Research Publications - Data Mining Research Group at CS, UIUC

2019

1. Shuochao Yao, Ailing Piao, Wenjun Jiang, Yiran Zhao, Huajie Shao, Shengzhong Liu, Dongxin Liu, Jinyang Li, Tianshi Wang, Shaohan Hu, Lu Su, Jiawei Han and Tarek Abdelzaher, "STFNets: Learning Sensing Signals from the Time-Frequency Perspective with Short-Time Fourier Neural Networks", in Proc. the Web Conf. 2019 (WWW'19), San Francisco, CA, May 2019
2. Carl Yang, Huy Hoang Do, Tomas Mikolov and Jiawei Han "Place-Deducing with Embeddings", in Proc. the Web Conf. 2019 (WWW'19), San Francisco, CA, May 2019
3. Honglei Zhuang, Timothy Hanratty, and Jiawei Han, "Aspect-Based Sentiment Analysis with Minimal Guidance", in Proc. 2019 SIAM Int. Conf. on Data Mining (SDM'19), Calgary, Alberta, Canada, May 2019
4. Sha Li, Chao Zhang, Dongming Lei, Ji Li, Jiawei Han, "GeoAttn: Fine-Grained Localization of Social Media Messages via Attentional Memory Network", in Proc. 2019 SIAM Int. Conf. on Data Mining (SDM'19), Calgary, Alberta, Canada, May 2019
5. Qi Zhu, Xiang Ren, Jingbo Shang, Yu Zhang, Ahmed El-Kishky and Jiawei Han, "Integrating Local Context and Global Cohesiveness for Open Information Extraction", in Proc. 2019 ACM Int. Conf. on Web Search and Data Mining (WSDM'19), Melbourne, Australia, Feb. 2019
6. Jiaming Shen, Ruiliang Lyu, Xiang Ren, Michelle Vanni, Brian Sadler, Jiawei Han, "Mining Entity Synonyms with Efficient Neural Set Generation", in Proc. 2019 AAAI Conf. on Artificial Intelligence (AAAI-19), Honolulu, Hawaii, Jan. 2019
7. Yu Meng, Jiaming Shen, Chao Zhang and Jiawei Han, "Weakly-Supervised Hierarchical Text Classification", in Proc. 2019 AAAI Conf. on Artificial Intelligence (AAAI-19), Honolulu, Hawaii, Jan. 2019
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 (to appear 2019)

2018

1. 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)
2. 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)
3. Jingbo Shang, Meng Jiang, Wenzhu Tong, Jinfeng Xiao, Jian Peng, Jiawei Han. "DPPred: An Effective Prediction Framework with Concise Discriminative Patterns", IEEE Transactions on Knowledge and Data Engineering, 30(7): 1226-1239 (2018)
4. Chenguang Wang, Yangqiu Song, Haoran Li, Ming Zhang, Jiawei Han, "Unsupervised meta-path selection for text similarity measure based on heterogeneous information networks", Data Mining and Knowledge Discovery, 32(6): 1735-1767 (2018)
5. Chao Zhang, Dongming Lei, Quan Yuan, Honglei Zhuang, Lance M. Kaplan, Shaowen Wang, Jiawei Han, "GeoBurst+: Effective and Real-Time Local Event Detection in Geo-Tagged Tweet Streams", ACM Transactions on Intelligent Systems and Technology (TIST) 9 (3): 34:1-24 (2018)
6. Wei Shen, Jiawei Han, Jianyong Wang, Xiaojie Yuan, Zhenglu Yang, "SHINE+: A General Framework for Domain-Specific Entity Linking with Heterogeneous Information Networks", IEEE Transactions on Knowledge and Data Engineering, 30(2): 353-366 (2018)
7. 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
8. 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
9. 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
10. 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
11. Fangbo Tao, Chao Zhang, Xiuxi 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
12. 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
13. Jingbo Shang, Liyuan 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
14. Liyuan 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
15. Quan Yuan, Xiang Ren, Wench He, Chao Zhang, Xinhe Geng, Lilu Huang, Heng Ji, Chin-Yew Lin and Jiawei Han, "Open-Schema Event Profiling for Massive News Corpora", in Proc. of 2018 ACM Int. Conf. on Information and Knowledge Management (CIKM’18), Turin, Italy, Oct. 2018
16. Yu Meng, Jiaming 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
17. Jingbo Shang, Jiaming 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
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

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

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-BOB'18), Washington, DC, August 2018

Jingbo Shang, Chao Zhang, Jiaming 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

Jingbo Shang, Qi Zhu, Jiaming Shen, Xuan Wang, Xiaotao Gu, Lance Kaplan, Timothy Harrraty 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

Jiaming Shen*, Jinfeng Xiao*, Yu Zhang, Carl Yang, Jingbo Shang, Jinda Han, Saurabh Sinha, Peipei Ping, Richard Weinshilboum, Zhiyong Xu and Jiawei Han, "HiExpan: Task-Specific 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

Hanwen Zha, Jiaming Shen, Keqian Li, Warren Greiff, Michelle Vanni, Jiawei Han and Xifeng 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

Carly 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, Aug. 2018

Chao Zhang, Fangbo Tao, Xiusi Chen, Jiaming 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

Qi Li, Meng Jiang, Xikun Zhang, Meng Qu, 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

Jiaming Shen, Zeqiu 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

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

Yuchen Li, Zhengzhi 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

Yu Shi, Chao Zhang, Jiaming Shen, Meng Jiang, Xiaotao Gu, Xian Zhang, Zhiyong Xu 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

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 ACM SIGIR Conf. on Research and Development in Information Retrieval (SIGIR’18), Ann Arbor, MI, July 2018

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

Yu Shi, Huan Gui, Qi Zhu, Lance Kaplan,Jiawei Han, "AspEm: Embedding Learning by Aspects in Heterogeneous Information Networks," Proc. of 2018 SIAM Int. Conf. on Data Mining (SDM’18), San Diego, CA, May 2018

Meng Qu, Xiang Ren, Yu Zhang, and Jiawei Han, "Weakly-supervised Relation Extraction by Pattern-enhanced Embedded Learning", Proc. of 2018 Int. Conf. on World-Wide Web (WWW’18), Lyon, France, Apr. 2018

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)

Carl Yang, Chao Zhang, Jiawei Han, Xuewen Chen, Jieping Ye, "Did You Enjoy the Ride: Understanding Passenger Experience via Heterogeneous Network Embedding", in Proc. of 2018 AAAI Conf. on Artificial Intelligence (AAAI’18), New Orleans, LA, Feb. 2018

Liyuan Liu, Jinfeng Xiao, Frank Xu, Xiang Ren, Huan Gui, Jian Peng and Jiawei Han, "Empower Sequence Labelling with Task-Aware Neural Language Model", Proc. of 2018 IEEE International Conference on Data Engineering, Paris, France, April 2018

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Chao Zhang, Mengxiong Liu, Zhengchao Liu, Carl Yang, Lifeng Zhang, Jiawei Han, "Spatialtemporal Activity Modeling Under Data Scarcity: A Graph-Regularized Cross-Media Embedding Approach", in Proc. of 2018 AAAI Conf. on Artificial Intelligence (AAAI’18), New Orleans, LA, Feb. 2018

Wanzheng Zhu, Chao Zhang, Shuochao 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

Zeqiu Wu, Xiang Ren, Frank F. Xu, Ji Li and Jiawei Han, "Indirect Supervision for Relation Extraction using Question-Answer Pairs", Proc. of 2018 ACM Int. Conf. on Web Search and Data Mining (WSDM’18), Los Angeles, CA, Feb. 2018

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

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

1. 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
2. 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
3. Chenguang Wang, Yangqiu Song, Haoan 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
4. 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
5. Shi Zhi, Yichen Sun, Jiayi Liu, Chao Zhang and Jiawei Han, “ClaimVerify: A Real-time 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
6. Mengxiong Liu, Zhengchao Liu, Chao Zhang, Keyang Zhang, Quan Yuan, Tim Hanratty and 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
7. 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
8. 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 Principles and Practice of Knowledge Discovery in Databases (ECMLPKDD'17), Skopje, Macedonia, Sept. 2017
9. Liuyuan 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
10. 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
11. Meng Ren, 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
12. 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
13. Meng Ren, 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
14. 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
15. 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
16. 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
17. 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.
18. 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
19. Xiuli Ma, Guanyu 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
20. Xiang Ren, Jiaming Shen, Meng Qu, Xuan Wang, Zeqiu Wu, Qi Zhu, Meng Jiang, Fangbo Tao, Saurabh Sinha, David Liem, Peipei Ping, Richard Weishilboum 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
22. 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.
24. 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. 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.
27. 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.
28. 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.
29. 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.
30. Wenjun Jiang, Chenglin Xiao, Lu Su, Qi Li, Shaochun 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.
1. Huan Gui, Jialu Liu, Fangbo Tao, Meng Jiang, Brandon T. Norick, and Jiawei Han, "Large-Scale Embedding Learning in Heterogeneous Event Data", in Proc. of 2016 Int. Conf. on Data Mining (ICDM'16), Barcelona, Spain, Dec. 2016.

2. Xiang Ren, Wenqi He, Meng Gu, 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. Fangbo 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.

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9. Huan Gui, Haishan Liu, Xiaorui 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, Jingting Wang, Guangyu Zhou, Claire Bonial. Clare Voss, Lance Kaplan, William Wallace, Jiawei Han and Heng Ji, "On Predicting Social Unrest Using Social Media", in Proc. of 2016 IEEE/ACM Conf. on Advances in Social Networks Analysis and Mining (ASONAM'16), San Francisco, CA, Aug. 2016.

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13. Xiang Ren, Wenqi He, Meng Qu, Clare 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.

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