data Mining (WSDM’17), Cambridge UK, Feb. 2017.

31. Wenjun Jiang, Chenglin Miao, Lu Su, Qi Li, Shaohan Hu, Shiguang Wang, Jing Gao, Hengchang Liu, Tarek F. Abdelzaher, Jiawei Han, Xue Liu, Yan Gao, and Lance Kaplan, "Towards Quality Aware Information Integration in Distributed Sensing Systems", in IEEE Transactions on Parallel and Distributed Systems, 2017.

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2. Xiang Ren, Wenqi He, Meng Qu, Lifu Huang, Heng Ji, and Jiawei Han, "AFET: Automatic Fine-Grained Entity Typing by Hierarchical Partial-Label Embedding", in Proc. of 2016 Conf. on Empirical Methods in Natural Language Processing (EMNLP’16), Austin, TX, Nov. 2016.

3. Meng Jiang, Peng Cui, and Jiawei Han, "Data-Driven Behavioral Analytics: Observations, Representations and Models", in Proc. of 2016 ACM Int. Conf. on Information and Knowledge Management (CIKM’16) (conference tutorial), Indianapolis, IN, Oct. 2016.

4. Tarique Siddiqui, Xiang Ren, Aditya Parameswaran and Jiawei Han, "FacetGist: Collective Extraction of Document Facets in Large Technical Corpora", in Proc. of 2016 ACM Int. Conf. on Information and Knowledge Management (CIKM’16), Indianapolis, IN, Oct. 2016.

5. Hongkun Yu, Jingbo Shang, Meichun Hsu, Malú Castellanos and Jiawei Han, "Data-Driven Contextual Valence Shifter Quantification for Multi-Theme Sentiment Analysis", in Proc. of 2016 ACM Int. Conf. on Information and Knowledge Management (CIKM’16), Indianapolis, IN, Oct. 2016.

6. Qian Cheng, Jingbo Shang, Joshua Juen, Jiawei Han and Bruce Schatz, "Mining Discriminative Patterns to Predict Health Status for Cardiopulmonary Patients", in Proc. of 2016 ACM Conf. on Bioinformatics, Computational Biology, and Health Informatics (ACM-BCB’16), Seattle, WA, Oct. 2016.

7. Jingbo Tao, Honglei Zhuang, Chi Wang Yu, Qi Wang, Taylor Cassidy, Lance Kaplan, Clare Voss, Jiawei Han, "Multi-Dimensional, Phrase-Based Summarization in Text Cubes", Data Eng. Bulletin 39(3), Sept. 2016, pp. 74-84.
8. Di Lu, Claire R. Voss, Fangbo Tao, Xiang Ren, Rachel Guan, Rostyslav Korolov, Tongtao Zhang, Dongang Wang, Hongzhi Li, Taylor Cassidy, Heng Ji, Shih-Fu Chang, Jiawei Han, William Wallace, James Hendler, Mei Si and Lance Kaplan, “Cross-media Event Extraction and Recommendation”, in Proc. of 2016 Annual Conf. of the North American Chapter of the Association for Computational Linguistics (NAACL), 2016. [Demo System]
9. Huan Gui, Haishan Liu, Xiangrui Meng, Anmol Bhasin, Jiawei Han, “Downside Management in Recommender Systems”, in Proc. of 2016 IEEE/ACM Int. Conf. on Advances in Social Networks Analysis and Mining (ASONAM’16), San Francisco, CA, Aug. 2016
10. Rostyslav Korolov, Di Lu, Jingjing Wang, Guangyu Zhou, Claire Bonial, Claire Voss, Lance Kaplan, William Wallace, Jiawei Han and Heng Ji, “On Predicting Social Unrest Using Social Media”, in Proc. of 2016 IEEE/ACM Int. Conf. on Advances in Social Networks Analysis and Mining (ASONAM’16), San Francisco, CA, Aug. 2016
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12. Meng Jiang, Christos Faloutsos, Jiawei Han, “CatchTartan: Representing and Summarizing Dynamic Multicontextual Behaviors”, in Proc. of 2016 ACM SIGKDD Conf. on Knowledge Discovery and Data Mining (KDD’16), San Francisco, CA, Aug. 2016
13. Xiang Ren, Wenqi He, Meng Qu, Claire R. Voss, Heng Ji, Jiawei Han, “Label Noise Reduction in Entity Typing by Heterogeneous Partial-Label Embedding”, in Proc. of 2016 ACM SIGKDD Conf. on Knowledge Discovery and Data Mining (KDD’16), San Francisco, CA, Aug. 2016
14. Mengting Wan, Xiangyu Chen, Lance Kaplan, Jiawei Han, Jing Gao, Bo Zhao, “From Truth Discovery to Trustworthy Opinion Discovery: An Uncertainty-Aware Quantitative Modeling Approach”, in Proc. of 2016 ACM SIGKDD Conf. on Knowledge Discovery and Data Mining (KDD’16), San Francisco, CA, Aug. 2016
15. Jing Gao, Qi Li, Bo Zhao, Wei Fan, and Jiawei Han, “Mining Reliable Information from Passively and Actively Crowdsourced Data” (conf. tutorial), in Proc. of 2016 ACM SIGKDD Conf. on Knowledge Discovery and Data Mining (KDD’16), San Francisco, CA, Aug. 2016
16. Xiang Ren, Wenqi He, Ahmed El-Kishkly, Clare R. Voss, Heng Ji, Meng Qu and Jiawei Han, “Entity Typing: A Critical Step for Mining Structures from Massive Unstructured Text”, in Proc. of 2016 Int. workshop on Mining and Learning with Graphs (MLG’16), colocated with KDD’16, San Francisco, CA, Aug. 14, 2016
17. Chao Zhang, Guangyu Zhou, Quan Yuan, Honglei Zhuang, Yu Zheng, Lance Kaplan, Shaowen Wang, Jiawei Han, “GeoBurst: Real-time Local Event Detection in Geo-tagged Tweet Stream”, in Proc. of 2016 ACM SIGIR Conf. on Research & Development in Information Retrieval (SIGIR’16), Pisa, Italy, July 2016
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19. Wei Zhang, Quan Yuan, Jiawei Han and Jianyong Wang, ”Collaborative Multi-level Embedding Learning from Reviews for Rating Prediction”, in Proc. of 2016 Int. Joint Conf. on Artificial Intelligence (IJCAI’16), New York City, NY, July 2016
20. Huan Gui, Jiawei Han, Quanquan Gu, “Towards Faster Rates and Oracle Property for Low-Rank Matrix Estimation”, in Proc. of 2016 Int. Conf. on Machine Learning (ICML’16), New York City, NY, June 2016
21. Xiang Ren, Ahmed El-Kishkly, Heng Ji, and Jiawei Han, “Automatic Entity Recognition and Typing in Massive Text Data”, (Conference Tutorial) 2016 ACM SIGMOD Int. Conf. on Management of Data (SIGMOD’16), San Francisco, CA, June 2016
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23. Jingbo Shang, Jian Peng, and Jiawei Han, ”MACFP: Maximal Approximate Consecutive Frequent Pattern Mining under Edit Distance”, in Proc of 2016 SIAM Int. Conf. on Data Mining (SDM’16), Miami, FL, May 2016
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25. Lingxiao Wang, Xiang Ren, Quanquan Gu, “Precision Matrix Estimation in High Dimensional Gaussian Graphical Models with Faster Rates”, in Proc. of 2016 Int. Conf. on Artificial Intelligence and Statistics (AISTATS’16), Cadiz, Spain, May 9 - 11, 2016
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27. Jialiu Liu, Xiang Ren, Jingbo Shang, Taylor Cassidy, Clare Voss and Jiawei Han, “Representing Documents via Latent Keyphrase Inference”, in Proc. of 2016 Int. World-Wide Web Conf. (WWW’16), Montreal, Canada, April 2016
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