

## Jundong Li

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RESEARCH INTERESTS	<ul style="list-style-type: none"><li>• Data Mining: dimensionality reduction; dynamic networks; data streams; network embedding; relational learning; anomaly detection; online learning; sentiment analysis; recommender systems; clustering; active learning; semi-supervised learning; associative classification; co-location pattern mining; spatial-temporal data mining</li><li>• Feature Selection: unsupervised feature selection; feature selection on networks; feature selection on dynamic networks; streaming feature selection; multi-label feature selection; feature selection on signed networks; personalized feature selection</li><li>• Social Computing: social network analysis; signed social networks; reciprocal link analysis; user behavior analysis; social cyberbullying detection; social mental health; social security</li></ul>	
EDUCATION	<b>Arizona State University</b> , Tempe, Arizona, USA Ph.D., Computer Science and Engineering <ul style="list-style-type: none"><li>• GPA: 4.00/4.00</li><li>• Advisor: Huan Liu, Ph.D, Fellow of IEEE</li></ul> <b>University of Alberta</b> , Edmonton, Alberta, Canada M.Sc., Department of Computing Science <ul style="list-style-type: none"><li>• GPA: 4.00/4.00</li><li>• Advisor: Osmar R. Zaiane, Ph.D</li></ul> <b>Zhejiang University</b> , Hangzhou, Zhejiang, China B.Eng., College of Computer Science and Technology <ul style="list-style-type: none"><li>• GPA: 3.71/4.00</li></ul>	Aug 2014 - Present  Sep 2012 - Jul 2014  Aug 2008 - Jun 2012
RESEARCH EXPERIENCES	<b>Intern Scientist, Yahoo! Research</b> <b>Mentor:</b> Yi Chang, Ph.D and Jiliang Tang, Ph.D <ul style="list-style-type: none"><li>• Reciprocal behaviors analysis on dynamic social networks</li><li>• User reciprocal delay prediction on Tumblr</li></ul> <b>Research Assistant, Computer Science, ASU</b> <b>Advisor:</b> Huan Liu, Ph.D, Fellow of IEEE <ul style="list-style-type: none"><li>• Feature selection for social media data</li><li>• Attributed network mining</li><li>• Mining dynamic and streaming networks</li><li>• Social relational learning</li><li>• Anomaly detection on networks</li><li>• Feature selection repository - <i>scikit-feature</i> (news coverage on KDnuggets)</li></ul> <b>Research Assistant, Computing Science, UAlberta</b> <b>Advisor:</b> Osmar R. Zaiane, Ph.D <ul style="list-style-type: none"><li>• Associative classification with statistically significant rules</li><li>• Co-location pattern mining on extended spatial objects</li></ul>	May 2016 - Aug 2016  Dec 2014 - present  May 2013 - Jul 2014

CONFERENCE  
TUTORIALS

- [T1] **Jundong Li**, Jiliang Tang, Huan Liu. “Recent Advances in Feature Selection: A Data Perspective”, In Proceedings of 23rd ACM SIGKDD International Conference on Knowledge Discovery and Data Mining, Halifax, Canada, Aug 13-17, 2017

BOOK CHAPTERS

- [B1] Luiza Antonie, **Jundong Li**, Osmar R. Zaiane. “Negative Association Rules”, In Frequent Pattern Mining (editors: Charu C. Aggarwal and Jiawei Han), Springer, 2014.

REFEREED  
JOURNAL  
PUBLICATIONS

- [J1] **Jundong Li**, Kewei Cheng, Suhang Wang, Fred Morstatter, Robert P. Trevino, Jiliang Tang and Huan Liu. “Feature Selection: A Data Perspective”, ACM Computing Surveys (CSUR), 2017 (To Appear)
- [J2] Ling Jian, **Jundong Li**, Huan Liu. “Exploiting Multi-Label Information for Noise Resilient Feature Selection”, ACM Transactions on Intelligent Systems and Technology (TIST), 2017 (To Appear)
- [J3] Ling Jian, **Jundong Li**, Huan Liu. “Toward Online Node Classification on Streaming Networks”, Data Mining and Knowledge Discovery (DMKD), 2017 (To Appear)
- [J4] Ling Jian, **Jundong Li**, Shihua Luo. “Exploiting Expertise Rules for Statistical Data-Driven Modeling”, IEEE Transactions on Industrial Electronics (TIE), 64(11): 8647-8656, 2017
- [J5] **Jundong Li**, Huan Liu. “Challenges of Feature Selection for Big Data Analytics”, IEEE Intelligent Systems, 32(2): 9-15, 2017.
- [J6] Ling Jian, Shuqian Shen, **Jundong Li**, Xijun Liang and Lei Li. “Budget Online Learning Algorithm for Least Squares SVM”, IEEE Transactions on Neural Networks and Learning Systems (TNNLS), 28(9): 2076-2087, 2017
- [J7] **Jundong Li**, Osmar R. Zaiane. “Exploiting Statistically Significant Dependent Rules for Associative Classification”, Intelligent Data Analysis: An International Journal, 21(5): 1155-1172, 2017
- [J8] **Jundong Li**, Aibek Adilmagambetov, M. Shazan M. Jabbar, Osmar R. Zaiane, Alvaro Osornio-Vargas and Osnat Wine. “On Discovering Co-Location Patterns in Datasets: A Case Study of Pollutants and Child Cancers”, Geoinformatica, 20(4), 651-692, 2016.

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CONFERENCE  
PUBLICATIONS

- [C1] **Jundong Li**, Jiliang Tang, Yilin Wang, Yali Wan, Yi Chang, Huan Liu. “Understanding and Predicting Delay in Reciprocal Relations”, In Proceedings of the 27th International Conference on World Wide Web (WWW), Apr 23-27, 2018, Lyon, France
- [C2] **Jundong Li**\*, Chen Chen\*, Hanghang Tong, Huan Liu. (\* equally contributed) “Multi-Layered Network Embedding”, In Proceedings of the 18th SIAM International Conference on Data Mining (SDM), May 3-5, 2018, San Diego, California, USA.
- [C3] Liang Wu, **Jundong Li**, Fred Morstatter, Huan Liu. “Toward Relational Learning with Misinformation”, In Proceedings of the 18th SIAM International Conference on Data Mining (SDM), May 3-5, 2018, San Diego, California, USA.
- [C4] **Jundong Li**, Liang Wu, Harsh Dani, Huan Liu. “Unsupervised Personalized Feature Selection”, In Proceedings of the 32nd AAAI Conference on Artificial Intelligence (AAAI). Feb 2-7, 2018, New Orleans, LA, USA.

- [C5] Xuying Meng, Suhang Wang, Kai Shu, **Jundong Li**, Bo Chen, Huan Liu, Yujun Zhang. “Personalized Privacy-Preserving Social Recommendation”, In Proceedings of the 32nd AAAI Conference on Artificial Intelligence (AAAI). Feb 2-7, 2018, New Orleans, LA, USA.
- [C6] **Jundong Li**, Kewei Cheng, Liang Wu, Huan Liu. “Streaming Link Prediction on Dynamic Attributed Networks”, In Proceedings of the 11th ACM International Conference on Web Search and Data Mining (WSDM). Feb 5-9, 2018, Los Angeles, USA.
- [C7] Xiao Huang, Qingquan Song, **Jundong Li**, Xia Hu. “Expert Cognition in Attributed Network Embedding”, In Proceedings of the 11th ACM International Conference on Web Search and Data Mining (WSDM). Feb 5-9, 2018, Los Angeles, USA.
- [C8] **Jundong Li**, Harsh Dani, Xia Hu, Jiliang Tang, Yi Chang, Huan Liu. “Attributed Network Embedding for Learning in a Dynamic Environment”, In Proceedings of the 26th ACM International Conference on Information and Knowledge Management (CIKM). Nov 6-10, 2017, Pan Pacific Singapore.
- [C9] Harsh Dani, **Jundong Li**, Huan Liu. “Sentiment Informed Cyberbullying Detection in Social Media”, In Proceedings of the 2017 European Conference on Machine Learning and Principles and Practice of Knowledge Discovery (ECML-PKDD). Sept 18-22, 2017, Skopje, Macedonia.
- [C10] **Jundong Li\***, Kewei Cheng\*, Huan Liu. (\* equally contributed) “Unsupervised Feature Selection in Signed Social Networks”, In Proceedings of the 23rd ACM SIGKDD International Conference on Knowledge Discovery and Data Mining (KDD). Aug 13-17, 2017, Halifax, Canada.
- [C11] **Jundong Li**, Harsh Dani, Xia Hu, Huan Liu. “Radar: Residual Analysis for Anomaly Detection in Attributed Networks”, In Proceedings of the 26th International Joint Conference on Artificial Intelligence (IJCAI). Aug 19-25, 2017, Melbourne, Australia.
- [C12] **Jundong Li**, Jiliang Tang, Huan Liu. “Reconstruction based Unsupervised Feature Selection: An Embedded Approach”, In Proceedings of the 26th International Joint Conference on Artificial Intelligence (IJCAI). Aug 19-25, 2017, Melbourne, Australia.
- [C13] **Jundong Li**, Liang Wu, Osmar R. Zaiane, Huan Liu. “Personalized Relational Learning”, In Proceedings of the 17th SIAM International Conference on Data Mining (SDM). Apr 27-29, 2017, Houston, USA.
- [C14] Liang Wu, **Jundong Li**, Xia Hu, Huan Liu. “Gleaning Wisdom From The Past: Early Detection of Emerging Rumors in Social Media”, In Proceedings of the 17th SIAM International Conference on Data Mining (SDM). Apr 27-29, 2017, Houston, USA.
- [C15] Xiao Huang, **Jundong Li**, Xia Hu. “Accelerated Attributed Network Embedding”, In Proceedings of the 17th SIAM International Conference on Data Mining (SDM). Apr 27-29, 2017, Houston, USA.
- [C16] Yilin Wang, Jiliang Tang, **Jundong Li**, Baoxin Li, Yali Wan, Clayton Mellina, Neil O’Hare, Yi Chang. “Understanding and Discovering Deliberate Self-harm Content in Social Media”, In Proceedings of the 26th International World Wide Web Conference (WWW). Apr 3-7, 2017, Perth, Australia.

- [C17] Kewei Cheng, **Jundong Li**, Jiliang Tang, Huan Liu. “Unsupervised Sentiment Analysis with Signed Social Networks”, In Proceedings of the 31st AAAI Conference on Artificial Intelligence (AAAI), Feb 4-9, 2017, San Francisco, CA, USA.
- [C18] Xiao Huang, **Jundong Li**, Xia Hu. “Label Informed Attributed Network Embedding”, In Proceedings of the 10th ACM International Conference on Web Search and Data Mining (WSDM). Feb 6-10, 2017, Cambridge, UK.
- [C19] **Jundong Li**, Xia Hu, Ling Jian, Huan Liu. “Toward Time-Evolving Feature Selection on Dynamic Networks”, In Proceedings of the 16th IEEE International Conference on Data Mining (ICDM). Dec 12-15, 2016, Barcelona, Spain.
- [C20] Kewei Cheng, **Jundong Li**, Huan Liu. “FeatureMiner: A Tool for Interactive Feature Selection” (demo), In Proceedings of the 25th ACM International Conference on Information and Knowledge Management (CIKM). Oct 24-28, 2016, Indianapolis, USA.
- [C21] **Jundong Li**\*, Ling Jian\*, Kai Shu, Huan Liu. (\* equally contributed) “Multi-Label Informed Feature Selection”, In Proceedings of the 25th International Joint Conference on Artificial Intelligence (IJCAI). Jul 9-15, 2016, New York, USA.
- [C22] **Jundong Li**, Xia Hu, Liang Wu, Huan Liu. “Unsupervised Streaming Feature Selection in Social Media”, In Proceedings of the 16th SIAM International Conference on Data Mining (SDM). May 5-7, 2016, Miami, USA.
- [C23] **Jundong Li**, Xia Hu, Jiliang Tang, Huan Liu. “Unsupervised Streaming Feature Selection in Social Media”, In Proceedings of the 24th ACM International Conference on Information and Knowledge Management (CIKM). Oct 19-23, 2015, Melbourne, Australia.
- [C24] **Jundong Li**, Osmar R. Zaïane “Associative Classification with Statistically Significant Positive and Negative Rules”, In Proceedings of the 24th ACM International Conference on Information and Knowledge Management (CIKM). Oct 19-23, 2015, Melbourne, Australia.
- [C25] **Jundong Li**, Osmar R. Zaïane, Alvaro Osornio-Vargas. “Discovering Statistically Significant Co-location Rules in Datasets with Extended Spatial Objects”, In Proceedings of the 16th International Conference on Data Warehousing and Knowledge Discovery (DaWaK). Sep 2-4, 2014, Munich, Germany.
- [C26] **Jundong Li**, Jörg Sander, Ricardo G.J.B. Campello, Arthur Zimek. “Active Learning Strategies for Semi-supervised DBSCAN”, In Proceedings of the 27th Canadian Conference on Artificial Intelligence (AI). May 6-9, 2014, Montreal, Canada.
- JOURNAL  
MANUSCRIPT
- [M1] Yinglong Zhang, **Jundong Li**, Justin Sampson, Huan Liu. “Robust Hierarchical Overlapping Community Detection with Personalized PageRank”. Information Sciences (INS). (Under Review)
- [M2] Xiao Huang, **Jundong Li**, Na Zou, Xia Hu. “A General Embedding Framework for Heterogeneous Information Learning”. ACM Transactions on Knowledge Discovery from Data (TKDD). (Under Review)

TEACHING  
EXPERIENCES

- Teaching Assistant, Computer Science, ASU** Aug 2014 - Dec 2014
- CSE 205: Object-oriented programming and data structures
  - CSE 412: Database management
- Teaching Assistant, Computing Science, UAlberta** Sep 2012 - May 2013
- CMPUT 174: Introduction to the foundations of computation I

- INVENTION  
DISCLOSURES
- M16-052P: Systems and Methods for Unsupervised Streaming Feature Selection in Social Media (2016)
  - M17-146P: Sentiment Informed Cyberbullying Detection in Social Media (2017)
- HONORS AND  
AWARDS
- AAAI Student Travel Award 2018
  - CIKM Student Travel Award 2017
  - SIGKDD Student Travel Award 2017
  - University Graduate Fellowship, ASU 2017
  - SDM Student Travel Award 2017
  - CIDSE Department Nomination for Microsoft Fellowship, ASU 2016
  - ICDM Student Travel Award 2016
  - CIKM Student Travel Award 2015
  - GSA Professional Development Award, UAlberta 2014
  - FGSR Travel Award, UAlberta 2014
  - Computing Science Department GPA Award, UAlberta 2014
  - CS Department Nomination for BMO Scholarship, UAlberta 2013
- INVITED TALKS
- “Leveraging Feature Selection for Learning in Attributed Networks”  
Nanjing University of Aeronautics and Astronautics, China July 24, 2017
  - “Leveraging Feature Selection for Learning in Attributed Networks”  
Tsinghua University, China July 20, 2017
  - “Leveraging Feature Selection for Learning in Attributed Networks”  
China University of Petroleum (East), China July 18, 2017
  - “Understanding and Predicting Delay in Reciprocal Relations”  
Yahoo! Research, Sunnyvale, USA Aug, 2016
  - “Dynamic Attributed Network Embedding”  
Yahoo! Research, Sunnyvale, USA July, 2016
- SERVICE
- Conference Session Chair:**
- 2017 CIKM Workshop on Interpretable Data Mining (IDM)
  - 2017 SIAM International Conference on Data Mining, CP 16: Optimization Methods
- Program Committee:**
- Pacific-Asia Conference on Knowledge Discovery and Data Mining (PAKDD), 2018
  - International Joint Conference on Artificial Intelligence (IJCAI), 2018
  - AAAI Conference on Artificial Intelligence (AAAI), 2018
  - ACM International Conference on Information and Knowledge Management (CIKM), 2017
  - International Joint Conference on Artificial Intelligence (IJCAI), 2017
  - IEEE International Conference on Big Data (BigData), Special Session on Intelligent Data Mining, 2017
- Journal Reviewer:**
- Journal of Machine Learning Research (JMLR)
  - Machine Learning Journal (MLJ)
  - IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI)
  - IEEE Transactions on Knowledge and Data Engineering (TKDE)
  - IEEE Transactions on Big Data (TBD)
  - IEEE Transactions on Network Science and Engineering (TNSE)
  - IEEE Transactions on Multimedia (TMM)
  - IEEE Transactions on Image Processing (TIP)
  - IEEE Transactions on Industrial Electronics (TIE)
  - IEEE Intelligent System (IS)
  - ACM Transactions on Knowledge Discovery from Data (TKDD)

- Data Mining and Knowledge Discovery (DMKD)
- Knowledge and Information Systems (KAIS)
- Statistical Analysis and Data Mining (SAM)
- Pattern Recognition (PR)
- Neurocomputing (NEUCOM)
- Journal of Computer Science and Technology (JCST)
- Pattern Recognition Letters
- Computational Intelligence
- Frontiers in Disaster Communications
- PLOS ONE

**Conference External Reviewer:**

- AAAI Conference on Artificial Intelligence (AAAI), 2016, 2017
- International Joint Conference on Artificial Intelligence (IJCAI), 2015
- ACM International Conference on Information and Knowledge Management (CIKM), 2016
- ACM International Conference on Web Search and Data Mining (WSDM), 2016, 2017
- ACM International Conference on World Wide Web (WWW), 2015, 2016
- ACM Conference on Recommender Systems (Recsys), 2015
- SIAM International Conference on Data Mining (SDM), 2015, 2016, 2017
- IEEE/ACM International Conference on Advances in Social Networks Analysis and Mining (ASONAM), 2015, 2016, 2017
- Asian Conference on Machine Learning (ACML), 2016
- International Conference on Healthcare Informatics (ICHI), 2015

**Conference Volunteer:**

- AAAI Conference on Artificial Intelligence (AAAI), 2018
- ACM SIGKDD Conferences on Knowledge Discovery and Data Mining (KDD), 2016, 2017

REFERENCES

Available upon requests