

Curriculum Vitae

Name: Huan Liu
Title: Professor
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EDUCATION

Ph.D. (Computer Science) University of Southern California (1989)
M.Sc. (Computer Science) University of Southern California (1985)
B.Eng. (Computer Science and Engineering) Shanghai JiaoTong University, China (1983)

PROFESSIONAL EXPERIENCE

Professor/Associate Professor, *1/00 to Present*
Computer Science & Engineering, SCAI/SCIDSE/SCI, Arizona State University, Tempe, AZ 85287.
Associate Professor/Senior/Lecturer, *1/99, 1/96, 1/94 to 12/99, tenured*
School of Computing, National University of Singapore, Singapore 119260.
Project Leader, *6/92 to 1/94* and Senior/Scientist, *11/89 to 1/94*
Artificial Intelligence Systems Section, Customer Services and Systems Branch
Telstra Research Laboratories, 770 Blackburn Road, Clayton, Vic 3168, Australia.

RESEARCH INTERESTS

- Data Mining and Machine Learning
- Feature Selection, Feature Engineering, and Data Science
- AI and Its Socially Responsible Applications
- Social Computing and Social Media Mining
- Text Mining and Network Analysis for Disinformation Detection

AWARDS & HONORS

SIGKDD Innovation Award (2022) “for his outstanding contributions to the foundation, principles and applications of social media mining and feature selection for data mining”

AAAI Fellow (2019) for significant contributions to feature selection and social computing

ACM Fellow (2018) for contributions in feature selection for data mining and knowledge discovery and in social computing

AAAS Fellow (2018) for distinguished contributions to the field of data science

IEEE Fellow (2012) for his contributions to feature selection in data mining and knowledge discovery

Top 56 Computer Scientists in the world and Top 37 in the US, Research.com, the 2022 edition

Kaize Ding (Fall 2022) ASU Graduate College Completion Fellowship

Lu Cheng (2022), ASU School of Computing and Augmented Intelligence CS Outstanding PhD Student Award

Lu Cheng (2022), Fulton Schools of Engineering Dean's Dissertation Award (Spring 2022)

Kaize Ding (2022), ASU GPSA 2022 Outstanding Research Award

Top 100 Computer Scientists in the US, Guide2Research, 7th Edition 2021

Ruocheng Guo (2021) ASU CIDSE CS Outstanding PhD Student Award

Kai Shu (2020) Finalist of the 2021 BenchCouncil Distinguished Doctoral Dissertation Award

Kai Shu (2020) ASU Fulton Schools of Engineering 2020 Dean's Dissertation Award

Lu Cheng (2020) ASU GPSA 2020 Outstanding Research Award

Jundong Li (2020) ASU's only nominee from the Graduate College for the CGS/ProQuest Distinguished Dissertation Award

Liang Wu (2019), School of Computing, Informatics, and Decision Systems Engineering, CS Outstanding PhD Student Award (2018 – 2019)

Suhuang Wang (2018), Fulton Schools of Engineering Dean's Dissertation Award (Fall 2018)

SBP-BRiMS2018 Challenge 2 Disinformation, Winner (2018), SBP-BRiMS2018, Washington DC, July 10-13, 2018.

SBP-BRiMS2017 Life Time Achievement Award, International Conference on Social Computing, Behavioral – Cultural Modeling, & Prediction and Behavior Representation in Modeling and Simulation, George Washington University, Washington, DC, July 5-7, 2017.

2016 Fulton Faculty Exemplar¹, Ira A Fulton Schools of Engineering, Arizona State University, May, 2016.

Best Researcher (Senior Faculty) Award (2015), School of Computing, Informatics, and Decision Systems Engineering, Arizona State University, May, 2016.

Best Researcher (Senior Faculty) Award (2014), School of Computing, Informatics, and Decision Systems Engineering, Arizona State University, May, 2015.

ACM International Conference on Information and Knowledge Management (CIKM), Outstanding Service to CIKM Award by SIGIR and SIGWeb, 2014

Best Researcher (Senior Faculty) Award (2013), School of Computing, Informatics, and Decision Systems Engineering, Arizona State University, May, 2014.

The 2014 President's Award for Innovation at ASU, PI of Team Award on Empowering Humanitarian Assistance and Disaster Relief with Social Media and Data Analytics, April 2, 2014.

Best Researcher (Senior Faculty) Award (2012), School of Computing, Informatics, and Decision

¹<http://intheloop.engineering.asu.edu/2016/05/13/note-from-kyle-2016-fulton-faculty-exemplars-and-outstanding-assistant-professors/>

Systems Engineering, Arizona State University, May, 2013.

The Distinguished Contributions Award, PAKDD 2012, Kuala Lumpur, Malaysia, May 2012.

One of the 41 ACM *Distinguished Scientists* for Computing Innovations named by ACM in 2010.

Best Researcher (Senior Faculty) Award (2010), School of Computing, Informatics, and Decision Systems Engineering, Arizona State University, May, 2011.

The *Most Influential Paper Award* (2010) of PAKDD for the paper of “Feature Selection for Clustering” by M. Dash and H. Liu, published in the proceedings of PAKDD 2000.

Researcher of the Year Award (2008), Department of Computer Science & Engineering, School of Computing and Informatics, Arizona State University, April 2009.

TEACHING EXPERIENCE

The *Teacher of the Year Award*, Department of Computer Science & Engineering, Arizona State University, April 2005.

- Social Media Mining (CSE472) (Fall 2018, Fall 2019, Fall 2020, Fall 2021)
- FSE/CIDSE Course Development of Machine Learning Component for ASU Coursera MCS Course Data Visualization (Summer 2017 - Spring 2018)
- Advanced Topics in Social Media Analysis (CSE691) (Fall 2016, Fall 2017)
- Social Media Mining (CSE472/598, ASU) (Fall 2014, Fall 2015)
- Social Media Mining (CSE494/598, ASU) (evolved from Social Computing and Web Analytics 2011, 2012)
- Social Computing and Web Analytics (CSE494/598, ASU) (created in 2008, 2010)
- Introduction to AI (CSE 471/598, ASU)
- Computing Ethics (CSE 301, ASU)
- Introduction to Data Mining (CSE 494, ASU) (created in 2003 with an NSF grant)
- Data Mining (CSE 572, ASU) (created in 2000)
- Concepts of Computing (CSE 200, ASU)
- Machine Learning and Neural Networks (CSE 3244, NUS) (created in 1995)
- Algorithms and Data Structures (IC 2101, NUS)
- Advanced Topics: Data Mining and Data Warehousing (IC 52c2, NUS)
- Introduction to Artificial Intelligence (CS 205A, NUS)

The largest number of students in a class: ~500 students at NUS, and ~120 students at ASU.

POST-DOCTOR SCIENTISTS

1. Dr. Lu Cheng, June 2022 - August 2022 (PI Selcuk Candan)

2. Dr. Vineeth Rakesh, August 2017 - July 2018
3. Dr. Tanatorn Tanantong, January - May 2016
4. Dr. Uraz Yavanoglu, May 2015 - April 2016
5. Dr. Xia Ben Hu, May 2015 - August 2015
6. Dr. Shamanth Kumar, May 2015 - June 2015
7. Dr. Zigang Huang (PI. Ying-Cheng Lai), 50%, May 2014 - July 2015
8. Dr. Zhuo Feng, May 2012 - May 2013
9. Dr. Peng Zhang (PI. Baoxin Li), 50%, Spring 2012 - December 2013
10. Dr. Sai Moturu, Fall 2009 - Summer 2010
11. Dr. Gabriel Fung, Spring 2010 - Fall 2010

SUPERVISION of Ph.D. STUDENTS

1. Walaa Abdulaziz M Alnasser, Ph.D., Summer 2022, Measuring and Enhancing Users' Privacy in Machine Learning. Senior R&D Lead, LEAN (Business Services: Towards a smart health eco system), Saudi Arabia
2. Lu Cheng, Ph.D., Spring 2022; Algorithmic Solutions for Socially Responsible AI; the 2020-2021 ASU GPSA Outstanding Research Award; Fulton Schools of Engineering 2021 Dean's Dissertation Award; School of Computing and Augment Intelligence 2022 CS Outstanding PhD Student Award. Tenure Track, Assistant Professor, University of Illinois, Chicago.
3. Ruocheng Guo, Ph.D., Learning Causality with Networked Observational Data, Spring 2021. Tenure Track, Assistant Professor, City University of Hong Kong. ASU CIDSE CS Outstanding PhD Student Award
4. Kai Shu, Ph.D., Understanding Disinformation: Learning with Weak Social Supervision, Summer 2020. Tenure Track, Gladwin Development Chair Assistant Professor, Computer Science, Illinois Institute of Technology. ASU Fulton Schools of Engineering 2020 Dean's Dissertation Award
5. Ghazaleh Beigi, Ph.D., Protecting User Privacy with Social Media Data and Mining, Spring 2020. Google
6. Gennaro De Luca, Ph.D., (Principal Advisor: Dr. Yinong Chen), Explainable AI in Workflow Development and Verification using Pi-Calculus, Spring 2020. Lecturer, Information Technology Program, The Polytechnic School, ASU
7. Nur Shazwani Kamrudin, Ph.D., A Study of User Behaviors and Activities on Online Mental Health Communities, Fall 2019. Senior Lecturer, Universiti Malaysia Pahang.
8. Tahora Nazer, Ph.D., Understanding Bots on Social Media: An Application in Disaster Response, Fall 2019. Spotify
9. Isaac Jones, Ph.D., Assessing Influential Users in Live Streaming Social Networks, Fall 2019. Google

10. Jundong Li, Ph.D., Learning with Attributed Networks: Algorithms and Applications, Summer 2019. Tenure Track, Assistant Professor, ECE/CS/Data Science, University of Virginia.
11. Liang Wu, Ph.D., Misinformation Detection in Social Media, March, 2019. Airbnb
12. Suhang Wang, Ph.D., Network Representation Learning in Social Media, August 2018. Tenure Track, Assistant Professor, College of Information Science and Technology, Pennsylvania State University. Fulton Schools of Engineering 2018 Dean's Dissertation Award.
13. Suhas Ranganath, Ph.D., Facilitating Efficient Information Seeking in Social Media, October 2017. Walmart Labs, Sunnyvale, CA. Co-Supervised with Professor Ying-Cheng Lai.
14. Philippe Christophe Faucon, Ph.D., Gene Network Inference via Sequence Alignment and Rectification, August, 2017. Google
15. Fred Morstatter, PhD, Discovering and Mitigating Social Data Bias, June 2017. USC ISI.
16. Somnath Shahapurkar, PhD, Crossing the Chasm: Deploying Machine Learning Analytics in Dynamic Real-World Scenarios, October 2016. FICO.
17. Robert (Rob) Trevino, Big Data Analysis of Bacterial Inhibitors in Paralleized Cellomics - A Machine Learning Approach, Ph.D., Fall 2016, AFRL
18. Yunzhong Liu, Patient-Centered and Experience-Aware Mining for Effective Information Discovery in Health Forums, co-supervised with Professor Yi Chen. May, 2016. LeEco US.
19. Magdiel Galan, PhD, Leveraging Collective Wisdom in A MultiLabeled Blog Categorization Environment, July 2015. Intel.
20. Reza Zafarani, Ph.D., Making Thin Data Thick: User Behavior Analysis with Minimum Information, May 2015. Tenure Track, Assistant Professor, Syracuse University.
21. Xia Ben Hu, Ph.D., Mining Content and Relations for Social Spammer Detection, April 2015. Outstanding Graduate Student Award in Fulton Schools of Engineering (May 13, 2015). Tenure Track, Assistant Professor, Texas A&M University.
22. Shamanth Kumar, Ph.D., Social Media Analytics for Crisis Response, April 2015. Castlight Health.
23. Pritam Gundecha, Ph.D., Managing User's Vulnerability on a Social Networking Site, March 2015. IBM Research Almaden
24. Jiliang Tang, Ph.D., Computing Distrust in Social Media, Feb 2015. Yahoo Labs. (i) Outstanding Computer Science PhD Student in CIDSE Award (May 1, 2015), (ii) Fulton Schools of Engineering Dean's Dissertation Award (May 13, 2015), and (iii) ACM SIGKDD2015 Doctoral Dissertation Award Runner Up.
25. Huiji Gao, Personalized POI Recommendation on Location-Based Social Networks, November 2014; LinkedIn, February 2015 ((i) Huiji Gao and Jiliang Tang won "The 3rd Place Dedicated Task 2: Next Location Prediction", Mobile Data Challenge by Nokia, June 19, 2012; (ii) ASU Graduate College Fellowship 2014-2015)
26. Ali Abbasi, Understanding Social Media Users vis Attributes and Links, November 2014; Quid, January 2015; (Best Student Paper Runner Up, International Conference on SBP 2012)

27. Salem Alelyani, Feature Selection Stability: A Data Perspective, April 2013, Assistant Professor, King Khalid University, Abha, Asir, Saudi Arabia.
28. Xufei Wang, Connecting Users with Similar Interests for Group Understanding, April, 2013, LinkedIn.
29. Geoffrey Barbier, Information Provenance in Social Media, Fall 2011, Air Force Research Labs.
30. Lei Tang, Learning with Large Scale Social Media Networks, Summer 2010, Yahoo!Labs.
31. Zheng Zhao, Spectral Feature Selection, Summer 2010, SAS. (Outstanding Ph.D. Student in CSE, ASU, 2008)
32. Nitin Agarwal, Social Computing on Blogosphere, Summer 2009, University of Arkansas at Little Rock, Assistant Professor; (Outstanding Ph.D. Student Finalist in SCI, ASU in April 2009).
33. Sai Moturu, Quantifying the Trustworthiness of User-Generated Social Media Content, Summer 2009, Media Lab, MIT. (Best Student Paper Award at HealthInfo2008).
34. Lei Yu, Redundancy-based Feature Selection for High-Dimensional and Application in Bioinformatics, Summer 2005, SUNY Binghamton, Tenure Track, July 2005; (Outstanding Ph.D. Student in CSE, ASU, April 2005)

*** The Following PhD Students are In Progress with Starting Semester ***

35. Kaize Ding, Ph.D., Fall 2017, in progress. ASU Graduate College Completion Fellow
36. Raha Moraffah, Ph.D., Fall 2017, in progress
37. Bing Hu, Ph.D., Spring 2018, in progress (with Dr. Karl G. Kempf)
38. Mansooreh Karami, Ph.D., Spring 2019, in progress
39. David Ahmadreza Mosallanezhad, Ph.D., Spring 2019, in progress (with Dr. Michelle (Mickey) Mancenido)
40. Brian Vincent, Ph.D., Fall 2019, in progress
41. Weidong Zhang, Ph.D., Fall 2019, in progress (with Dr. Yingzhen Yang)
42. Faisal Alatawi, Ph.D., Spring 2020, in progress
43. Amrita Bhattacharjee, Ph.D., Fall 2020, in progress
44. Tharindu Kumarage, Ph.D., Fall 2020, in progress
45. Paras Sheth, Ph.D., Fall 2020, in progress
46. Anique Tahir, Ph.D., Fall 2020, in progress
47. Zhen Tan, Ph.D., Spring 2021, in progress
48. Ujun Jeong, Ph.D., Spring 2021, in progress
49. Nayoung Kim, Ph.D., Spring 2021, in progress

50. Bohan Jiang, Ph.D., Summer 2021, in progress
51. Garima Agrawal, Ph.D., Spring 2022, in progress
52. Kritshekhar Jha, Ph.D., co-advisor with Dr. Ming Zhao, Spring 2022, in progress
53. Zeyad Alghamdi, Ph.D., Spring 2022, in progress
54. Alimohammad Beigi, Ph.D., Fall 2022, in progress

SUPERVISION of MASTER'S STUDENTS

1. Snigdha Reddy Mudireddy, MCS, Fall 2022 - (project assistant with Ujun and Bohan)
2. Suraj Jyothi Unni, MCS, Spring 2022 - (project assistant with Raha)
3. Ravi Kuarumuri, MS, Interpretable Features for Distinguishing Machine Generated News Articles, Spring 2022. Amazon
4. Bohan Jiang, MCS, Fall 2020; continue his PhD study
5. Aditya Deotale, MS, Using Event Logs and Rapid Ethnograph to Mine Clinical Pathways, Spring 2020 (with Dr. Adela Grando)
6. Yichuan Li, MCS, Fall 2019 - Summer 2020 (project assistant)
7. Matthew Davis, MS, Types of Bots: Categorization of Accounts Using Unsupervised Machine Learning, Spring 2019 - Fall 2019.
8. Anshuman Venkateswaran, MCS, Spring 2019 (project assistant)
9. Deepak Mahudeswaran, MCS, Spring 2018 - Spring 2019 (Fake News Detection, project assistant)
10. Rohit Bhanushali, MCS, Spring 2018 - Fall 2018 (project assistant)
11. Abhay Joshi, MCS, Spring 2018 - Fall 2018 (project assistant)
12. Chetan Gupta, MS, Fall 2017 - Spring 2018 (project assistant)
13. Venkatesh Magham, MS, Data Poisoning Attacks on Linked Data with Graph Regularization, Fall 2017 - Spring 2019
14. Shobhit Sharma, MCS, TweetTracker, Spring 2017 - Fall 2017 (project assistant)
15. Kunal Bansal, MCS, TweetTracker+Bot Detection, Spring 2017 - Fall 2017 (project assistant)
16. Justin Sampson, MS, Spring 2016, in progress
17. Kewei Cheng, Mining Signed Social Networks Using Unsupervised Learning Algorithms, February 2017
18. Harsh Dani, Sentiment Informed Cyberbullying Detection in Social Media, January 2017.
19. Ran Wang, Toward Small Community Discovery in Social Networks, April 2015.

20. Ashwin Rajadesingan, Detecting Sarcasm on Twitter: A Behavior Modling Approach Security Issues in Social Media, Fall 2014.
21. Aneeth Anand, Feature Selection for Multi-Source Data, Spring 2012.
22. William Cole, Opinion Mining, Summer, 2011.
23. Gayathri Varadarajan, Collective Computation based Data Mining for Prognostics and Health Management, Fall 2010.
24. Shamanth Kumar, Comparative Mining in Blogosphere, (status changed to Ph.D.)
25. Shankara Bhargav Subramanya, View Completion using Multi-Source Data, graduated July 2008, Amazon.
26. Sanjay Sundararajan, (MCS) Analysis of Group Interaction on Blogosphere, graduated Spring 2008, Progressive.
27. Payam Refaeilzadeh, Semi-supervised Feature Selection, graduated Spring 2007, Microsoft Redmond.
28. Ashutosh Tiwari, (MCS), Clustering of Stream Data, graduated Spring 2007.
29. Niyati Parikh, Event Detection from Heterogeneous Data in Sensor Networks, Fall 2006.
30. Lance Parsons, Integrated Learning from Microarrays - Discovering Subtypes of Glioblastoma, Fall 2006.
31. Surendra Singhi, Selection Bias in Machine Learning, graduated Fall 2005.
32. Magdiel Galan, (MCS) Instance Selection for Stream Data, Summer 2005, continued in ASU Ph.D. program.
33. Ehtesham Haque, Subspace Search for Web Mining Applications, Fall 2004
34. Srihari Venkatesan, Intelligent Driving Data Analysis, Fall 2004, Yahoo!.
35. Jigar Mody, Selective Voting for Ensemble Methods, Spring 2004, Microsoft Redmond.
36. Amit Mandivikar, Active Learning for Image Mining, Fall 2003, Microsoft Redmond.
37. Deepak Kolippakkam, View Validation for Image Mining, Fall 2003, Roskamp Institute (Bioinformatics).
38. Snehal Kundalkar, (MCS) Intelligent Data Extraction, Fall 2003.
39. Reshma Suvarna, Using Meta Data and Namespaces in Data Mining, Spring 2003, HP.
40. Jianhua Han, (MCS) Meta Data and RDF in Data Mining, Spring 2002
41. Dimuthu Prasanna Makawita, Sampling from Databases Using B⁺Trees, 2000.
42. Kian Sing Ng, Real World Applications of Data Mining, 1999.
43. Ying Lu, On Multivariate Discretization, 1999.
44. Jun Yao, Process View of KDD: Techniques for Multiple Stages of KDD, 1998.

45. Manoranjan Dash, Feature Selection - A Preprocessing Step in Data Mining Graduated, 1998.

Also served on numerous PhD and MS thesis committees, and as an external Ph.D. thesis committee member or a thesis examiner for universities in the US, Australia, Hong Kong, and Singapore.

SUPERVISION of UNDERGRADUATE STUDENTS

1. Colin Finnegan, Honors, Spring 2022 - "An Exploration of Echo Chambers" (Faisal Alatawi)
2. Mertay Dayanc, ASU FURI (Fulton Schools of Undergraduate Research Initiative), Spring 2021, "Understanding Machine vs Human Generated Text in News Articles", (David A Mosallanezhad)
3. David Zhou, ASU FURI, Spring 2021, "A Systematic Study of COVID-19 Pooled Tests", (Kaize Ding)
4. Ariz Chang, ASU Honors, "Using Machine Learning Models to Detect Fake News, Bots, and Rumors on Social Media", Spring 2021 - (Anique Tahir)
5. Mohit Doshi, ASU/NASA Space Grant Program, Fall 2020 (Kaize Ding) Suyu Ge, Summer Intern from Tsinghua U, Summer 2020 (Lu Cheng)
6. Raphael David, FURI, Summer 2020 (Kai Shu)
7. Ryan Schwartz, NSF REU, Summer 2020 (Raha Moraffah)
8. Qiang Fu, FURI, Summer 2020 (Raha Moraffah)
9. Connor Aitken, Honors, Fall 2018 - Spring 2019 (Isaac Jones)
10. Matthew Davis, Honors, Spring 2018 - Fall 2018; NSF REU, Fall 2018; FURI, Summer and Fall 2018;
11. Jennifer Berumen, NSF REU, Fall 2017 - Spring 2018; FURI, Fall 2018 - Spring 2019;
12. Marcus Stilwell, FURI, Fall 2018;
13. Alex Nou, Honors, Summer 2017 - Spring 2019; FURI, Spring 2018;
14. Sarah Smallwood, Aerospace Engineering, Honor's Thesis (2nd Reader). Fall, 2017 - Spring 2018
15. Lilian Ngweta, Honors, Fall 2017 - Spring 2018
16. Daniel Baird, research preparation for FURI, Fall 2016; Honors Thesis, Fall 2017 - Spring 2018
17. Christina Wilmot, Honors Thesis, Fall 2016 - Spring 2017
18. Lewis Ruskin, Honors Thesis, Spring 2016 - Spring 2017
19. Kian Fakhri, Honors Thesis, Fall 2016.
20. Daniel Baurd, research preparation for FURI, Fall 2016
21. Grant Marshall, REU student, December 2011 - 2013; FURI x 2 Fall 2011; Honor's Thesis, Fall 2014 - 2015

22. Mark Karlsrud, Honor's Thesis, Fall 2014 - 2015
23. Daniel Howe, REU student Summer 2013 - 2015
24. Aaron Mattson, Honor's Thesis, 2nd Reader, Fall 2012 - Spring 2013
25. Garret Walliman, Honor's Thesis, 2nd Reader, Fall 2012 - Spring 2013
26. Luke Pirtle, Summer 2012 - March 2013
27. Shantanu Bala, Fall 2011 - Spring 2012
28. Lin Yang, Fall 2011 and Spring 2012
29. Patrick Mcinerney, Honors Project, *Intelligent Data Collection*, Fall 2010 - Spring 2011
30. Fred Morstatter, *Feature Selection Software Package*, CRA Outstanding Undergraduate Researchers Award (Honorable Mention, 2010), Fall 2009 - Spring 2011
31. Patrick Kreckler, Honors Project, *Social Media Study*, Fall 2009 - Spring 2010
32. David Weber, Honors Project, *Identifying Communities in Disguise*, co-supervisor, 2008.
33. Daniel Casey, student research project, *Adaptive Stream Sampling for Sensors*, Spring 2005.
34. Andrew B. Call, project, *Case Study in Data Warehousing*, Spring 2004.
35. Robert Fitzgerald, Honors Project (incomplete *An Examination of Selection Bias in Machine Learning*, 2003.
36. Bret Ehlert, Honors Project, *Active Feature Selection*, Fall 2000.
37. Jian Shu, Honors Thesis, *Feature Discretization and Evaluation*, 1998.
38. Yin Yin Chong, Honors Thesis, *Feature Selection Techniques and Visual Aids*, 1995.
39. Boon Poh Lee, Honors Thesis, *An Active Planner in Multi-Media Environment*, 1995.

High School Students visiting ASU (2016, 2013, 2012)

1. Ricky Hsu; Soumya Kambhampati, Terry Wen, Daria Bazzi

Visiting Scholars at ASU

1. Qianru Wang, PhD Student, Northwestern Polytechnical University (Professor Bin Guo), November 2019 - October 2020
2. Qun Zhao, PhD Student, HoHai University (Professor Yufeng Yu), September 2019 - September 2020
3. Gang Wei, Graduate Student, Xi'an Jiaotong University, Xi'an, November 2018 - May 2019
4. Saul Solorio Ferbabdez, PhD Student, National Institute of Astrophysics, Optics, and Electronics, Puebla, Mexico, September 2018 - April 2019

5. Shuo Steve Yang, PhD Student, Shanghai Jiaotong University, Shanghai, September 2017 - September 2018
6. Shan-Yun Sharon Teng, PhD Student, National Cheng Kung University, Taiwan, August 2017 - July 2018
7. Xuying Meng, PhD student, Institute of Computing Technology, Chinese Academy of Sciences, September 2016 - March 2017 Dr. Uraz Yavanoglu, Gazi University, Turkey, May 2015 - April 2016
8. Augusto Andrade, PhD Candidate, Spring, Summer, and Fall 2011, University of So Paulo – USP, Feature Selection for Clustering.
9. Zhuo Feng, PhD Candidate, Fall 2011 - Spring 2012, University of Arizona, Web Search.

Visiting Professors/Scholars at ASU

1. Professor Hai Huang, Beijing University of Post and Telecommunications, October, 2018 - October, 2019
2. Professor Yufeng Yu, HoHai University, August 2018 - August 2019
3. Professor Min Gao, Chong Qing University, December 2017 - January 2019
4. Mr. Fang Chen, Library of Chinese Academy of Sciences, November, 2017 - April, 2018
5. Professor Chen Chen, Nankai University, August, 2017 - July, 2018
6. Dr. Yinglong Zhang, East China Jiaotong University, Nanchang, Jiangxi, September, 2016- August, 2017
7. Dr. Tanatorn Tanantong, Rangsit University, Pathum Tani, Thailand, January - May 2016
8. Professor Ling Jian, China University of Petroleum, Qingdao, Shandong, September, 2015 - August, 2016
9. Professor Jongwon Seok, Changwon National University, September 2014 - August 2015
10. Professor Zhen Yang, Beijing University of Technology, February 2014 - March 2015
11. Professor Ying Wang, Jilin University, September 2013 - September 2014
12. Professor Guoyong Cai, Guilin University of Electronic Technology, January 2013 - July 2013
13. Professor Shijin Li, HoHai University, May 2012 - May 2013
14. Professor Yingzhou Bi, Guangxi Teacher Education University, Spring 2012 - February 2013
15. Professor Yimin Wen, Guilin University of Electronic Technology, Spring 2012

GRANTS AND PROJECTS

- III: SMALL: Graph Contrastive Learning for Few-Shot Node Classification. \$599,987. NSF (#2229461), 01/01/2023 - 12/31/2025.

- Designing Nature to Enhance Resilience of built infrastructure in Western US Landscapes. \$4,499,990. USACE, 9/24/2021 - 9/23/2024. Xu, T., Pavlic, T., Mascaro, G., Maciejewski, R., Muenich, R., Liu, H. (CoI, 5%), Wutich, A., Candan, K. & Sefair, J.
- CC* Integration-Large: (BLUE) Software-Defined CyberInfrastructure to enable data-driven smart campus applications. \$500,000. NSF (#2126291), 09/01/2021 - 08/31/2023. PI: Dijiang Huang, Senior Personnel: Huan Liu (13%)
- EAGER: SaTC-EDU: Artificial Intelligence for Cybersecurity Education via a Machine Learning-Enabled Security Knowledge Graph. \$300,000. NSF (#2114789), 5/1/2021 - 4/30/2023. PI: Dijiang Huang, Co-PIs: Huan Liu (25%) and Ying-Chih Chen
- Knowing the Unknown: Exploring the Space of Adversarial Attacks via Causal Learning. \$300,000. AMC (W911NF2110030), 4/1/2021 - 3/31/2024.
- SaTC: CORE: Small: Interdisciplinary Models to Identify and Understand Cyberbullying. \$499,999, NSF(#2036127), 01/01/2021 - 12/31/2024. PI: Yasin N Silva, Co-PIs: Huan Liu (25%) and Deborah L. Hall.
- Social Media Research to Combat Disinformation and Foreign Influence. \$1,200,000. ONR, 12/11/2020 - 12/10/2023.
- Analytical Cognitive Enhancement Research (A-COGER). \$350,000, Parallax Advanced Research Corporation. 8/14/2020 - 11/14/2022.
- Semantic Information Defender (SemaFor program), \$848,513, DARPA HR001120C0123, 7/29/2020 to 7/28/2024. PI: Scott Ruston, Co-PIs: Huan Liu (34%), Dan Gillmor, and Kristy Roschke.
- Characterizing and Understanding of Dynamic Time-Series Information for Decision Making A Causal Learning Approach. \$685,000, AMC. 6/1/2020 - 5/31/2025.
- CCF: RAPID: Active Tracking of Disease Spread in COVID-19 Graph Predictive Analytics. \$199,499, NSF (#2029044), 5/1/2020 - 4/3/2021. PI: Gautam Dasarathy, Co-PIs: Douglas Cochran, Huan Liu (17%), and Pavan Turaga.
- III: Small: pCAR: Discovering and Leveraging Plausibly Causal (p-causal) Relationships to Understand Complex Dynamic Systems, \$493,466, NSF (#1909555), 10/1/2019 - 9/30/2022. Co-PI, 45% (PI: K. Selcuk Candan).
- BotHunter - Intelligent Analysis of Bots, their Evolution and Impact, \$555,000, ONR, 1/1/2018 - 12/31/2021.
- Center of Excellence for Accelerating Operational Efficiency (CAOE), \$8,195,097, DHS, 9/1/2017 - 6/30/2020. Co-PI, 6% (PI: Ross Maciejewski).
- III:Small: Discovering and Characterizing Implicit Links in Graph Data, \$495,123, PI, NSF (#1614576), 10/01/2016 - 09/30/2020.
- Developing Novel Socio-Computational Methodologies to Analyze Multimedia-based Cyber Propaganda Campaigns, \$210,400, UALR, 06/01/2017 - 12/31/2018.
- II-NEW: GEARS - An Infrastructure for Energy-Efficient Big Data Research on Heterogeneous and Dynamic Data, \$750,000, NSF (#1629888), 09/01/2016 - 08/31/2019. PI: Ming Zhao; Co-PIs: Fengbo Ren, Hasan Davulcu, Huan Liu, K. Selcuk Candan.

- TweetTracker Interface Adapter Design Support and Evaluation, Progeny Systems Corporation, \$124,069, 08/10/2016 - 07/05/2018.
- CDS&E/Collaborative Research: DataStorm: A Data Enabled System for End-to-End Disaster Planning and Response, \$692,774, NSF (#1610282), 08/01/2016 - 07/31/2019. PI: K. Selcuk Candan; Co-PIs: Huan Liu, Ming Zhao, Pitu Mirchandani.
- Using Social Media as Crowd-Sourcing Sensors - An Analytics Approach \$135,000, Charles River Analytics, 07/29/2016 - 02/12/2018.
- Intelligent Analysis of Big Social Media Data for Crisis Tracking, \$450,000, ONR (N00014-16-1-2257), 02/01/2016 - 12/31/2017.
- Research Area 5.3.3: Sybil-Resilient Influence Measurement in Microblogging Systems, \$450K, ARO (W911NF-15-1-0328), 7/15/2015 – 7/14/2018, Co-PI, 40% (PI: Yanchao Zhang)
- Social Media Characterization, \$70,000, National Security Innovations (NSI), Inc., 4/15/2014 - 2/28/2015.
- Social Media Analytics for Bots, Charles River/SBIR, \$24,000, 7/6/2015 - 02/08/2016.
- Disaster Preparation and Response via Big Data Analysis and Robust Networking, \$300,000, NSF, 3/1/2015 - 2/28/2018, Co-PI, 40% (PI: Guoliang Xue)
- Developing Novel Auxiliary Technologies for Crisis Tracking, \$750,000, ONR (N000141410095), 1/1/2014 - 12/31/2015.
- Computational Exploration of Noise in Social Media, \$50,000, ARO-STIR, 8/15/2013 - 5/30/2014, Co-PI, 50% (PI: Guoliang Xue).
- Content Analysis of Social Media, \$47,695, FleishmanHillard, 8/1/2013 - 11/30/2013.
- Modeling of Complex Systems: Mining Suspicious Tiny Sub-Networks in a Massive Social Network, \$75,000, UIUC, 6/1/2013 - 11/30/2014
- Multi-Source Assessment of State Stability, \$449,070, CMU/Minerva, 6/1/2013 - 5/31/2018.
- REU: III: Small: Transforming Feature Selection to Harness the Power of Social Media, \$15,998, associated with NSF (IIS-1217466), 9/1/2012 - 8/31/2015.
- III: Small: Transforming Feature Selection to Harness the Power of Social Media, \$410,389, NSF (IIS-1217466), 9/1/2012 - 8/31/2015.
- High-School Apprenticeship Program (HSAP) Research: Information Provenance for Social Media, \$6,114, 2013, associated with ARO(#25071).
- CASP: Center for Humanitarian and Social Media Data Storage and Processing, \$97,980, DURIP, 2012, ONR (N000141210808).
- High-School Apprenticeship Program (HSAP) Research: Information Provenance for Social Media, \$9,342, 2012, associated with ARO(#25071).
- ARO SBP 12-13 Sponsorship for International Conference on Social Computing, Behavioral-Cultural Modeling, and Prediction, \$13,600, ARO Grant No.: W911NF-12-1-0119. 3/13/2012 - 11/12/2013.

- Assessing Trustworthiness in Social Media: A Social Computing Approach, ARO (025071), 11/01/2011 - 10/31/2014. \$374,978.
- CPS:Medium: GoingEasy with Crowdsourcing - Building Cyber-Physical Systems for People with Visual Impairment, NSF (1135616), 10/01/2011 - 09/30/2015, \$1,000,000, Co-PI, 30% (PI: Baoxin Li).
- NIH SBP 11-14 Sponsorships - International Conference on Social Computing, Behavioral-Cultural Modeling, and Prediction, \$94,073, Award No.: R13 GM097967, 03/04/2011 - 02/28/2015.
- The Role of Social Media in Trusted Collaboration for Disaster Relief, ONR (N000141110527), PI, 03/01/2011 - 12/31/2013, \$607,197.
- NSF Conference Sponsorship for the Third International Conference on Social Computing, Behavioral Modeling, and Prediction, NSF (1019597), PI, 04/01/2010 - 03/31/11, \$7,500, 100%.
- BlogTrackers: Analyzing Social Media for Cultural Modeling, ONR (N000141010091), PI, 01/01/2010 - 09/30/2013, \$773,225.
- III-Medium: A Machine Learning Approach to Computational Understanding of Skill Criteria in Surgical Training, NSF (001319), 07/15/2009 - 06/30/2013, \$874,484, co-PI, 30% (PI: Baoxin Li).
- Developing Cultural Analysis and Sociological Network Theory for Understanding Virtual Communities, Collaborative Project, University of Hawaii/AFOSR, PI, 01/01/2009 - 11/30/2011, \$480,983, 100%.
- Online Social Behaviors and Prediction of their Implications for the Physical World: A Comparative Study, Part 1, 06/01/2009 - 07/31/2011, Collaborative Project, University of Hawaii/ONR, PI, \$259,144, 100%.
- NSF REU Grant for III-COR-Small: Beyond Feature Selection and Extraction - An Integrated Framework for High-Dimensional Data of Small Labeled Samples, NSF, IIS (0936275), PI, 4/29/2009 -. \$16,000, 50%.
- DHS COE in Border Security and Immigration - Effective Reduction of High False Alarm Rates, (University of Arizona is the lead institute), 7/1/2008 - 6/30/2011.
- Second International Workshop on Social Computing, Behavioral Modeling, and Prediction. HHS-NIH-NIGMS-National Institute of General Medical Sciences (R13GM087995), PI, 3/16/09 - 3/15/10, \$12,000, 100%.
- Conference Sponsorship: Second International Workshop on Social Computing, Behavioral Modeling, and Prediction, ONR, PI, 12/01/2008 - 05/30/2009, \$5,000, 100%.
- NSF Workshop Sponsorship for the Second International Workshop on Social Computing, Behavioral Modeling, and Prediction, NSF, 01/15/009 - 12/31/2009, \$2,000, 100%.
- A Collective-Computation Approach to Prognostics Health Management, NASA, PI, 09/01/2008 - 08/31/2009, \$200,000, 34%
- III-COR-Small: Beyond Feature Selection and Extraction - An Integrated Framework for High-Dimensional Data of Small Labeled Samples, NSF, PI, 8/2008 - 7/2011, \$430,626, 50%

- Modeling Group Interaction via Open Data Sources, AFOSR, PI, 3/2008 - 2/2011, \$459,510, 100%.
- BlogTrackers: Combining Domain Knowledge and Novel Search Capabilities for Assessing Political Risks, ONR, 1/2008 - 10/2009, \$186,000, 70%.
- Link Mining of Textual Data, MITRE, PI, 9/2007-8/2008, \$50,000, 100%.
- DeepSearch for for Modeling Group Interaction Using Open Data Sources, Air Force Research Labs, PI, 8/2007 - 12/2007, \$26,000, 100%.
- Enhanced Data Accessibility Using Web Services Technology, Arizona Water Institute, Co-PI, (PI: Kyle Carpenter), 1/2007 - 12/2007. \$50,000, 10%.
- Environmental and Economic Impacts of Material Used in Future Urban Development, Co-PI, (PI: John Crittenden), 4/2007 - 3/2008, \$400,000, Arizona Science Foundation, 6%.
- Enabling the Study of Long-Term Human and Social Dynamics, NSF (BTS 0022), Co-PI, (PI: Keith Kintigh), 9/2004 - 8/2005, \$100,000, 5%.
- Modeling Driving Data, Motorola, PI, 5/2004 - 8/2004, \$13,605, 100%.
- Synthesis of Streaming Data from Multiple Sensors via Embedded Data Extraction, CEINT, PI, 1/2004 - 8/2005, \$52,102, 100%.
- MEASURES: A Proof of Concept Demonstration (Multi-scale Environmental Analysis in Urban and Regional Ecosystems), Senior Personnel, (PI: H.J. Fernando), NSF, 8/15/04 to 7/14/05, \$100,000, 30%.
- ET-I3: Enabling Technologies for Intelligent Information Integration, Co-PI, (PI: Subbarao Kambhpati), ASU-AZ, 6/2003 - 7/2005, \$200,000, 20%.
- Intelligent Driving Data Analysis, Motorola, PI, 1/2003 - 12/2003, \$19,549, 100%.
- A Collaborative Project: Development of An Undergraduate Data Mining Course, NSF (DUE: 0231448), PI, 1/2003 - 12/2004, \$52,720, 100%.
- Intelligent Data Extraction in an Automobile Environment, IMES/FORD, PI, 9/2002 - 8/2003, \$27,000, 100%.
- Toward a Unified Taxonomy for Feature Selection, NSF (IIS: 0127815), PI, 8/2001 - 7/2002, \$54,999, 100%.
- A Data Mining Approach for Detecting Egeria in Digital Imagery, SFSU, PI, 1/2002 - 12/2003, \$101,918, 100%.

The following projects were conducted at National University of Singapore.

- Integrated Machine Learning Workbench for Data Mining, Japan Ministry of Education, PI (at NUS), (PI at Osaka University: Hiroshi Motoda), 1999 - 2001, about US\$100,000.
- Program of Research in Intelligent Systems, National Science and Technology Board and Ministry of Education of Singapore, Associate Director and Co-PI, (PI: Tat-Seng Chua, Co-PI: Chris Marshall), 1998 - 2000, S\$3M.

- Data Mining and Intelligent Data Analysis, National Science and Technology Board and Academic Research Council of Singapore, PI, S\$70,000, 1998-1999.
- Knowledge Discovery in Gifted Education Program, Academic Research Council of Singapore in collaboration with Singapore Ministry of Education, Co-PI, (PI: Chew-Lim Tan), S\$161,700, 1998-2000.
- *A Unified Approach to Data Mining*. Academic Research Council, PI, 1997-1998, S\$65,000.
- *A Comprehensive Computer System for Data Discretization*. National Computer Board and Academic Research Council, PI, 1995-1996, S\$68,000.
- *An Automated Tool for Knowledge Acquisition*. Academic Research Council, PI, 1994 - 1995, S\$ 70,000.

PATENTS AND DISCLOSURES

- Ghazaleh Beigi, Ruocheng Guo, Huan Liu, Yanchao Zhang, Alexander Nou. “Privacy protection systems and methods”, **US Patent** 11,436,371; Date of Patent: 2022/9/6
- Liang Wu and Huan Liu. “Method and Apparatus for Detecting Fake News in a Social Media Network”, **US Patent** 11,418,476; Date of Patent: 2022/08/16
- Jundong Li, Harsh Dani, Xia Hu, and Huan Liu. “Systems and methods for improved anomaly detection in attributed networks”, **US Patent** 11,360,928; Date of Patent: 2022/6/14
- Jundong Li, Xia Hu, Jiliang Tang, and Huan Liu. “Systems and methods for unsupervised streaming feature selection in social media”, **US Patent** 10,942,939; Date of Patent: 2021-03-09
- Pritam Gundecha, Jiliang Tang, and Huan Liu. “Systems and methods for predicting personal attributes based on public interaction data”. **US Patent** No. 10,665,764; Date of Patent: May 26, 2020.
- Reza Zafarani and Huan Liu. “User Identification Across Social Media”. **US Patent** No. 9,544,381; Date of Patent: January 10, 2017.
- Hua-Jun Zeng, Jian-Tao Sun, Wei-Ying Ma, Zheng Chen, Benyu Zhang, and Huan Liu. “Augmenting User, Query, and Document Triplets Using Singular Value Decomposition. **US Patent** No.: 7,747,618, B2; Date of Patent: Jun. 29, 2010.
- L Cheng, J Li, K Candan, H Liu. “Systems and methods for tracking disaster footprints with social streaming data”, 2022. US Patent App. 17/544,008
- Lu Cheng, Kai Shu, Siqi Wu, Yasin Silva, Deborah Hall, Huan Liu. “Systems and methods for unsupervised cyberbullying detection via time-informed Gaussian mixture model”, 2022/6/9. US Patent App. 17/546,648
- G Beigi, SHU Kai, R Guo, S Wang, H Liu. “Systems and methods for a privacy preserving text representation”, 2021. US Patent App. 17/245,774
- Kai Shu, D Manudewaran, H Liu. “Method and Apparatus for Collecting, Detecting and Visualizing Fake News”, 2021. US Patent App. 17/267,765

- G Beigi, R Guo, H Liu, Y Zhang, A Nou. “Privacy protection systems and methods”, 2021. US Patent App. 16/782,349
- Kai Shu, S Wang, J Tang, Y Wang, H Liu. “Systems and methods for a cross media joint friend and item recommendation framework”, 2021. US Patent App. 16/525,148
- J Li, H Dani, X Hu, and H Liu. “Systems and methods for improved anomaly detection in attributed networks”, 2020. US Patent App. 16/550,937
- R Guo, J Li, and H Liu. “Systems and methods for sequential event prediction with noise-contrastive estimation for marked temporal point process”, 2020. US Patent App. 16/511,505
- L Wu and H Liu. “Method and apparatus for detecting fake news in a social media network”, 2019. US Patent App. 16/435,064
- J Li, X Hu, J Tang, H Liu. “Systems and methods for unsupervised streaming feature selection in social media”, 2017. US Patent App. 15/412,955
- S Wang, J Tang, and H Liu. “Systems and methods for embedded unsupervised feature selection”, 2017. US Patent App. 15/412,909
- Early detection of fake news. ASU Disclosure ID: D21-013. Kai Shu, et al. 7/27/2020
- Privacy Preserving Text Representation Learning. ASU Disclosure ID: D20-095. Ghazaleh Beigi, et al. 1/14/2020
- Hierarchical Propagation Networks for Fake News Detection: Investigation and Exploitation. ASU Disclosure ID: M20-079P. Kai Shu, et al. 9/23/2019
- FakeNewsNet: A Data Repository with News Content, Social Context and Spatiotemporal Information for Studying Fake News on Social Media. ASU Disclosure ID: M20-078P. Kai Shu, et al. 9/23/2019
- Protecting User Privacy: An Approach for Untraceable Web Browsing History and Unambiguous User Profiles. ASU Disclosure ID: M19-148P. Beigi et al. 12/19/2018.
- FakeNewsTracker: A Tool for Fake News Collection, Detection, and Visualization. (Exclusive License) ASU Disclosure ID: M19-050P. Shu et al. 9/5/2018
- Sequential Event Prediction with Noise-Contrastive Estimation for Marked Temporal Point Process. ASU Disclosure ID: M18-237P. Guo et al. 4/19/2018
- Residual Analysis for Anomaly Detection in Attributed Networks. ASU Disclosure ID: M18-226P. Li et al. 4/16/2018
- CrossFire: Cross Media Joint Friend and Item Recommendation. ASU Disclosure ID: M18-221P. Shu et al. 4/16/2018
- Detecting Fake News by Learning How It Spreads in Social Media. ASU Disclosure ID: M18-220P. Wu et al. 4/13/2018
- Sentiment Informed Cyberbullying Detection in Social Media. ASU Disclosure ID: M17-146P. Dani et al. 1/24/2017

- A system which predicts social status of social network users. It can be applied in targeted advertising and information credibility modeling. ASU Disclosure ID: M16-240P. Wu et al. 4/6/2016
- Predicting Online Protest Participation in Social Media. ASU Disclosure ID: M16-246P. Raganath et al. 3/23/2016
- Embedded Unsupervised Feature Selection. ASU Disclosure ID: M16-062P. Wang et al. 10/8/2015
- Unsupervised Streaming Feature Selection in Social Media. ASU Disclosure ID: M16-052P. Li et al. 9/24/2015
- Novel clustering algorithms for improved Twitter dataset creation. ASU Disclosure ID: M16-049P. Sampson et al. 9/22/2015
- Exploring Personal Attributes from Publicly Available Interactions to Secure Users Privacy. ASU Disclosure ID: M15-054P. Gundecha et al. 9/3/2014
- Detecting Malicious Users from their Usernames. ASU Disclosure ID: M15-034P. Zafarani and Liu. 8/1/2014
- Detecting Sarcasm in Twitter. ASU Disclosure ID: M15-033P. Rajadesingan et al. 8/1/2014
- Seeking Provenance of Information using Social Media. ASU Disclosure ID: M14-202P. Gundecha et al. 4/15/2014
- CrisisTracker: Mobile Social Media Dashboard for First Responders. ASU Disclosure ID: M14-006P. Morstatter et al. 7/1/2013
- TweetTracker Desktop: A Twitter Monitoring and Analysis Platform. ASU Disclosure ID: M13-133P. Kumar et al. 2/13/2013
- ACT (ASU Coordination Tracker). ASU Disclosure ID: M13-126P. Gao and Liu. 2/11/2013
- User Identification Across Social Media. ASU Disclosure ID: M13-100P. Zafarani and Liu. 12/6/2012
- TweetXplorer. ASU Disclosure ID: M13-067P. Kumar et al. 9/24/2012
- Tweet Tracker Mobile. ASU Disclosure ID: M12-077P. Morstatter et al. 12/7/2011
- TweetTracker: A Twitter Monitoring and Analysis Platform. ASU Disclosure ID: M12-075P. Kumar et al. 12/5/2011.
- Augmenting User, Query, and Document Triplets using Singular Value Decomposition. Patent No.: US7,747,618 B2. Zheng et al. Jun. 29, 2010.
- BlogTrackers: Combining Domain Knowledge and Novel Search Capabilities for Political Risks. ASU Disclosure ID: M10-022P. Kumar et al. 12/23/2009.

PUBLICATIONS

Google Scholar Citations: > 82,000; H-index: 126 (98 since 2017)

AUTHORED BOOKS

1. “Socially Responsible AI: Theories and Practice”, Lu Cheng and Huan Liu. World Scientific, forthcoming
2. “Causality: Learning to Discover with Data”, Raha Moraffah and Huan Liu. Morgan & Claypool Publishers, forthcoming
3. “Detecting Fake News on Social Media”, Kai Shu and Huan Liu. Morgan & Claypool Publishers, July 2019.
4. “Trust in Social Media”, Jiliang Tang and Huan Liu. Morgan & Claypool Publishers, September, 2015.
5. “Mining Human Mobility in Location-Based Social Networks”, Huiji Gao and Huan Liu. Morgan & Claypool Publishers, April, 2015.
6. “Social Media Mining: An Introduction”, Reza Zafarani, Mohammad Ali Abbasi, and Huan Liu. **Textbook**. May, 2014, Cambridge University Press. Chinese version published in Nov. 2015.
7. “Twitter Data Analytics”, Shamanth Kumar, Fred Morstatter, and Huan Liu. January 2014, Springer Briefs.
8. “Provenance Data in Social Media”, Geoffrey Barbier, Zhuo Feng, Pritam Gundecha, and Huan Liu. May 2013, Morgan & Claypool Publishers.
9. “Spectral Feature Selection for Data Mining”, Zheng Alan Zhao and Huan Liu. 2012, Chapman and Hall/CRC Press.
10. “Community Detection and Mining in Social Media”, Lei Tang and Huan Liu, 2010, Morgan & Claypool Publishers. It was published in Chinese by China Machine Press in 2012.
11. “Modeling and Data Mining in Blogosphere”, Nitin Agarwal and Huan Liu, 2009, Morgan & Claypool Publishers.
12. “Feature Selection for Knowledge Discovery and Data Mining”, Huan Liu and Hiroshi Motoda, July 1998. Kluwer Academic Publishers. 2nd printing in 2012, Springer Science & Business Media.

EDITED BOOKS

1. “Combating Online Hostile Posts in Regional Languages during Emergency Situation”, Editors: Tanmoy Chakraborty, Kai Shu, H. Russell Bernard, Huan Liu, and Md Shad Akhtar. First International Workshop, CONSTRAINT 2021 Collocated with AAAI 2021 Virtual Event, February 8, 2021, Revised Selected Papers. Communications in Computer and Information Science 1402, ISBN 978-3-030-73695-8
2. “Disinformation, Misinformation, and Fake News in Social Media - Emerging Research Challenges and Opportunities”, Editors: Kai Shu, Suhang Wang, Dongwon Lee, and Huan Liu. Lecture Notes in Social Networks, Springer. 2020.
3. “Feature Engineering for Machine Learning and Data Analytics”, Editors: Guozhu Dong and Huan Liu. Chapman and Hall/CRC Press, 2018.

4. “Social Computing and Behavioral Modeling”, edited, Huan Liu, John Salerno, and Michael Young, 2009, Springer, USA.
5. “Proceedings of the 2009 SIAM International Conference on Data Mining”, edited, H. Park, P. Srinivasan, H. Liu, and Z. Obradovic, 2009, Society for Industrial and Applied Mathematics, USA.
6. “Social Computing, Behavioral Modeling, and Prediction”, edited, Huan Liu, John Salerno, and Michael Young, 2008, Springer, USA.
7. “Computational Methods of Feature Selection”, edited, Huan Liu and Hiroshi Motoda, 2008, Chapman and Hall/CRC Press.
8. “Advances in Knowledge Discovery and Data Mining”, the 9th Pacific-Asia Conference, PAKDD 2005, Hanoi, Vietnam, May 18-20, 2005, Proceedings. Series: Lecture Notes in Computer Science, Subseries: Lecture Notes in Artificial Intelligence, Vol. 3518. Ho, Tu Bao; Cheung, David; Liu, Huan (Eds.) Springer Verlag.
9. “Instance Selection and Construction for Data Mining”, edited, (with H. Motoda), February 2001, Kluwer Academic Publishers.
10. “Knowledge Discovery and Data Mining - Current Issues and New Applications”, Proceedings of the 4th Pacific-Asia Conference on Knowledge Discovery and Data Mining, edited, (with T. Terano, A.L.P. Chen), April 2000, Springer Verlag.
11. “Feature Extraction, Construction and Selection: A Data Mining Perspective”, edited, (with Hiroshi Motoda), July 1998, Kluwer Academic Publishers. 2nd Printing, 2001.
12. “KDD: Techniques and Applications”, Proceedings of the 1st Pacific-Asia Conference on Knowledge Discovery and Data Mining, edited, (with Hongjun Lu and Hiroshi Motoda), 23-24 February, 1997, Singapore. World Scientific.
13. “Proceedings of the 6th Australian Joint Conference on Artificial Intelligence”, edited, (with Chris Rowles and Norman Foo), 16-19 November, 1993, Melbourne, Australia. World Scientific.

JOURNAL or Magazine PUBLICATIONS

1. Zhen Yang, Ming Zhou, Haiyang Yu, Richard O. Sinnott, and Huan Liu. “Efficient and Secure Federated Learning with Verifiable Weighted Average Aggregation”, IEEE the Transactions on Network Science and Engineering (TNSE), forthcoming
2. Qianru Wang, Bin Guo, Lu Cheng, Liang Wang, Zhiwen Yu, and Huan Liu. “Learning Shared Mobility-Aware Knowledge for Multiple Urban Travel Demands”, IEEE Internet of Things Journal, Vol:9, Issue: 9, May 1, 2022. DOI: 10.1109/JIOT.2021.3115174
3. Qiang Sheng, Juan Cao, H. Russell Bernard, Kai Shu, Jintao Li, and Huan Liu. “Characterizing multi-domain false news and underlying user effects on Chinese Weibo”, Information Processing and Management, Elsevier, Vol: 59, Issue 4, July 2022. <https://doi.org/10.1016/j.ipm.2022.102959>
4. Kaize Ding, Kai Shu, Xuan Shan, Jundong Li, and Huan Liu. “Cross-Domain Graph Anomaly Detection”. IEEE Trans Neural Netw Learn Syst. Vol: 33, Number: 6, June, 2022. PMID: 3459655, DOI: 10.1109/TNNLS.2021.3110982

5. Qianru Wang, Bin Guo, Lu Cheng, Liang Wang, Zhiwen Yu, and Huan Liu. “Learning Shared Mobility-Aware Knowledge for Multiple Urban Travel Demands”, *IEEE Internet of Things Journal*, Vol:9, Issue: 9, May 1, 2022. DOI: 10.1109/JIOT.2021.3115174
6. Haiyang Yu, Zhen Yang, Shanshan Tu, Muhammad Waqas, and Huan Liu. “Blockchain-Based Offline Auditing for the Cloud in Vehicular Networks”, *IEEE Trans on Network and Service Management (TNSM)*, forthcoming
7. Raha Moraffah, Paras Sheth, Mansooreh Karami, Anchit Bhattacharya, Qianru Wang, Anique Tahir, Adrienne Raglin, and Huan Liu. “Causal Inference for Time Series Analysis: Problems, Methods and Evaluation”, *Knowledge and Information Systems (KAIS)*, Vol: 63, Issue: 12, pp 3103 - 3138. Nov. 2021. <https://doi.org/10.1007/s10115-021-01619-8>
8. Qianru Wang, Bin Guo, Yi Ouyang, Lu Cheng, Liang Wang, Zhiwen Yu, and Huan Liu. “Learning Shared Mobility-aware Knowledge for Multiple Urban Travel Demands,” in *IEEE Internet of Things Journal*, DOI: 10.1109/JIOT.2021.3115174.
9. Lu Cheng, Kush R. Varshney, and Huan Liu. “Socially Responsible AI Algorithms: Issues, Purposes, and Challenges”, *Journal of AI Research*, forthcoming
10. Yalin Wang, Wen Zhang, Brittany Blair Braden, Gustavo Miranda, Kai Shu, Suhang Wang, and Huan Liu. “Integrating Multimodal and Longitudinal Neuroimaging Data with Multi-Source Network Representation Learning”, *Neuroinformatics*, forthcoming
11. Kai Shu, Ahmed Hassan Awadallah, Susan Dumais, and Huan Liu. “Detecting Fake News with Weak Social Supervision”, *IEEE Intelligent Systems*, Vol:36, Issue: 4, pages: 96-103. July/August 2021, DOI: 10.1109/MIS.2020.2997781.
12. Liangtian Wan, Yuyuan Yuan, Feng Xia, and Huan Liu. “To Your Surprise: Identifying Serendipitous Collaborators,” *IEEE Trans on Big Data*, Vol: 7, Issue: 3, pp: 574-589, DOI: 10.1109/TBDATA.2019.2921567. July 2021
13. Ninghao Liu, Mengnan Du, Ruocheng Guo, Huan Liu, and Xia Hu. “Adversarial Attacks and Defenses: An Interpretation Perspective”, *ACM SIGKDD Explorations Newsletter*, Volume 23, Issue 1, June 2021, pp 8699, <https://doi.org/10.1145/3468507.3468519>
14. Haiyang Yu, Qi Hu, Zhen Yang, and Huan Liu. “Efficient Continuous Big Data Integrity Checking for Decentralized Storage”, *IEEE Transactions on Network Science and Engineering*, Vol: 8, Issue: 2, pp: 1658-1673, DOI: 10.1109/TNSE.2021.3068261, April-June 2021
15. Feng Xia, Ke Sun, Shuo Yu, Abdul Aziz, Liangtian Wan, Shirui Pan, and Huan Liu. “Graph Learning: A Survey”, *IEEE Transactions on Artificial Intelligence (TAI)*, Vol: 2, Issue: 2, pages: 109-127, DOI: 10.1109/TAI.2021.3076021. <http://arxiv.org/abs/2105.00696>. April 2021
16. Lu Cheng, Ruocheng Guo, Yasin N Silva, Deborah Hall, and Huan Liu. “Modeling Temporal Patterns of Cyberbullying Detection with Hierarchical Attention Networks”, *ACM Trans on Data Science (TDS)*, 2021
17. Chen Chen, Yinglong Xia, Hui Zang, Jundong Li, Huan Liu, and Hanghang Ton. “Incremental one-class collaborative filtering with co-evolving side networks”, *Springer London, Knowledge and Information Systems*, pp 1-20, 2021.

18. Lu Cheng, Y. N. Silva, D. Hall and H. Liu, "Session-based Cyberbullying Detection: Problems and Challenges," in *IEEE Internet Computing*, March/April 2021. Vol: 25, Issue: 2, pages: 66-72, doi: 10.1109/MIC.2020.3032930
19. Wei Wang, Tao Tang, Feng Xia, Zhiguo Gong, Zhikui Chen, Huan Liu. "Collaborative Filtering with Network Representation Learning for Citation Recommendation", *IEEE Transactions on Big Data (TBD)*, 2020/10. DOI: 10.1109/TBDDATA.2020.3034976
20. Kai Shu, Amrita, Bhattacharjee, Faisal Alatawi, Tahora H. Nazer, Kaize Ding, Mansooreh Karami, and Huan Liu. "Combating Disinformation in A Social Media Age", *WIREs Data Mining and Knowledge Discovery*, 2020.
21. Ruocheng Guo, Lu Cheng, Jundong Li, P. Richard Hahn, and Huan Liu. "A Survey of Learning Causality with Data: Problems and Methods", *ACM Computing Surveys (CSUR)*, 53 (4), 1-37, 2020.
22. Raha Moraffah, Mansooreh Karami, Ruocheng Guo, Adrienne Raglin, and Huan Liu. "Causal Interpretability for Machine Learning - Problems, Methods and Evaluation", *ACM SIGKDD Explorations Newsletter*, vol 22, no. 1, pp18 - 33. June 2020.
<https://doi.org/10.1145/3400051.3400058>
23. Kai Shu, Deepak Mahudeswaran, Suhang Wang, Dongwon Lee, and Huan Liu. "FakeNewsNet: A Data Repository with News Content, Social Context and Dynamic Information for Studying Fake News on Social Media", *Journal of Big Data*, Mary Ann Liebert, Inc. Publishers, 8(3), pp 171 - 188.
24. Yufeng Yu, Dingsheng Wan, Qun Zhao, and Huan Liu. "Detecting Pattern Anomalies in Hydrological Time Series with Weighted Probabilistic Suffix Trees", *Water* 2020, 12, 1464; <https://doi.org/10.3390/w12051464>.
25. Hai Huang and Huan Liu. "Feature selection for hierarchical classification via joint semantic and structural information of labels", *Knowledge-Based Systems*, Elsevier, Vol 195, May 2020.
<https://doi.org/10.1016/j.knosys.2020.105655>
26. Qun Zhao, Yuelong Zhu, Kai Shu, Dingsheng Wan, Yufeng Yu, Xudong Zhou, Huan Liu. "Joint Spatial and Temporal Modeling for Hydrological Prediction, *IEEE Access*. April 2020.
27. Ghazaleh Beigi and Huan Liu. "A Survey on Privacy in Social Media: Identification, Mitigation, and Applications", *ACM Transactions on Data Science*, 1 (1), 1-38, 2020.
<https://dl.acm.org/doi/abs/10.1145/3343038>
28. Ghazaleh Beigi, Jiliang Tang, and Huan Liu. "Social Science Guided Feature Engineering: A Novel Approach to Signed Link Analysis", *ACM Transactions on Intelligent Systems and Technology (TIST)* 11 (1), 1-27, 2020. <https://doi.org/10.1145/3364222>
29. Liang Wu, Fred Morstatter, Kathleen, M. Carley, and Huan Liu. "Misinformation in Social Media: Definition, Manipulation, and Detection", *SIGKDD Explorations. ACM SIGKDD Explorations Newsletter* 21 (2), 80-90.
30. Shuo Yu, Feng Xia, and Huan Liu. "Academic Team Formulation based on Liebig's Barrel: Discovery of Anticask Effect", *IEEE Trans on Computational Social Systems*. Vol 6 (5), 1083-1094, Oct., 2019.

31. Ghazaleh Beigi and Huan Liu. “Identifying Novel Privacy Issues of Online Users on Social Media Platforms”, ACM SIGWEB Newsletter, Winter Issue, Article number: 4, 2019. doi:10.1145/3293874.3293878
Kai Shu, Deepak Mahudeswaran, and Huan Liu. “FakeNewsTracker: A Tool for Fake News Collection, Detection, and Visualization”, Special Issue of Best of SBP, Computational and Mathematical Organization Theory (CMOT), Springer, 25:60-71, 2019.
32. Suhang Wang, Charu Aggarwal, and Huan Liu. “Random-Forest-Inspired Neural Networks”, ACM Trans on Intelligent Systems and Technology (TIST), 9(6), Article No. 69. doi:10.1145/3232230
33. Liang Wu, Fred Morstatter, and Huan Liu. “SlangSD: building, expanding and using a sentiment dictionary of slang words for short-text sentiment classification” , Springer Entnerlands Language Resources and Evaluation, 52(3), 838-852. 9/1/2018.
34. Huan Liu. “Beyond the Scale of Big Data”, Frontiers in Big Data 1:1. <https://doi.org/10.3389/fdata.2018.00001> 10 July 2018
35. X Meng, S Wang, K Shu, J Li, B Chen, H Liu, Y Zhang .“Towards privacy preserving social recommendation under personalized privacy settings”, Springer US, World Wide Web, 1-29, 2018.
36. Fred Morstatter, Liang Wu, Uraz Yavanoglu, Stephen R. Corman, and Huan Liu. “Identifying Framing Bias in Online News”, ACM Trans on Social Computing, Volu 1 Issue 2, Article No. 5, June 2018. doi:10.1145/3204948
37. Fred Morstatter and Huan Liu. “In Search of Coherence and Consensus: Measuring the Interpretability of Statistical Topics”, Journal of Machine Learning Research (JMLR), 18(169):1-32, 2018
38. Zhen Yang, Jiliang Tang, and Huan Liu. “Cloud Information Retrieval: Model Description and Scheme Design”, IEEE Access, DOI: 10.1109/ACCESS.2018.2797131. Forthcoming
39. Suhang Wang, Jiliang Tang, and Yilin Wang, and Huan Liu. “Exploring Hierarchical Structures for Recommender Systems”, IEEE TKDE, DOI: 10.1109/TKDE.2018.2789443. Forthcoming
40. Ling Jian, Jundong Li, and Huan Liu. “Exploiting Multi-Label Information for Noise Resilient Feature Selection”, ACM TIST, Forthcoming
41. Ling Jian, Jundong Li, and Huan Liu. “Toward online node classification on streaming networks”, Journal of Data Mining and Knowledge Discovery (DMKD), Springer Nature. First Online: July 2017. Volume 32, Issue 1, pp 231-257, January 2018. DOI 10.1007/s10618-017-0533-7.
42. Jundong Li, Kewei Cheng, Suhang Wang, Fred Morstatter, Robert P. Trevino, Jiliang Tang, Huan Liu. “ Feature Selection: A Data Perspective”, ACM Computing Surveys (CSUR), Volume 50, Issue 6, January 2018. Article No. 94. DOI 10.1145/3136625.
43. Kai Shu, Amy Sliva, Suhang Wang, Jiliang Tang, and Huan Liu. “Fake News Detection on Social Media: A Data Mining Perspective”, SIGKDD Explorations, 19(1):22-36, June, 2017.
44. Tahora H. Nazer, Guoliang Xue, Jiyu Sheng, and Huan Liu. “Intelligent Disaster Response via Social Media Analysis - A Survey”, SIGKDD Explorations, 19(1):46-59, June, 2017.

45. Suhas Ranganath, Xia B Hu, Jiliang Tang, Suhang Wang, and Huan Liu. “Understanding and Identifying Rhetorical Questions in Social Media”, *ACM Transaction on Intelligent Systems and Technology (TIST)*. Forthcoming.
46. Yun Li, Tao Li, and Huan Liu. “Recent Advances in Feature Selection and Its Applications”, Springer, *Knowledge and Information Systems (KAIS)*. pp 1-27, May 2017. DOI 10.1007/s10115-017-1059-8.
47. Suhas Ranganth, Suhang Wang, Xia Hu, Jiliang Tang, and Huan Liu. “Facilitating Time Critical Information Seeking in Social Media”, *IEEE Trans on Knowledge and Data Engineering (TKDE)*. Forthcoming.
48. Fred Morstatter and Huan Liu. “Discovering, Assessing, and Mitigating Data Bias in Social Media”, *Elsevier Journal of Online Social Networks and Media*. Volume 1, Pages: 1-13. June 2017.
49. Fred Morstatter, Liang Wu, Uraz Yavanoglu, Stephen S. Corman, and Huan Liu. “Identifying Framing Bias in Online News”, *ACM Transactions on Social Computing (TSC)*. Forthcoming.
50. Jundong Li and Huan Liu. “Challenges of Feature Selection for Big Data Analytics”, *Special Issue on Big Data, IEEE Intelligent Systems*. 32 (2), 9-15. 2017
51. Feng Xia, Wei Wang, Teshome Megersa Bekele, and Huan Liu. “Big Scholarly Data: A Survey”, *IEEE Trans on Big Data*, Issue:99, Page(s): 1. January 2017. DOI: 10.1109/TB-DATA.2016.2641460.
52. Kai Shu, Suhang Wang, Jiliang Tang, Reza Zafarani and Huan Liu. “User Identity Linkage across Online Social Networks: A Review”, *ACM SIGKDD Explorations*. Volume 8, Number 2, December 2016. Pages: 5-17.
53. Fred Morstatter and Huan Liu. “Replacing Mechanical Turkers? Challenges in the Evaluation of Models with Semantic Properties”, *Journal of Data and Information Quality (JDIQ)*, Volume 7 Issue 4, October 2016, Article No. 15. DOI10.1145/2935752.
54. Xia Hu, Peter Reaven, Aramesh Saremi, Ninghao Liu, Mohammed Abbasi, Huan Liu, and Raymond Migrino. “Machine Learning to Predict Rapid Progression of Carotid Atherosclerosis in Patients with Impaired Glucose Tolerance”, *EURASIP Journal on Bioinformatics and Systems Biology*. 2016:14. DOI 10.1186/s13637-016-0049-6.
55. Huan Liu, Fred Morstatter, Jiliang Tang, and Reza Zafarani. “The good, the bad, and the ugly: uncovering novel research opportunities in social media mining”, in *Trends of Data Science, International Journal on Data Science and Analytics*, Springer International Publishing Switzerland. September, 2016. DOI 10.1007/s41060-016-0023-0
56. Jiliang Tang, Yi Chang, Charu Aggarwal, and Huan Liu. “A Survey of Signed Network Mining in Social Media”, *ACM Computing Suverys (CSUR)*, Volume 49 Issue 3, August 2016, Article No. 42. arXiv:1511.07569
57. Peng Cui, Huan Liu, Charu Aggarwal, and Fei Wang. “Uncovering and Predicting Human Behaviors”, *Intelligent Systems*, 31 (2), 77-88, 2016
58. Wei Wei, K Joseph, Huan Liu, Kathleen M Carley. “Exploring Characteristics of Suspended Users and Network Stability on Twitter”, *Social Network Analysis and Mining*, 6(1), 51, Springer, 2016.

59. Yu Cheng, Ankit Agarawal, Huan Liu, Alok Choudhary. “Legislative Prediction with Dual Uncertainty Minimization from Heterogeneous Information”, Special Issue of Best of SDM 2015 in Statistical Analysis and Data Mining: The ASA Data Science Journal, Wiley. Forthcoming. DOI: 10.1002/sam.11309.
60. Jundong Li, Kewei Cheng, Suhang Wang, Fred Morstatter, Robert P. Trevino, Jiliang Tang, Huan Liu: Feature Selection: A Data Perspective. CoRR abs/1601.07996 (2016)
61. Jun-Jie Jiang, Zi-Gang Huang, Liang Huang, Huan Liu, Ying-Cheng Lai. “Directed dynamical influence is more detectable with noise”, Scientific Reports 2016; 6: 24088. PMCID: PMC4828632. Published online 2016 Apr 12. doi: 10.1038/srep24088
62. Peng Cui, Huan Liu, Charu Aggarwal, Fei Wang. “Online Behavioral Analysis and Modeling” [Guest Editorial]. IEEE Intelligent Systems 31(1): 2-4 (2016).
63. Reza Zafarani and Huan Liu. “Users Joining Multiple Sites: Friendship and Popularity Variations across Sites”, Elsevir Journal of Information Fusion 28: 83-89 (2016).
64. Xia Hu, Lei Tang, and Huan Liu. “Embracing Information Explosion without Choking: Clustering and Labeling in Microblogging”, IEEE Trans. on Big Data (TBD) 1(1): 35-46 (2015).
65. Reza Zafarani and Huan Liu. “User Identification across Social Media”, ACM Transactions on Knowledge Discovery from Data TKDD 10(2): 16 (2015).
66. Lie Qu, Yan Wang, Mehmet A. Orgun, Ling Liu, Huan Liu, Athman Bouguettaya. “CCCloud: Context-Aware and Credible Cloud Service Selection Based on Subjective Assessment and Objective Assessment”. IEEE T. Services Computing 8(3): 369-383 (2015)
67. Fred Morstatter, Huiji Gao, and Huan Liu. “Discovering Location Information in Social Media”, Special Issue on Location-Based Social Media Analysis, Editor: XiaoFang Zhou, IEEE Computer Science, Data Engineering Bulletin, 38(2), pp 4-13, June 2015.
68. Jiliang Tang, Huiji Gao, Atish Dasarma, Yingzhou Bi, and Huan Liu. “Trust Evolution: Modeling and Its Applications”, IEEE Transactions on Knowledge and Data Engineering (TKDE). 27(6): 1724-1738 (2015).
69. Reza Zafarani and Huan Liu. “Evaluation without Ground Truth in Social Media Research”, Communications of ACM, Volume 58 Issue 6, June 2015 Pages 54-60.
70. Huiji Gao, Jiliang Tang and Huan Liu. “Solving the Cold Start Problem in Location Recommendation with Geo-Social Correlations”, Data mining and Knowledge Discovery (DMKD), Springer. 29(2): 299-323 (2015)
71. Jiliang Tang, Huiji Gao, Atish Dasarma, Yingzhou Bi, and Huan Liu. “Trust Evolution: Modeling and Its Applications”, IEEE Transactions on Knowledge and Data Engineering (TKDE). 27(6): 1724-1738 (2015).
72. Reza Zafarani and Huan Liu. “Evaluation without Ground Truth in Social Media Research”, Communications of ACM, Volume 58 Issue 6, June 2015 Pages 54-60.
73. Huiji Gao, Jiliang Tang and Huan Liu. “Solving the Cold Start Problem in Location Recommendation with Geo-Social Correlations”, Data mining and Knowledge Discovery (DMKD), Springer. 29(2): 299-323 (2015).

74. Pritam Gundecha , Geoffrey Barbier, Jiliang Tang, and Huan Liu. "User Vulnerability and its Reduction on a Social Networking Site", *ACM Transactions on Knowledge Discovery from Data (TKDD)*. 9(2): Pages 12:1-12:25, 2014.
75. Jiliang Tang and Huan Liu. "An Unsupervised Feature Selection Framework for Social Media Data", *IEEE Transactions on Knowledge and Data Engineering (TKDE)*. 26(12): 2914-1927, 2014.
76. Kathleen M. Carley, Jrgen Pfeffer, Fred Morstatter, Huan Liu. "Embassies burning: toward a near-real-time assessment of social media using geo-temporal dynamic network analytics" *Social Network Analysis and Mining* 4(1) (2014).
77. Jiliang Tang and Huan Liu. "Feature Selection for Social Media Data", *ACM Transactions on Knowledge Discovery from Data (TKDD)*. 8(4) Pages 19:1 - 19:27, 2014.
78. Zhi-Dan Zhao, Zi-Gang Huang, Liang Huang, Huan Liu, Ying-Cheng Lai. "Scaling and correlation of human movements in cyberspace and physical space", *Physical Review E*, 90 (5), 050802.
79. Reza Zafarani and Huan Liu. "Behavior Analysis in Social Media", *IEEE Intelligent Systems*, 29(4): 9-11, 2014.
80. Xinwang Liu, Lei Wang, Jian Zhang, Jianping Yin, and Huan Liu, "Global and Local Structure Preservation for Feature Selection", *IEEE Transactions on Neural Networks and Learning Systems*. 25(6): 1083-1095, 2014.
81. Dror Y. Kenett, Fred Morstatter, H. Eugene Stanley, and Huan Liu. "Discovering Social Events through Online Attention", *PLOS ONE*, July 2014.
82. Shamanth Kumar, Fred Morstatter, and Huan Liu. "Monitoring Social Media for Humanitarian Assistance and Disaster Relief", invited contribution, *IEEE Special Technical Community Social Networking, STCSN E-Letter Vol. 2 No. 1*, March 12, 2014.
83. Shijin Li, Jianbin Qiu, Xinxin Yang, Huan Liu, Dingsheng Wan, Yuelong Zhu: A novel approach to hyperspectral band selection based on spectral shape similarity analysis and fast branch and bound search. *Eng. Appl. of AI* 27: 241-250 (2014)
84. Lei Wang, Luping Zhou, Chunhua Shen, Lingqiao Liu, Huan Liu. "A Hierarchical Word-Merging Algorithm with Class Separability Measure". *IEEE Trans. Pattern Anal. Mach. Intell.* 36(3): 417-435 (2014)
85. Jiliang Tang, Xia Hu, and Huan Liu, "Social Recommendation: A Review", *Journal of Social Network Analysis and Mining*, Springer, 3(4): 1113-1133 (2013).
86. Xufei Wang, Lei Tang, Huan Liu, and Lei Wang, "Learning with Multi-resolution Overlapping Communities", *Knowledge and Information Systems (KAIS)*, 36(2): 517-535 (2013).
87. Zheng Zhao, Lei Wang, Huan Liu, and Jieping Ye. "On Similarity Preserving Feature Selection", *IEEE Transactions on Knowledge and Data engineering (TKDE)*, 25(3): 619-632, 2013.
88. Geoffrey Barbier, Reza Zafarani, Huiji Gao, Gabriel Fung, and Huan Liu. "Maximizing Benefits from Crowdsourced Data", *Special Issue: Data Model, Computational and Mathematical Organization Theory*, 18(3): 257-279,2012. DOI: 10.1007/s10588-012-9121-2.

89. Lei Tang, Xufei Wang and Huan Liu. "Scalable Learning of Collective Behavior". vol. 24, no. 6, pp. 1080-1091, June, 2012. Selected as a June-2012 featured article by the Special Technical Community on Social Networks, IEEE Computer Society.
90. Nitin Agarwal, Huan Liu, Lei Tang, and Philip Yu. "Modeling Blogger Influence in a Community", *Social Network Analysis and Mining*, Springer, DOI: 10.1007/s13278-011-0039-3, 2(2): 139-162, 2012.
91. Fred Morstatter, Huan Liu, and Daniel Zeng. *Opening Doors to Sharing Social Media Data*, IEEE Intelligent Systems, January/February 2012. Vol.27, No. 1: pp 47 -51. (selected as a May-2012 feature article by the Special Technical Community on Social Networks, IEEE Computer Society)
92. Jiliang Tang, Xufei Wang, Huiji Gao, Xia Hu, and Huan Liu. "Enriching Short Text Representation in Microblog for Clustering", *Frontiers of Computer Science in China*, Vol. 6, Issue 1:88-101, 2012. DOI: 10.1007/s11704-011-1167-7.
93. L. Tang, H. Liu and J. Zhang. "Identifying Evolving Groups in Dynamic Multi-Mode Networks". *Transactions on Knowledge and Data Engineering (TKDE)*, 24(1): 72-85, 2012.
94. Lei Tang, Xufei Wang, and Huan Liu. "Group Profiling for Understanding Social Structures", *ACM Transactions on Intelligent Systems and Technology (TIST)*, 3(1):15 2012.
95. Lei Tang, Xufei Wang, and Huan Liu. "Community Detection via Heterogeneous Interaction Analysis", *Data Mining and Knowledge Discovery*, Springer. August, 2011. DOI: 10.1007/s10618-011-0231-0.
96. Geoffrey Barbier, Lei Tang and Huan Liu. "Understanding Online Groups through Social Media". *WIREs Data Mining and Knowledge Discovery*, May 20, 2011.
97. N. Yagnik, H. Liu, and H.J.S. Fernando. "Sensor Networks: Decentralized Monitoring and Subspace Classification of Events", *Special Issue on Novel Applications of Machine Learning, International Journal of General Systems*, Taylor & Francis, Volume 40 Issue 4, 457. May 4, 2011. doi:10.1080/03081079.2010.544882
98. Lei Tang, and Huan Liu. "Leveraging Social Media Networks for Classification". *Journal of Data Mining and Knowledge Discovery (DMKD)*, DOI: 10.1007/s10618-010-0210-x, January 14, 2011.
99. Sai Moturu and Huan Liu. "Quantifying the Trustworthiness of Social Media Content", *Journal of Distributed and Parallel Databases*, Springer, Volume 29, January 4, 2011. DOI: 10.1007/s10619-010-7077-0.
100. L. Tang and H. Liu. "Toward Collective Behavior Prediction via Social Dimension Extraction". *IEEE Intelligent Systems*, vol.25, no.4, pp.19-25, July-Aug. 2010.
101. N. Agarwal, M. Galan, H. Liu, and S. Subramanya. "WisColl: Collective Wisdom based Blog Clustering". *Journal of Information Science: Special Issue on Collective Intelligence (INS-CI)*, 180(1):39-61. 2010.
102. Z. Zhao and H. Liu. "Searching for Interacting Features in Subset Selection", *Intelligent Data Analysis - An International Journal*, 13(2): 207 -228, 2009.

103. S. Moturu, W. Johnson, and H. Liu. “Predictive Risk Modeling for Forecasting High-Cost Patients: a Real-World Application Using Medicaid Data”, *International Journal of Biomedical Engineering and Technology, Special Issue on Warehousing and Mining Complex Data: Applications to Biology, Medicine, Behavior, Health and Environment*, 3(1-2): 114-132, 2009.
104. S. Subramanya, Z. Wang, B. Li, and H. Liu. “Completing Missing Views for Multiple Sources of Web Media”, *International Journal of Data Mining, Modeling and Management*, 1(1):23-44, 2008.
105. N. Agarwal and H. Liu, “Blogosphere: Research Issues, Applications, and Tools”, *SIGKDD Explorations*, 10(1): 18–31, July 2008.
106. L. Tang, H. Liu, J. Zhang, N. Agarwal and J.J. Salerno. “Topic Taxonomy Adaptation for Group Profiling”, *ACM Transactions on Knowledge Discovery from Data*, 1(4): 1–28, January 2008.
107. N. Agarwal, H. Liu, and J. Zhang. “Blocking Objectional Web Contents by Leveraging Multiple Information Sources”. *SIGKDD Explorations*, 8(1): 17 - 26, June, 2006.
108. K.S. Candan, J.W. Kim, H. Liu, and R. Suvarna. “Discovering Mappings in Hierarchical Data from Multiple Sources Using the Inherent Structure”. *The Knowledge and Information Systems Journal*, 10(2): 185-210, August, 2006.
109. N. Agarwal, E. Haque, H. Liu, and L. Parsons. “A Subspace Clustering Framework for Research Group Collaboration”. *International Journal of Information Technology and Web Engineering*, 1(1): 35 – 58, January - March, 2006.
110. M. Berens, H. Liu, L. Parsons, L. Yu, and Z. Zhao. “Fostering Biological Relevance in Feature Selection for Microarray Data”, *Trends and Controversies, IEEE Intelligent Systems*, 20(6): 71-73, November/December 2005.
111. H. Liu and L. Yu. “Toward Integrating Feature Selection Algorithms for Classification and Clustering”, *IEEE Trans. on Knowledge and Data Engineering*, 17(4): 491 – 502, 2005.
112. L. Yu and H. Liu. “Efficient Feature Selection via Analysis of Relevance and Redundancy”, *Journal of Machine Learning Research, JMLR 5 (Oct)*: 1205–1224, 2004.
113. H. Liu, H. Motoda, and L. Yu. “A Selective Sampling Approach to Active Feature Selection”, *Artificial Intelligence, Elsevier*, 159(1-2):49-74, 2004.
114. P. Foschi and H. Liu. “Active Learning for Detecting a Spectrally Variable Subject in Color Infrared Imagery”, *Pattern Recognition Letters, Elsevier*, 25(13): 1509-1517, 2004.
115. L. Parson, E. Haque, and H. Liu. “Subspace Clustering for High Dimensional Data - A Review”, *SIGKDD Explorations*, 6(1): 90 – 105, June 2004.
116. M. Dash and H. Liu. “Consistency-Based Search in Feature Selection”, *Artificial Intelligence*. 151(1-2):155-176, December 2003.
117. D. Makawita, K-L. Tan, and H. Liu. “Sampling from Databases Using B+Trees”, *Intelligent Data Analysis*, 6(4): 359-377, 2002.
118. M. Dash, H. Liu, P. Scheuermann, and K-L. Tan. “Fast Hierarchical Clustering and Its Validation”, *Data and Knowledge Engineering, Elsevier Science*. 44(1):111-140. Dec, 2002

119. Z. Chen, F. Lin, H. Liu, W.Y. Ma, Liu Wenyin. "User Intention Modelling in Web Applications Using Data Mining", *World Wide Web - Internet and Web Information Systems Journal*, Kluwer Academic Publishers. 5(3):181-192. 2002
120. H. Liu, F. Hussain, C.L. Tan, and M. Dash. "Discretization: An Enabling Technique", *Journal of Data Mining and Knowledge Discovery* 6(4): 393-423; Oct 2002.
121. H. Liu and H. Motoda, "On Issues of Instance Selection", *Journal of Data Mining and Knowledge Discovery*. 6(2):115-130; Apr 2002.
122. Z. Zhou, H. Liu, S.Z. Li, and C.S. Chua. "Rule Mining with Prior Knowledge - A Belief Networks Approach", *Intelligent Data Analysis*, 5(2):95-110, 2001.
123. K.S. Candan, H. Liu, and R. Suvarna. "Resource Description Framework: Metadata and Its Applications", *SIGKDD Explorations*, July 2001. 3(1):6-19.
124. H. Liu, H. Lu, and J. Yao, "Towards Multidatabase Mining: Identifying Relevant Databases", *IEEE Transactions on Knowledge and Data Engineering*, 13(4):541-553. July/August 2001.
125. K.S. Ng and H. Liu. "Customer Retention via Data Mining", *AI Review*, Kluwer Academic Publishers. 14(6):569-590, 2001.
126. J. Yao, M. Dash, S.T. Tan and H. Liu. "Entropy-based Fuzzy Clustering and Fuzzy Modeling", *Fuzzy Sets and Systems - International Journal of Soft Computing and Intelligence*, Official Publication of the International Fuzzy System Association, 113:381-388, Elsevier, 2000.
127. R. Setiono and H. Liu. "A Connectionist Approach to Generating Oblique Decision Trees", *IEEE Transactions on Systems, Man, and Cybernetics (Part B: Cybernetics)*, Volume 29, Number 3, pp 440 – 444, June 1999.
128. H. Liu and R. Setiono. "Some Issues on Scalable Feature Selection", *Expert Systems with Application*, pp 333 – 339. Elsevier, Volume 15, 1998.
129. R. Setiono and H. Liu. "Incremental Feature Selection", *Applied Intelligence*, Volume 9, Number 3, November/December 1998. Kluwer Academic Publishers. Pages 217-230.
130. H. Liu and H. Motoda. "Feature Transformation and Subset Selection", *IEEE Intelligent Systems*, March/April 1998, Volume 13, Number 2, Pages 26-28.
131. R. Setiono and H. Liu. "Analysis of Hidden Representations by Greedy Clustering", *Connection Science*, Vol. 10, No. 1, 1998. Carfax. pages 21-42.
132. R. Setiono and H. Liu. "NeuroLinear: From Neural Networks to Oblique Decision Rules", *Neurocomputing*, Elsevier, Vol. 17, No. 1, September 1997, pages 1-25.
133. M. Dash and H. Liu. "Feature Selection for Classification", *Intelligent Data Analysis - An International Journal*, Vol. 1, No. 3, 1997. Elsevier.
134. R. Setiono and H. Liu. "Neural Network Feature Selector", *IEEE Trans. on Neural Networks*, Vol. 8, No. 3, May 1997, pp. 654-662.
135. H. Liu and R. Setiono. "Feature Selection via Discretization of Numeric Attributes", *IEEE Trans. on Knowledge and Data Engineering*, VOL.9, NO. 4, July/August 1997. pp. 642-645.

136. H. Lu, R. Setiono, and H. Liu. "Effective Data Mining Using Neural Networks", IEEE Trans. on Knowledge and Data Engineering, Vol. 8, No. 6, Dec. 1996, pp. 957-961.
137. H. Liu. "Efficient Rule Induction from Noisy Data", Expert Systems with Applications: An International Journal, Vol. 10, No. 2, 1996. Pergamon. pp. 275-280.
138. R. Setiono and H. Liu. "Symbolic Representation of Neural Networks", IEEE Computer, Mar. 1996, pp 71-77.
139. H. Liu and Setiono. "Dimensionality Reduction via Discretization", Knowledge-Based Systems, Vol. 9, No. 1, Feb. 1996. Elsevier. pp. 67-72.
140. R. Setiono and H. Liu. "Improving Backpropagation Learning with Feature Selection", Applied Intelligence, Kluwer Academic Publishers, 1996. pp 129-139.
141. H. Liu and W.X. Wen. "Supervised Learning for Self-Generating Neural Networks", Australian Journal of Intelligent Information Processing Systems. Vol. 2, No. 2, Winter 1995. pp 12-19.
142. H. Liu, C. Rowles and W. Wen. "Critics for Knowledge-Based Design Systems", IEEE Transactions on Knowledge and Data Engineering, Vol. 7, NO. 5, Oct. 1995. pp 740-750.
143. H. Liu and W.X. Wen. "Joint Concept Formation", International Journal of Knowledge Acquisition, Vol. 6, 1994. pp 75-87.
144. G.A. Bekey, H. Liu, R. Tomovic and W.J. Karplus. "Knowledge-Based Control of Grasping in Robot Hands Using Heuristics from Human Motor Skills", IEEE Transactions on Robotics and Automation, Vol.9, No.6, Dec. 1993. pp 709-722.
145. A. Jennings, H. Higuchi and H. Liu. "A Personal News Service based on a User Model Neural Network", Australian Telecommunications Research, Vol. 27, No.1, 1993. pp 1-12.
146. A. Jennings, C. Rowles, C. Leckie and H. Liu. "AI Applications in Telecommunications", Telecommunications Journal of Australia, Vol. 41, No. 1, 1991, Australia. pp 47-55.
147. H. Liu, T. Iberall and G.A. Bekey. "Neural Network Architecture for Robot Hand Control", the IEEE Control Systems, April 1989. pp 38-43.
148. K. Rao, H. Liu, G. Medioni and G.A. Bekey. "Shape Description and Grasping for Robot Hand and Eye Coordination", the IEEE Control Systems, Feb. 1989. pp 22-29.

BOOK CHAPTERS and ENCYCLOPEDIA ENTRIES

1. Walaa Alnasser, Ghazaleh Beigi, and Huan Liu. "An Overview on Protecting User Private-Attribute Information on Social Networks", Handbook of Research on Cyber Crime and Information Privacy, 102-117, 2021
2. Kai Shu, Suhang Wang, Dongwon Lee, and Huan Liu, "Mining Disinformation and Fake News: Concepts, Methods, and Recent Advancements", Chapter, in Disinformation, Misinformation, and Fake News in Social Media - Emerging Research Challenges and Opportunities, Lecture Notes in Social Networks, Springer. Editors: Kai Shu, Suhang Wang, Dongwon Lee, and Huan Liu. 2020

3. Nur Shazwani Kamarudin, Ghazaleh Beigi, Lydia Manikonda, and Huan Liu. “Social Media for Mental Health: Data, Methods, and Findings”, in *Open Source Intelligence and Security Informatics*, editors: Mohammad A. Tayebi, Uwe Glaesser, and David Skillicorn. Forthcoming
4. Kai Shu, H. Russell Bernard, and Huan Liu. “Studying Fake News via Network Analysis: Detection and Mitigation”, *Emerging Resesarch Challenges and Opportunities in Computational Social Network Anaysis and Mining*, Editors: Nitin Agarwal, Nima Dokoohaki, and Serpil Tokdemir. *Lecture Notes in Social Networks (LNSN)*, Springer. 2019.
5. Suhang Wang and Huan Liu. “Deep Learning for Feature Representation”, Chapter 11, *Feature Engineering for Machine Learning and Data Analytics*, Editors: Guozhu Dong and Huan Liu. Chapman and Hall/CRC Press, 2018.
6. Vineeth Rakesh, Lei Tang, and Huan Liu. “Feature Learning from Social Graphs”, *Encyclopedia of Big Data Technologies*, edited by Shrif Sakr and Albert Y. Zomaya. Springer Switzerland. forthcoming
7. Nitin Agarwal and Huan Liu, “Trust in Blogosphere”, In *Encyclopedia of Database Systems*, August 2, 2017. Editors: Ling Liu and M. Tamerzsu. doi: 10.1007/978-1-4899-7993-3_438-2.
8. Nitin Agarwal and Huan Liu, “Time- and Event-Driven Modeling of Blogger Influence”, In *Encyclopedia of Social Network Analysis and Mining*, June 16, 2017. doi:10.1007/978-1-4614-7163-9_378-1
9. Liang Wu and Huan Liu, “Detecting Crowdturfing in Social Media”, in *Encyclopedia of Social Network Analysis and Mining*. Forthcoming.
10. Liang Wu, Fred Morstatter, Xia Hu, Huan Liu, “Mining Misinformation in Social Media”, in *Big Data in Complex and Social Networks*. Forthcoming.
11. Ghazaleh Beigi, Xia Hu, Ross Maciejewski, and Huan Liu. “An Overview of Sentiment Analysis in Social Media and Its Applications in Disaster Relief”, in *Sentiment Analysis and Ontology Engineering: An Environment of Computational Intelligence*. Editors: Shyi-Ming Chen and Witold Pedrycz. *Studies in Computational Intelligence 639*, Springer Switzerland 2016. DOI 10.1007/978-3-319-30319-2
12. Suhang Wang, Jiliang Tang, and Huan Liu. “Feature Selection”, *Encyclopedia of Machine Learning and Data Mining* DOI:10.1007/978-1-4899-7502-7_101-1, 2016.
13. Huiji Gao and Huan Liu. “Time-Aware Personalized Location Recommendation”, *Encyclopedia of GIS*, 2nd Edition, Springer. Editors: Shashi Shekhar and Hui Xiong. Forthcoming.
14. Isaac Jones, Lei Tang, and Huan Liu. “Community Discovery in Multi-Mode Networks”, in *User Community Discovery. Human-Computer Interaction Series*, Springer. Editors: Georgios Paliouras, Symeon Papadopoulos, Dimitrios Vogiatzis, and Yiannis Kompatsiaris. December, 2015. DOI 10.1007/978-3-319-23835-7
15. Shamanth Kumar, Fred Morstatter and Huan Liu. “Analyzing Twitter data”, in *Twitter: A Digital Socioscope*, Cambridge University Press. Editors: Yelena Mejova, Ingmar Weber, and Michael W. Macy. May, 2015.
16. Xia Hu and Huan Liu. “Mining and Profiling in Social media”, *International Encyclopedia of Digital Communication*, Blackwell-Wiley in association with the International Communication Association. Editors: Robin Mansell and Peng Hwa Ang. Forthcoming.

17. Suhang Wang, Jiliang Tang, and Huan Liu. "Feature Selection", Encyclopedia of Machine Learning and Data Mining, Springer. Forthcoming.
18. Mohammad Ali Abbasi, Jiliang Tang, and Huan Liu. "Trust-Aware Recommender Systems" in Machine learning based Computational Trust, Editors: Xin Liu, Anwitaman Datta, and Ee-Peng Lim, Chapman & Hall/CRC Press, forthcoming.
19. Nitin Agarwal, Debanjan Mahata, and Huan Liu. "Time and Event Driven Modeling of Blogger Influence", Encyclopedia of Social Network Analysis and Mining (ESNAM), Springer, forthcoming.
20. Zhuo Feng, Pritam Gundecha, and Huan Liu. "Social Provenance", Encyclopedia of Social Network Analysis and Mining (ESNAM), Springer, forthcoming.
21. Huiji Gao and Huan Liu. "Data Analysis on Location-Based Social Networks" in Mobile Social Networking: An Innovative Approach, Editors: Alvin Chin and Daqing Zhang, Springer, 2014.
22. Salem Alelyani, Jiliang Tang, and Huan Liu. "Feature Selection for Clustering", in Data Clustering: Algorithms and Applications, Editors: Charu Aggarwal and Chandan Reddy. CRC Press. August, 2013.
23. Pritam Gundecha and Huan Liu. "Mining Social Media: A Brief Introduction", Tutorials in Operations Research - New Directions in Informatics, Optimization, Logistics, and Production, pp 1 - 17. Edior: Pitu B. Mirchandani, INFORMS, 2012.
24. Xia Ben Hu and Huan Liu. "Text Analytics in Social Media", in Mining Text Data", Editor: Charu C. Aggawal and ChengXiang Zhai, Springer, Boston/Dordrecht/London, 2012.
25. Geoffrey Barbier and Huan Liu. "Data Mining in Social Media" in Social Network Data Analytics", Editor: Charu C. Aggawal, Springer, Boston/Dordrecht/London, March, 2011.
26. L. Tang and H. Liu. "Understanding Group Structures and Properties in Social Media", in Link Mining: Models, Algorithms and Applications, Editors: Christos Faloutsos, Jiawei Han, and Philip Yu. Springer. pp 163 - 185. 2010.
27. L. Tang and H. Liu. "Graph Mining and Applications to Social Network Analysis", in Managing and Mining Graph Data, Editors: Charu Aggarwal and Haixun Wang. Springer. 2010.
28. H. Liu. "Feature Selection: An Overview", Encyclopedia of Machine Learning. Claude Sammut and Geoffrey I. Webb (Ed.), Springer. September, 2010
29. H. Liu and Z. Zhao. "Manipulating Data and Dimension Reduction Methods: Feature Selection", Encyclopedia of Complexity and System Science, Springer, 2009.
30. N. Agarwal, H. Liu, J. Zhang. "A Study of Friendship Networks and Blogosphere", Handbook of Research on Text and Web Mining Technologies, Editors: M. Song and Y. Wu . Information Science Reference (an imprint of IGI Global). pp. 646-669, 2009.
31. N. Agarwal and H. Liu. "Trust on Blogosphere", in Encyclopedia of Database Systems (EDBS). Part 20, pp. 3187-3191. Editors: Ling Liu and M. Tamer zsu. SpringerLink. 2009.
32. P. Refaeilzadeh, L. Tang, and H. Liu. "Cross-Validation", in Encyclopedia of Database Systems (EDBS), Editors: Ling Liu and M. Tamer zsu. Springer, pp6. 2009.

33. N. Agarwal, H. Liu, J.J. Salerno, P.S. Yu. “Searching for ‘Familiar Strangers’ on Blogosphere”, Next Generation of Data Mining Editors: Hillol Kargupta, Jiawei Han, Philip Yu, Rajeev Motwani, Vipin Kumar, CRC Press, Chapman and Hall/CRC Press, pp 295 - 315, 2009.
34. M. Dash and H. Liu. “Dimensionality Reduction”, in Encyclopedia of Computer Science and Engineering, John Wiley & Sons, Inc. Volume 2, pages 958-966. The ISBN for the 5-Volume set is 978-0-471-38393-2. Benjamin W. Wah, Editor, published in Hoboken, NJ, January 2009.
35. Z. Zhao and H. Liu. “On Interacting Features in Subset Selection”, in Encyclopedia of Data Warehousing and Mining, 2nd Edition, Idea Group, Inc. pp 1079 – 1084, September, 2008.
36. L. Tang, H. Liu, and J. Zhang. “Taxonomy Adaptation for Hierarchical Content Categorization”, in Encyclopedia of Data Warehousing and Mining, 2nd Edition, Idea Group, Inc. pp 178 – 182, September, 2008.
37. S. Moturu, L. Parsons, Z. Zhao, and H. Liu. “Integrative Data Analysis for Biological Discovery”, in Encyclopedia of Data Warehousing and Mining, 2nd Edition, Idea Group, Inc. pp 1058 – 1065, September, 2008.
38. K.S. Candan, J.W. Kim, H. Liu, R. Suvarna, and N. Agarwal. “Spatial Transformations for Identifying Mappings in Hierarchical Media Data”, in Multimedia Data Mining and Knowledge Discovery, Editors: Valery A. Petrushin and Latifur Khan, Springer, 2006.
39. L. Yu and H. Liu. “Data Mining Methods for Microarray Data Analysis”, in Encyclopedia of Data Warehousing and Mining, Editor: John Wang, Idea Group Inc. 2005.
40. H. Liu and L. Yu, “Instance Selection”, in Encyclopedia of Data Warehousing and Mining, Editor: John Wang, Idea Group Inc. 2005.
41. H. Liu, A. Mandvikar, and P.G. Foschi. “An Active Learning Approach to Egeria densa Detection in Digital Imagery”, New Generation of Data Mining Applications, IEEE/Wiley, 2005.
42. H. Liu, H. Motoda, and L. Yu. “Feature Extraction, Selection, and Construction”, in The Handbook of Data Mining, Lawrence Erlbaum Associates, Inc. Publishers. Editor: N. Ye. PP 409 - 423. 2003.
43. “Feature Selection”, (with Hiroshi Motoda), contribution to Handbook of Data Mining and Knowledge Discovery, Oxford University Press, New York. Editors: W. Klosgen and J. Zytkow. 2002.
44. “Feature Aggregation”, (with Hiroshi Motoda), contribution to Handbook of Data Mining and Knowledge Discovery, Oxford University Press, New York. Editors: W. Klosgen and J. Zytkow. 2002.
45. “Data Reduction via Instance Selection”, (with Hiroshi Motoda), in Instance Selection and Construction for Data Mining, Editors: H. Liu and H. Motoda, Kluwer Academic Publishers, Boston, USA, 2001.
46. “Sampling: Knowing Whole from Its Part”, (with Baohua Gu and Feifang Hu), in Instance Selection and Construction for Data Mining, Editors: H. Liu and H. Motoda, Kluwer Academic Publishers, Boston, USA, 2001.

47. “Unsupervised Feature Ranking and Selection”, (with Manoranjan Dash), in Selected Aspects of Knowledge Discovery for Business Information Systems. Editors: W. Abramowicz and J. Zurada, Kluwer Academic Publishers, Boston, USA, 2000.
48. “Less Is More”, (with H. Motoda), in Feature Extraction, Construction and Selection: A Data Mining Perspective, Kluwer Academic Publishers, Boston, USA. Pages: 3 - 12. Editors: H. Liu and H. Motoda. July 1998.
49. “Feature Extraction via Neural Networks”, (with R. Setiono), in Feature Extraction, Construction and Selection: A Data Mining Perspective, Kluwer Academic Publishers, Boston, USA. Pages: 191 - 204. Editors: H. Liu and H. Motoda. July 1998.
50. “A Family of Efficient Rule Generators”, Encyclopedia of Computer Science and Technology, Volume 39, Marcel Dekker, Inc., New York. Editors: Allen Kent and James G. Williams. 1998.

CONFERENCE PUBLICATIONS

1. Raha Moraffah and Huan Liu. “Query-Efficient Target-Agnostic Black-Box Attack”, IEEE 22nd International Conference on Data Mining (ICDM22), Nov. 28 - Dec. 1, 2022, Orlando, FL.
2. Zhe Xu, Kaize Ding, Yu-Xiong Wang, Huan Liu, and Hanghang Tong. “Generalized Few-Shot Node Classification”, IEEE 22nd International Conference on Data Mining (ICDM22), Nov. 28 - Dec. 1, 2022, Orlando, FL.
3. Lu Cheng, Nayoung Kim, and Huan Liu. “Debiasing Word Embeddings with Nonlinear Geometry”, In Proceedings of the 29th International Conference on Computational Linguistics (COLING2022), October 12-17, 2022. Gyeongju, Republic of Korea.
4. Zhen Tan, Kaize Ding, Ruocheng Guo, and Huan Liu. “Supervised Graph Contrastive Learning for Few-shot Node Classification”, In Proceedings of the European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Database (ECML-PKDD2022), Sept. 19-23, 2022. Grenoble, France.
5. Mansooreh Karami, Ahmadreza David Mosallanezhad, Michelle Mancenido, and Huan Liu. “Let’s Eat Grandma”: Does Punctuation Matter in Sentence Representation?”, In Proceedings of the European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Database (ECML-PKDD2022), Sept. 19-23, 2022. Grenoble, France.
6. Mansooreh Karami, Ahmadreza Mosallanezhad, Paras Sheth and Huan Liu. “Estimating Topic Exposure for Under-Represented Users on Social Media”, In Proceedings of 15th International Conference on Social Computing, Behavioral-Cultural Modeling Prediction and Behavior Representation in Modeling and Simulation (SBP-BRiMS2022). September 20-23, 2022. Pittsburg, PA.
7. Raha Moraffah, Suraj Jyothi Unni, Adrienne Raglin and Huan Liu “Causal Data Fusion for Multi-modal Disaster Classification in Social Media”, In Proceedings of 15th International Conference on Social Computing, Behavioral-Cultural Modeling Prediction and Behavior Representation in Modeling and Simulation (SBP-BRiMS2022). September 20-23, 2022. Pittsburg, PA.

8. Bohan Jiang, Paras Sheth, Baoxin Li and Huan Liu. “CoVaxNet: An Online-Offline Data Repository for COVID-19 Vaccine Hesitancy Research”, In Proceedings of 15th International Conference on Social Computing, Behavioral-Cultural Modeling Prediction and Behavior Representation in Modeling and Simulation (SBP-BRiMS2022). September 20-23, 2022. Pittsburg, PA.
9. Nayoung Kim, Ahmadreza Mosallanezhad, Lu Cheng, Baoxin Li and Huan Liu. “Bridge the Gap: the Commonality and Differences Between Online and Offline COVID-19 Data”, In Proceedings of 15th International Conference on Social Computing, Behavioral-Cultural Modeling Prediction and Behavior Representation in Modeling and Simulation (SBP-BRiMS2022). September 20-23, 2022. Pittsburg, PA.
10. Anique Tahir, Lu Cheng, Paras Sheth and Huan Liu. “Improving Vaccine Stance Detection by Combining Online and Offline Data”, In Proceedings of 15th International Conference on Social Computing, Behavioral-Cultural Modeling Prediction and Behavior Representation in Modeling and Simulation (SBP-BRiMS2022). September 20-23, 2022. Pittsburg, PA.
11. Ujun Jeong, Zeyad Alghamd, Kaize Ding, Lu Cheng, Baoxin Li and Huan Liu. “Classifying COVID-19 related Meta Ads using Discourse Representation through Hypergraph”, In Proceedings of 15th International Conference on Social Computing, Behavioral-Cultural Modeling Prediction and Behavior Representation in Modeling and Simulation (SBP-BRiMS2022). September 20-23, 2022. Pittsburg, PA.
12. Amrita Bhattacharjee*, Mansooreh Karami*, and Huan Liu. “Text Transformations in Contrastive Self-Supervised Learning: A Review”, In Proceedings of the 2021 International Joint Conferences on Artificial Intelligence (IJCAI-ECAI2022) Survey Track, July 23 - 29, 2022. Vienna, Austria.
13. Chuxu Zhang, Kaize Ding, Jundong Li, Xiangliang Zhang, Yanfang Ye, Nitesh V. Chawla, Huan Liu. “Few-Shot Learning on Graphs: A Survey”, In Proceedings of the 2021 International Joint Conferences on Artificial Intelligence (IJCAI-ECAI2022) Survey Track, July 23 - 29, 2022. Vienna, Austria.
14. Lu Cheng, Ahmadreza (David) Mosallanezhad, Yasin Silva, Deborah Hall and Huan Liu. “Bias Mitigation for Toxicity Detection via Sequential Decisions”, The 45th International ACM SIGIR Conference on Research and Development in Information Retrieval (SIGIR 2022), July 11-15, 2022. Madrid, Spain.
15. Xinyi Zhou, Kai Shu, Vir V. Phoha, Huan Liu and Reza Zafarani. ““This is Fake! Shared it by Mistake”: Assessing the Intent of Fake News Spreaders”, The ACM Web Conference 2022, the Web4Good Special Track, April 25-29, 2022, Lyon, France and online
16. Ahmadreza (David) Mosallanezhad, Mansooreh Karami, Kai Shu, Michelle Mancenido and Huan Liu. “Domain Adaptive Fake News Detection via Reinforcement Learning”, The ACM Web Conference 2022, the Web4Good Special Track, April 25-29, 2022, Lyon, France and online
17. Lu Cheng, Ruocheng Guo, Kasim Selcuk Candan, and Huan Liu. “Effects of Multi-Aspect Online Reviews with Unobserved Confounders: Estimation and Implication”, 16th AAAI International Conference on Web and Social Media (ICWSDM 2022), June 6-9, 2022. Atlanta, Georgia and Online.

18. Zhen Tan, Kaize Ding, Ruocheng Guo and Huan Liu. “Graph Few-shot Class-incremental Learning”, 15th ACM International Conference on Web Search and Data Mining (WSDM 2022), February 27 - March 3, 2022. Tempe, Arizona
19. Lu Cheng, Ruocheng Guo, and Huan Liu. “Causal Mediation Analysis with Hidden Confounders”, 15th ACM International Conference on Web Search and Data Mining (WSDM 2022), February 27 - March 3, 2022. Tempe, Arizona
20. Lu Cheng, Ruocheng Guo, and Huan Liu. “Estimating Causal Effects of Multi-Aspect Online Reviews with Multi-Modal Proxies”, 15th ACM International Conference on Web Search and Data Mining (WSDM 2022), Feb 27 - March 3, 2022. Tempe, Arizona
21. Kaize Ding, Jianling Wang, James Caverlee, and Huan Liu. “Meta Label Propagation for Few-shot Semi-supervised Learning on Graphs”, 36th AAAI Conference on Artificial Intelligence (AAAI-22), February 22 - March 1, 2022. Vancouver, BC, Canada
22. David (hmadreza) Mosallanezhad, Kai Shu, and Huan Liu. “Generating Topic-Preserving Synthetic News”, IEEE International Conference on Big Data, online, Dec 15-18, 2021.
23. Kaize Ding, Dingcheng Li, Alexander Hanbo Li, Xing Fan, Chenlei Guo, Yang Liu, and Huan Liu. “Learning to Selectively Learn for Weakly-supervised Paraphrase Generation”, The Conference on Empirical Methods in Natural Language Processing (EMNLP), November 7-11, 2021. Punta Cana, Dominican Republic
24. Kaize Ding, Xuan Shan, and Huan Liu. “Towards Anomaly-resistant Graph Neural Networks via Reinforcement Learning”, Short, In Proceedings of the 30th ACM International Conference on Information and Knowledge Management (CIKM2021), November 1-5, 2021. Online, Queensland, Australia
25. Paras Sheth, Ujun Jeong, Ruocheng Guo, Huan Liu, and K. Selcuk Candan. “CauseBox: A Causal Inference Toolbox for Benchmarking Treatment Effect Estimators with Machine Learning Methods” Demo, In Proceedings of the 30th ACM International Conference on Information and Knowledge Management (CIKM2021), November 1-5, 2021. Online, Queensland, Australia
26. Mansooreh Karami, Tahora H. Nazer, and Huan Liu (2021). “Profiling Fake News Spreaders on Social Media through Psychological and Motivational Factors”, In Proceedings of the 32nd ACM Conference on Hypertext and Social Media (HT’21), August 30 - September 2, 2021. Online, Dublin, Ireland.
27. Lu Cheng, Ahmadreza Mosallanezhad*, Paras Sheth*, and Huan Liu. “Causal Learning for Socially Responsible AI”, In Proceedings of the 2021 International Joint Conferences on Artificial Intelligence (IJCAI2021), Survey Track, August 21-26, Montreal, Canada.
28. Xueying Zhan, Huan Liu, Qing Li, Antoni B. Chan. “A Comparative Survey: Benchmarking for Pool-based Active Learning”, In Proceedings of the 2021 International Joint Conferences on Artificial Intelligence (IJCAI2021), Survey Track, August 21-26, Montreal, Canada.
29. Lu Cheng, Ruocheng Guo, Kai Shu, and Huan Liu. “Causal Understanding of Fake News Dissemination on Social Media”, In Proceedings of the 27th ACM SIGKDD Conference on Knowledge Discovery and Data Mining (KDD2021). Online Virtual Event. August 14-18, 2021.

30. Lu Cheng*, Ahmadsreza Mosallanezhad*, Yasin Silva, Deborah Hall, and Huan Liu. “Mitigating Bias in Session-based Cyberbullying Detection: A Non-Compromising Approach”, In Proceedings of the 59th Annual Meeting of the Association for Computational Linguistics (ACL-IJCNLP2021), Bangkok, Thailand. August 1-6, 2021.
31. Walaa Alnasser, Ghazaleh Beigi and Huan Liu. “Privacy Preserving Text Representation Learning Using BERT”, International Conference on Social Computing, Behavioral-Cultural Modeling & Prediction and Behavior Representation in Modeling and Simulation (SBP-BRiMS 2021), July 6 - 9, 2021. Online
32. Ujun Jeong, Kaize Ding, and Huan Liu. “FBAdTracker: An Interactive Data Collection and Analysis Tool for Facebook Advertisements”, International Conference on Social Computing, Behavioral-Cultural Modeling & Prediction and Behavior Representation in Modeling and Simulation (SBP-BRiMS 2021), Demo Track, July 6 - 9, 2021. Online
33. Tharindu Kumarage, Amrita Bhattacharjee, Kai Shu, and Huan Liu. “Data Generation for Neural Disinformation Detection ”, International Conference on Social Computing, Behavioral-Cultural Modeling & Prediction and Behavior Representation in Modeling and Simulation (SBP-BRiMS 2021), Working Paper Track, July 6 - 9, 2021. Online
34. Bohan Jiang, Mansooreh Karami, Lu Cheng, Tyler Black and Huan Liu. “Mechanisms and Attributes of Echo Chambers in Social Media”, International Conference on Social Computing, Behavioral-Cultural Modeling & Prediction and Behavior Representation in Modeling and Simulation (SBP-BRiMS 2021), Working Paper Track, July 6 - 9, 2021. Online
35. Kaize Ding, Qinghai Zhou, Hanghang Tong and Huan Liu. “Few-shot Network Anomaly Detection with Cross-network Meta-learning”. In Proceedings of the International Web Conference, Ljubljana, Slovenia. April 19-23, 2021.
36. Suyu Ge, Lu Cheng, and Huan Liu. “Improving Cyberbullying Detection with User Interaction”. In Proceedings of the 2021 International World Wide Web Conference, Ljubljana, Slovenia. April 19-23, 2021.
37. Kai Shu, Yichuan Li, Kaize Ding and Huan Liu. “Fact-enhanced Synthetic News Generation”. In Proceedings of the AAAI Conference on Artificial Intelligence (AAAI), 2021.
38. Lu Cheng, Ruocheng Guo, and Huan Liu. “Long-Term Effect Estimation with Surrogate Representation”. The 14th ACM International Conference on Web Search and Data Mining (WSDM), March 8-12, 2021. Jerusalem, Israel.
39. Lo Pang-Yun Ting, Shan-Yun Teng, Suhang Wang, Kun-Ta Chuang, and Huan Liu. “Learning Latent Perception Graphs for Personalized Unknowns Recommendation”. The Second IEEE International Conference on Cognitive Machine Intelligence (CogMI), Dec 1-3, 2020. Online
40. Adrienne Raglin, Raha Moraffah and Huan Liu. “Causality and Uncertainty of Information for Content Understanding”. The Second IEEE International Conference on Cognitive Machine Intelligence (CogMI), Dec 1-3, 2020. Online
41. Kaize Ding, Jianling Wang, Jundong Li, Dingcheng Li and Huan Liu. “Be More with Less: Hypergraph Attention Networks for Inductive Text Classification”. The 2020 Conference on Empirical Methods in Natural Language Processing (EMNLP), November 16 - 20, 2020. Online.

42. Lu Cheng, Kai Shu, Siqi Wu, Yasin N. Silva, Deborah Hall, and Huan Liu. “Unsupervised Cyberbullying Detection via Time-Informed Deep Clustering”. In Proceedings of the 29th ACM International Conference on Information and Knowledge Management (CIKM’20), Oct. 19-23, 2020, Online.
43. Kaize Ding, Jianling Wang, Jundong Li, Kai Shu, Chenghao Liu, and Huan Liu. “Graph Prototypical Networks for Few-shot Learning on Attributed Networks”. In Proceedings of the 29th ACM International Conference on Information and Knowledge Management (CIKM’20), Oct. 19-23, 2020, Online.
44. Kai Shu, Guoqing Zheng, Yichuan Li, Subhabrata Mukherjee, Ahmed Hassan Awadallah, Scott Ruston, and Huan Liu. “Early Detection of Fake News with Multi-source Weak Social Supervision”, Proceedings of The European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases (ECML-PKDD 2020). September 14 - 18, 2020, Ghent, Belgium.
45. Qianru Wang, Bin Guo, Yi Ouyang, Kai Shu, Zhiwen Yu and Huan Liu. “Spatial Community-Informed Evolving Graphs for Demand Prediction”, Proceedings of The European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases (ECML-PKDD 2020). September 14 - 18, 2020, Ghent, Belgium.
46. Ruocheng Guo, Xiaoting Zhao, Adam Henderson, Liangjie Hong and Huan Liu. “Debiasing Grid-based Product Search for E-commerce”, In Proceedings of 25th ACM SIGKDD Conference on Knowledge Discovery and Data Mining (SIGKDD 2020 ADS Track). August 23-27, 2020. San Diego, CA.
47. Jianling Wang, Kaize Ding, Liangjie Hong, Huan Liu, and James Caverlee. “Next-Item Recommendation with Sequential Hypergraphs”, Proceedings of 43rd International ACM SIGIR Conference on Research and Development in Information Retrieval (SIGIR2020). July 25-30, 2020, Xi’an, China.
48. Kaize Ding, Jundong Li, Nitin Agarwal, and Huan Liu. “Inductive Anomaly Detection on Attributed Networks”, IJCAI-PRICAI2020. new date January 2021, Japan.
49. Ruocheng Guo, Jundong Li, Yichuan Li, K. Seluk Candan, Adrienne Raglin, and Huan Liu. “IGNITE: A Minimax Game Toward Learning Individual Treatment Effects from Networked Observational Data”, FinTech Track, IJCAI-PRICAI2020.
50. Kai Shu, Liangda Li, Suhang Wang, Yunhong Zhou, and Huan Liu. “Joint Local and Global Sequence Modeling in Temporal Correlation Networks for Trending Topic Detection”, Proceedings of 12th ACM Web Science Conference (WebSci2020).
51. Kai Shu, Deepak Mahudeswaran, Suhang Wang, and Huan Liu. “Hierarchical Propagation Networks for Fake News Detection: Investigation and Exploitation”, AAAI International Conference on Web and Social Media (ICWSM), June 2020. Atlanta, Georgia.
52. Lu Cheng, Ruocheng Guo, K. Selcuk Candan, and Huan Liu. “Representation Learning for Imbalanced Cross-Domain Classification”, SAM International Conference on Data Mining (SDM20), May 7-9, 2020. Cincinnati, Ohio.
53. Ruocheng Guo, Jundong Li, and Huan Liu. “Counterfactual Evaluation of Treatment Assignment Functions with Networked Observational Data”, SAM International Conference on Data Mining (SDM20), May 7-9, 2020. Cincinnati, Ohio.

54. Ghazaleh Beigi, Ahmadreza Mosallanezhad, Ruocheng Guo, Hamidreza Alvani, Alexander Nou and Huan Liu. “Privacy-Aware Recommendation with Private-Attribute Protection using Adversarial Learning”, The 13th ACM International Conference on Web Search and Data Mining (WSDM), February 3-7, 2020. Houston, Texas.
55. Ruocheng Guo, Jundong Li and Huan Liu. “Learning Individual Causal Effects with Networked Observational Data”, The 13th ACM International Conference on Web Search and Data Mining (WSDM), February 3-7, 2020. Houston, Texas
56. Lu Cheng, Ruocheng Guo, Raha Moraffah, K.S. Candan, Adrienne Raglin, and Huan Liu. “A Practical Data Repository for Causal Learning with Big Data”, BenchCouncil International Symposium on Benchmarking, Measuring and Optimizing (BENCH19), November 14-16, 2019. Denver, Colorado.
57. Yichuan Li, Ruocheng Guo, Weiyang Wang and Huan Liu. “Causal Learning in Question Quality Improvement”, BenchCouncil International Symposium on Benchmarking, Measuring and Optimizing (BENCH19), November 14-16, 2019. Denver, Colorado.
58. Ahmadreza Mosallanezhad, Ghazaleh Beigi, and Huan Liu. “Deep Reinforcement Learning-based Text Anonymization against Private-Attribute Inference”, Conference on Empirical Methods in Natural Language Processing (EMNLP2019), November 3-7, 2019. Hong Kong, China.
59. Suhang Wang, Charu Aggarwal, and Huan Liu. “Beyond word2vec: Distance-graph Tensor Factorization for Word and Document Embeddings”, The 28th ACM International Conference on Information and Knowledge Management (CIKM2019), November 3-7, 2019. Beijing, China.
60. Limeng Cui, Kai Shu, Suhang Wang, Dongwon Lee and Huan Liu. “dEFEND: A System for Explainable Fake News Detection”, Demo, The 28th ACM International Conference on Information and Knowledge Management (CIKM2019), November 3-7, 2019. Beijing, China.
61. Pradyumna Prakhari Sinha, Rohan Mishra, Ramit Sawhney, Debanjan Mahata, Rajiv Ratn Shah, and Huan Liu. “#suicidal - A Multipronged Approach to Identify and Explore Suicidal Ideation in Twitter”, The 28th ACM International Conference on Information and Knowledge Management (CIKM2019), November 3-7, 2019. Beijing, China.
62. Ghazaleh Beigi, Kai Shu, Ruocheng Guo, Suhang Wang, and Huan Liu. “Privacy Preserving Text Representation Learning”, Poster, In the Proceedings of the 30th ACM Conference on Hypertext and Social Media (HT 2019), Sept 17-20, 2019. Hof, Germany.
63. Kai Shu, Xinyi Zhou, Suhang Wang, Reza Zafarani, and Huan Liu. “The Role of User Profiles for Fake news Detection”, short paper, In Proceedings of the 2019 IEEE/ACM International Conference on Advances in Social Networks Analysis and Mining (ASONAM), August 27 - 30, 2019. Vancouver, Canada.
64. Jundong Li, Liang Wu, Ruocheng Guo, Chenghao Liu, Huan Liu. “Multi-Level network Embedding with Boosted Low-Rank Matrix Approximation”, In Proceedings of the 2019 IEEE/ACM International Conference on Advances in Social Networks Analysis and Mining (ASONAM), August 27 - 30, 2019. Vancouver, Canada.
65. Thai Le, Kai Shu, Maria D. Molina, Dongwon Lee, S. Shyam Sundar, and Huan Liu. “Using Synthetic Clickbaits to Improve Prediction and Distinguish between Bot-Generated and

- Human-Written Headlines”, In Proceedings of the 2019 IEEE/ACM International Conference on Advances in Social Networks Analysis and Mining (ASONAM), August 27 - 30, 2019. Vancouver, Canada.
66. Adrienne Raglin, Anshuman Venkateswaran, and Huan Liu. “Abductive Causal Reasoning for Internet of Things, 5th IEEE International Conference on Internet of People (IoP2019) - Towards Collaborative Human and Machine Intelligence, August 19-23, 2019, Leicester, UK.
 67. Lu Cheng, Jundong Li, Yasin N. Silva, Deborah Hall, and Huan Liu. “PI-Bully: Personalized Cyberbullying Detection with Peer Influence”, In Proceedings of the 2019 International Joint Conferences on Artificial Intelligence (IJCAI2019), August 10 -16, 2019. Macao, China.
 68. Kaize Ding, Jundong Li, Shivam Dhar, Shreyash Devan, and Huan Liu. “InterSpot: InteractiveSpammer Detection in Social Media”, Demo, In Proceedings of the 2019 International Joint Conferences on Artificial Intelligence (IJCAI2019), August 10 -16, 2019. Macao, China.
 69. Jundong Li, Ruocheng Guo, Chenghao Liu, Huan Liu. “Adaptive Unsupervised Feature Selection on Attributed Networks ”, In Proceedings of 25th ACM SIGKDD Conference on Knowledge Discovery and Data Mining (KDD 2019), August 4-8, 2019. Anchorage, Alaska.
 70. Kai Shu, Limeng Cui, Suhang Wang, Dongwon Lee, and Huan Liu. “dEFEND: Explainable Fake News Detection”, In Proceedings of 25th ACM SIGKDD Conference on Knowledge Discovery and Data Mining (KDD 2019), August 4-8, 2019. Anchorage, Alaska.
 71. Tahora H. Nazer, Matthew Davis, Mansooreh Karami, Leman Akoglu, David Koelle, and Huan Liu. “Bot Detection: Will Focusing on Recall Cause Overall Performance Deterioration”, International Conference on Social Computing, Behavior-Culture Modeling, and Prediction (SBP-BRiMS 2019), July 9 - 12, 2019. Washington DC.
 72. Jayashree Subramanian, Varun Sridharan, Kai Shu, and Huan Liu. “Exploiting Emojis for Sarcasm Detection”. International Conference on Social Computing, Behavior-Culture Modeling, and Prediction (SBP-BRiMS 2019), July 9 - 12, 2019. Washington DC.
 73. Kaize Ding, Jundong Li, Rohit Bhanushali, and Huan Liu. “Deep Anomaly Detection on Attributed Networks”. In Proceedings of the 2019 SIAM International Conferene on Data Mining (SDM19), Calgary, Canada, May 2-4, 2019.
 74. Lu Cheng, Ruocheng Guo, Yasin N. Silva, Deborah Hall, and Huan Liu. “Hierarchical Attention Networks for Cyberbullying Detection on the Instagram Social Network”. In Proceedings of the 2019 SIAM International Conferene on Data Mining (SDM19), Calgary, Canada, May 2-4, 2019.
 75. Shuo Yang, Kai Shu, Suhang Wang, Renjie Gu, Fan Wu, and Huan Liu. “Unsupervised Fake News Detection on Social Media: A Generative Approach”. In Proceedings of 33rd AAI Conference on Artificial Intelligence (AAAI 2019). Honolulu, Hawaii. January 27 - Feruary 1, 2019.
 76. Lu Cheng, Jundong Li, Yasin Silva, Debora Hall, and Huan Liu. “XBully: Cyberbullying Detection within a Multi-Modal Context”. In the Proceedings of 12th ACM International Conference on Web Search and Data Mining (WSDM 2019). February 11-15, 2019. Melbourne, Australia.

77. Ghazaleh Beigi, Ruocheng Guo, Alex Nou, Yanchao Zhang, and Huan Liu. “Protecting User Privacy: An Approach for Untraceable Web Browsing History and Unambiguous User Profiles”. In the Proceedings of 12th ACM International Conference on Web Search and Data Mining (WSDM 2019). February 11-15, 2019. Melbourne, Australia.
78. Kaize Ding, Jundong Li, and Huan Liu. “Interactive Anomaly Detection on Attributed Networks”. In the Proceedings of 12th ACM International Conference on Web Search and Data Mining (WSDM 2019). February 11-15, 2019. Melbourne, Australia.
79. Vineeth Rakesh, Suhang Wang, Kai Shu, and Huan Liu. “Linked Variational AutoEncoders for Inferring Substitutable and Supplementary Items”. In the Proceedings of 12th ACM International Conference on Web Search and Data Mining (WSDM 2019). February 11-15, 2019. Melbourne, Australia.
80. Kai Shu, Suhang Wang, and Huan Liu. “Beyond News Content: The Role of Social Context for Fake News Detection”. In the Proceedings of 12th ACM International Conference on Web Search and Data Mining (WSDM 2019). February 11-15, 2019. Melbourne, Australia.
81. Kai Shu, Suhang Wang, Thai Le, Dongwon Lee, and Huan Liu. “Deep Headline Generation for Clickbait Detection”. In the 2018 IEEE International Conference on Data Mining (ICDM2018). November 17 -20, 2018. Singapore.
82. Shan-Yun Teng, Jundong Li, Lo-Pang-Yun Ting, Kun-Ta Chuang, Huan Liu. “Interactive Unknowns Recommendation in E-Learning Systems. In the 2018 IEEE International Conference on Data Mining (ICDM2018). November 17 -20, 2018. Singapore.
83. Junliang Yu, Min Gao, Jundong Li, Hongzhi Yin, and Huan Liu. “Adaptive Implicit Friend Identification over Heterogeneous Networks for Social Recommendation”. In Proceedings of the 26th ACM International Conference on Information and Knowledge Management (CIKM2018). October 22 - 26, 2018. Turin, Italy.
84. Yiqi Chen, Tiejun Qian, Huan Liu, and Ke Sun. “‘Bridge’ Enhanced Signed Directed Network Embedding”. In Proceedings of the 26th ACM International Conference on Information and Knowledge Management (CIKM2018). October 22 - 26, 2018. Turin, Italy.
85. Liangyue Li, Hanghang Tong, and Huan Liu. “Towards Explainable Networked Prediction”. Short Paper. In Proceedings of the 26th ACM International Conference on Information and Knowledge Management (CIKM2018). October 22 - 26, 2018. Turin, Italy.
86. Vineeth Rakesh, Ruocheng Guo, Raha Moraffah, Nitin Agarwal, and Huan Liu. “Linked Causal Variational Autoencoder for Inferring Paired Spillover Effects”. Short Paper. In Proceedings of the 26th ACM International Conference on Information and Knowledge Management (CIKM2018). October 22 - 26, 2018. Turin, Italy.
87. Wen Zhang, Kai Shu, Suhang Wang, Huan Liu, and Yalin Wang. “Multimodal Fusion of Brain Networks with Longitudinal Couplings”, In 21th International Conference on Medical Image Computing and Computer Assisted Intervention (MICCAI 2018). September 16 -20, 2018. Granada, Spain.
88. Kai Shu, Suhang Wang, Jiliang Tang, Yi Chang, Ping Luo, and Huan Liu. “Exploiting User Actions for App Recommendations”, Short Paper. In The 2018 IEEE/ACM International Conference on Advances in Social Networks Analysis and Mining (ASONAM 2018). August 28 - 31, 2018. Barcelona, Spain.

89. Nur Shazwani Kamarudin, Vineeth Rakesh Mohan, Ghazaleh Beigi, Lydia Manikonda and Huan Liu. "A Study of Reddit-Users Response to Rape", Poster Paper. In The 2018 IEEE/ACM International Conference on Advances in Social Networks Analysis and Mining (ASONAM 2018). August 28 - 31, 2018. Barcelona, Spain.
90. Guansong Pang, Longbing Cao, Ling Chen, and Huan Liu. "Learning Representations of Ultrahigh-dimensional Data for Random Distance-based Outlier Detection", In: 24th SIGKDD Conference on Knowledge Discovery and Data Mining (KDD2018), August 19-23, 2018. London, UK.
91. Amy Sliva, Kai Shu, and Huan Liu. "Using Social Media to Understand Cyber Attack Behavior", In 9th International Conference on Applied Human Factors and Ergonomics (AHFE 2018), July 21 - 25, 2018. Orlando, Florida.
92. Ruocheng Guo, Jundong Li, and Huan Liu. "INITIATOR: Noise-contrastive Estimation for Marked Temporal Point Process ", the 27th International Joint Conference on Artificial Intelligence and the 23rd European Conference on Artificial Intelligence (IJCAI-ECAI-18), July 13-19, 2018. Stockholm, Sweden.
93. Ghazaleh Beigi, Kai Shu, Yanchao Zhang, and Huan Liu. "Securing Social Media User Data - An Adversarial Approach", the 29th ACM Conference on HyperText and Social Media (HT-2018), July 9 - 12, 2018. Baltimore, Maryland.
94. Liang Wu, Diane Hu, Liangjie Hong, and Huan Liu. "Turning Clicks into Purchases: Revenue Optimization for Product Search in E-Commerce", The 41st International ACM SIGIR Conference on Research and Development in Information Retrieval (SIGIR2018), July 8 - 12, 2018. Ann Arbor, Michigan.
95. Kathleen Carley, Guido Cervone, Nitin Agarwal, and Huan Liu. "Social Cyber-Security", short paper, International Conference on Social Computing, Behavior-Culture Modeling, and Prediction (SBP-BRiMS 2018), July 10 - 13, 2018. Washington DC.
96. Ghazaleh Beigi and Huan Liu. "Similar but Different: Exploiting Users Congruity for Recommendation Systems", International Conference on Social Computing, Behavior-Culture Modeling, and Prediction (SBP-BRiMS 2018), July 10 - 13, 2018. Washington DC.
97. Lydia Manikonda, Ghazaleh Beigi, Huan Liu and Subbarao Kambhampati. "Twitter for Sparking a Movement, Reddit for Sharing the Moment: #metoo through the Lens of Social Media", short paper, International Conference on Social Computing, Behavior-Culture Modeling, and Prediction (SBP-BRiMS 2018), July 10 - 13, 2018. Washington DC.
98. Kai Shu, Amy Sliva, Justin Sampson, and Huan Liu. "Understanding Cyber Attack Behaviors with Sentiment Information on Social Media", International Conference on Social Computing, Behavior-Culture Modeling, and Prediction (SBP-BRiMS 2018), July 10 - 13, 2018. Washington DC.
99. Liang Wu, Jundong Li, Fred Morstatter, Huan Liu. "Toward Relational Learning with Misinformation". The 18th SIAM International Conference on Data Mining (SDM 2018), May 3-5, 2018. San Diego, CA.
100. Jundong Li, Chen Chen, Hanghang Tong, and Huan Liu. "Multi-Layered Network Embedding". The 18th SIAM International Conference on Data Mining (SDM 2018), May 3-5, 2018. San Diego, CA.

101. Jundong Li, Jiliang Tang, Yilin Wang, Yali Wan, Yi Chang and Huan Liu. “Understanding and Predicting Delay in Reciprocal Relations”. In Proceedings of the 27th International Conference on World Wide Web (WWW), Lyon, France, Apr 23-27, 2018.
102. Kai Shu, Suhang Wang, Jiliang Tang, Yilin Wang, and Huan Liu. “CrossFire: Cross Media Joint Friend and Item Recommendations”, The 11th ACM International Conference on Web Search and Data Mining (WSDM2018), Los Angeles, CA. Feb 5-9, 2018.
103. Liang Wu and Huan Liu. “Tracing Fake-News Footprints: Characterizing Social Media Messages by How They Propagate”, The 11th ACM International Conference on Web Search and Data Mining (WSDM2018), Los Angeles, CA. Feb 5-9, 2018.
104. Jundong Li, Kewei Cheng, Liang Wu, and Huan Liu. “Streaming Link Prediction on Dynamic Attributed Networks ”, The 11th ACM International Conference on Web Search and Data Mining (WSDM2018), Los Angeles, CA. Feb 5-9, 2018.
105. Suhas Ranganath, Ghazaleh Beigi, and Huan Liu. “Leveraging Implicit Contribution Amounts to Facilitate Microfinancing Requests”, the 11th ACM International Conference on Web Search and Data Mining (WSDM2018), Los Angeles, CA. Feb 5-9, 2018.
106. Xuying Meng, Suhang Wang, Huan Liu, and Yujun Zhang. “Exploiting Emotion on Reviews for Recommender Systems”, The Thirty-Second AAAI International Conference on AI (AAAI2018), New Orleans, Louisiana. Feb 2-7, 2018.
107. Xuying Meng, Suhang Wang, Kai Shu, Jundong Li, Bo Chen, Huan Liu, and Yujun Zhang. “Personalized Privacy-Preserving Social Recommendation” The Thirty-Second AAAI International Conference on AI (AAAI2018), New Orleans, Louisiana. Feb 2-7, 2018.
108. Guansong Pang, Longbing Cao, Ling Chen, Defu Lian, and Huan Liu. “Sparse Modeling-based Sequential Ensemble Learning for Effective Outlier Detection in High-dimensional Numeric Data” The Thirty-Second AAAI International Conference on AI (AAAI2018), New Orleans, Louisiana. Feb 2-7, 2018.
109. Jundong Li, Liang Wu, Harsh Dani, and Huan Liu. “Unsupervised Personalized Feature Selection” The Thirty-Second AAAI International Confererence on AI (AAAI2018), New Orleans, Louisiana. Feb 2-7, 2018.
110. Jundong Li, Harsh Dani, Xia Hu, Jiliang Tang, Yi Chang, and Huan Liu. “Attributed Network Embedding for Learning in a Dynamic Environment”, In Proceedings of the 26th ACM International Conference on Information and Knowledge Management (CIKM2017), Singapore, Nov 6-10, 2017.
111. Suhang Wang, Charu Aggarwal, Jiliang Tang, and Huan Liu. “Attributed Signed Network Embedding”, In Proceedings of the 26th ACM International Conference on Information and Knowledge Management (CIKM2017), Singapore, Nov 6-10, 2017.
112. Harsh Dani, Jundong Li, and Huan Liu. “Sentiment Informed Cyberbullying Detection in Social Media”, The European Conference on Machine Learning & Principles and Practice of Knowledge Discovery in Databases (ECML-PKDD 2017), Skopje, Macedonia. September 18 - 22, 2017.
113. Jundong Li, Harsh Dani, Xia Hu, and Huan Liu. “Radar: Residual Analysis for Anomaly Detection in Attributed Networks”, In Proceedings of the 26th International Joint Conference on Artificial Intelligence (IJCAI), Melbourne, Australia, Aug 19-25, 2017.

114. Jundong Li, Jiliang Tang, and Huan Liu. “Reconstruction-based Unsupervised Feature Selection: An Embedded Approach”, In Proceedings of the 26th International Joint Conference on Artificial Intelligence (IJCAI), Melbourne, Australia, Aug 19-25, 2017.
115. Guansong Pang, Longbing Cao, Ling Chen, and Huan Liu. “Learning Homophily Couplings from Non-IID Data for Joint Feature Selection and Noise-Resilient Outlier Detection”, In Proceedings of the 26th International Joint Conference on Artificial Intelligence (IJCAI), Melbourne, Australia, Aug 19-25, 2017.
116. Kewei Cheng, Jundong Li, and Huan Liu. “Unsupervised Feature Selection in Signed Social Networks”, In Proceedings of 23rd ACM SIGKDD International Conference on Knowledge Discovery and Data Mining (KDD), Halifax, Canada, Aug 13-17, 2017.
117. Suhang Wang, Charu Aggarwal, Huan Liu. “Randomized Feature Engineering as a Fast and Accurate Alternative to Kernel Methods”, In Proceedings of the 23rd ACM SIGKDD International Conference on Knowledge Discovery and Data Mining (KDD), Halifax, Canada, Aug 13-17, 2017.
118. Liang Wu, Xia Hu, Fred Morstatter, Huan Liu. “Adaptive Spammer Detection with Sparse Group Modeling”, the 11th AAAI International Conference on Web and Social Media (ICWSM 2017), May 15-18, 2017. Montreal, Canada.
119. Liang Wu, Xia Hu, Huan Liu. “Early Identification of Personalized Trending Topics in Microblogging”, poster paper, the 11th AAAI International Conference on Web and Social Media (ICWSM 2017), May 15-18, 2017. Montreal, Canada.
120. Liang Wu, Xia Hu, Fred Morstatter, Huan Liu. “Detecting Camouflaged Content Polluters”, poster paper, the 11th AAAI International Conference on Web and Social Media (ICWSM 2017), May 15-18, 2017. Montreal, Canada.
121. Robert Trevino, Thomas J. Lamkin, Ross Smith, Steve A. Kawamoto, Huan Liu. “Maximum Distance Minimum Error (MDME): A Non-parametric Approach to Feature Selection for Image-Based High Content Screening Data”, IEEE Intelligent Systems Conference (IntelliSys2017). September 7-8, 2017. London, United Kingdom.
122. Liang Wu, Jundong Li, Xia Hu, Huan Liu. “Gleaning Wisdom from the Past: Early Detection of Emerging Rumors in Social Media”, SIAM International Conference on Data Mining (SDM17), April 27-29, 2017. Houston, Texas.
123. Suhang Wang, Charu Aggarwal, and Huan Liu. “Using a Random Forest to Inspire a Neural Network and Improving on It”, SIAM International Conference on Data Mining (SDM17), April 27-29, 2017. Houston, Texas.
124. Suhang Wang, Yilin Wang, Jiliang Tang, Charu Aggarwal, Suhas Ranganath, and Huan Liu. “Exploiting Hierarchical Structures for Unsupervised Feature Selection”, SIAM International Conference on Data Mining (SDM17), April 27-29, 2017. Houston, Texas.
125. Suhang Wang, Jiliang Tang, Charu Aggarwal, Yi Chang, and Huan Liu. “Signed Network Embedding in Social Media”, SIAM International Conference on Data Mining (SDM17), April 27-29, 2017. Houston, Texas.
126. Jundong Li, Liang Wu, Osmar R. Zaane and Huan Liu. “Toward Personalized Relational Learning”, SIAM International Conference on Data Mining (SDM17), April 27-29, 2017. Houston, Texas.

127. Suhang Wang, Yilin Wang, Jiliang Tang, Kai Shu, Suhas Ranganath, and Huan Liu. “Exploiting Visual Contents for Point-of-Interest Recommendation”, The 26th International World Wide Web Conference (WWW17), April 3-7, 2017. Perth, Australia.
128. Robert P. Trevino, Philippe Faucon, Thomas J. Lamkin, Steve A. Kawamoto, Ross Smith and Huan Liu. “Non-parametric Quality Assessment of High-Content Screening Assays”, the 9th International Conference on Bioinformatics and Computational Biology (BICOB2017), March 20-22, 2017. Honolulu, HI.
129. Yilin Wang, Suhang Wang, Jiliang Tang, Guojun Qi, Huan Liu, and Baoxin Li. “CLARE: A Joint Approach to Label Classification and Tag Recommendation”, The Thirty First AAAI Conference (2017) February 4-9, 2017. San Francisco, CA.
130. Kewei Cheng, Jundong Li, Jiliang Tang, and Huan Liu. “Unsupervised Sentiment Analysis with Signed Social Networks”, The Thirty First AAAI Conference (2017) February 4-9, 2017. San Francisco, CA
131. Jundong Li, Xia Hu, Ling Jiang, and Huan Liu. “Toward Time-Evolving Feature Selection on Dynamic Networks”, In Proceedings of IEEE International Conference on Data Mining (ICDM2016), short paper, December 13-15, 2016. Barcelona, Spain.
132. Guansong Pang, Longbing Cao, Ling Chen, and Huan Liu. “Unsupervised Feature Selection for Outlier Detection by Modelling Hierarchical Value-Feature Couplings”, In Proceedings of IEEE International Conference on Data Mining (ICDM2016), December 13-15, 2016. Barcelona, Spain.
133. Justin Sampson, Fred Morstatter, Liang Wu and Huan Liu. “Leveraging the Implicit Structure within Social Media for Emergent Rumor Detection”, short paper, ACM International Conference of Information and Knowledge Management (CIKM2016), October 24-28, 2016. Indianapolis, Indiana.
134. Suhang Wang, Jiliang Tang, Fred Morstatter and Huan Liu. “Paired Restricted Boltzmann Machine for Linked Data”, ACM International Conference of Information and Knowledge Management (CIKM2016), October 24-28, 2016. Indianapolis, Indiana.
135. Suhang Wang, Jiliang Tang, Charu Aggarwal and Huan Liu. “Linked Document Embedding for Classification”, ACM International Conference of Information and Knowledge Management (CIKM2016), October 24-28, 2016. Indianapolis, Indiana.
136. Kewei Cheng, Jundong Li and Huan Liu. “FeatureMiner: A Tool for Interactive Feature Selection”, demo paper, ACM International Conference of Information and Knowledge Management (CIKM2016), October 24-28, 2016. Indianapolis, Indiana.
137. Fred Morstatter and Huan Liu. “A Novel Measure for Coherence in Statistical Topic Models”, short paper, Association of Computational Linguistics (ACL), August 7 - 12, 2016. Berlin, Germany.
138. Ling Jian, Jundong Li, Kai Shu, and Huan Liu. “Multi-Label Informed Feature Selection”, In Proceedings of 25th International Joint Conference on Artificial Intelligence (IJCAI), July 9-15, 2016. New York.
139. Yilin Wang, Suhang Wang, Jiliang Tang, Huan Liu and Baoxin Li. “PPP: Joint Pointwise and Pairwise Image Label Prediction”, CVPR2016, June 27-30, 2016. Las Vegas, Nevada.

140. Ghazaleh Beigi, Jiliang Tang and Huan Liu. “Signed Link Analysis in Social Media Networks”, poster paper, The 10th International AAAI Conference on Weblogs and Social Media (ICWSM2016), May 17 - 20, 2016. Cologne, Germany.
141. Suhas Ranganth, Xia Hu, Jiliang Tang, Suhang Wang and Huan Liu. “Understanding and Identifying Rhetorical Questions in Social Media”, poster paper, The 10th International AAAI Conference on Weblogs and Social Media (ICWSM2016), May 17 - 20, 2016. Cologne, Germany.
142. Isaac Jones, Ran Wang, Jiawei Han and Huan Liu. “Community Cores: Removing Size Bias From Community Detection”, poster paper, The 10th International AAAI Conference on Weblogs and Social Media (ICWSM2016), May 17 - 20, 2016. Cologne, Germany.
143. Pritam Gundecha, Jiliang Tang, Xia Hu and Huan Liu. “Exploring Personal Attributes from Unprotected Interactions”, poster paper, The 10th International AAAI Conference on Weblogs and Social Media (ICWSM2016), May 17 - 20, 2016. Cologne, Germany.
144. Jinxue Zhang, Xia Hu, Yanchao Zhang and Huan Liu. “Your Age Is No Secret: Inferring Microbloggers’ Ages via Content and Interaction Analysis”, The 10th International AAAI Conference on Weblogs and Social Media (ICWSM2016), May 17 - 20, 2016. Cologne, Germany.
145. Ghazaleh Beigi, Jiliang Tang, Suhang Wang, and Huan Liu. “Exploiting Emotional Information for Trust/Distrust Prediction”. SIAM International Conference on Data Mining (SDM16), May 5-7, 2016. Miami, Florida.
146. Jiliang Tang, Charu Aggarwal, and Huan Liu. “Node Classification in Signed Social Networks”. SIAM International Conference on Data Mining (SDM16), May 5-7, 2016. Miami, Florida.
147. Jundong Li, Xia Hu, Liang Wu, and Huan Liu. “Robust Unsupervised Feature Selection on Networked Data”. SIAM International Conference on Data Mining (SDM16), May 5-7, 2016. Miami, Florida.
148. Fred Morstatter, Harsh Dani, Justin Sampson and Huan Liu. “Can One Tamper with the Sample API? -Toward Neutralizing Bias from Spam and Bot Content”. **Best WWW2016 Poster Award**. The 25th International World Wide Web Conference (WWW16), April 11 - 15, 2016. Montreal, Canada.
149. Jiliang Tang, Charu Aggarwal, and Huan Liu. “Recommendation with Signed Social Networks”. The 25th International World Wide Web Conference (WWW16), April 11 - 15, 2016. Montreal, Canada.
150. Liang Wu, Xia Hu, and Huan Liu. “Relational Learning with Social Status Analysis”. ACM International Conference on Web Search and Data Mining (WSDM2016), February 22-25, 2016. San Francisco, CA.
151. Suhas Ranganath, Xia Hu, Jiliang Tang, and Huan Liu. “Understanding and Identifying Advocates of Political Campaigns on Social Media”. ACM International Conference on Web Search and Data Mining (WSDM2016), February 22-25, 2016. San Francisco, CA.
152. Jiliang Tang, Suhang Wang, and Huan Liu. “Recommendation with Social Dimensions”, The Thirtieth AAAI Conference (AAAI 2016), February 12-17, 2016. Phoenix, Arizona.
153. Suhas Ranganath, Fred Morstatter, Xia Hu, Jiliang Tang, Suhang Wang, and Huan Liu. “Predicting Online Protest Participation of Social Media Users”, The Thirtieth AAAI Conference (AAAI 2016), February 12-17, 2016. Phoenix, Arizona.

154. Suhas Ranganth, Suhang Wang, Xia Hu, Jiliang Tang, and Huan Liu. “Finding Time-Critical Replies for Information Seeking in Social Media”. In Proceedings of IEEE International Conference on Data Mining (ICDM2015), November 14 - 17, 2015. Atlantic City, NJ.
155. Justin Sampson, Fred Morstatter, Reza Zafarani, and Huan Liu. “Divergent: Streamed Real-time Crisis Event Mapping using Sparse Language Distributions”. Demo. In Proceedings of IEEE International Conference on Data Mining (ICDM2015), November 14 - 17, 2015. Atlantic City, NJ.
156. Harsh Dani, Fred Morstatter, Xia Hu, Zhen Yang, and Huan Liu. “Social Answer: A System for Finding Appropriate Sites for Questions in Social Media”. Demo. In Proceedings of IEEE International Conference on Data Mining (ICDM2015), November 14 - 17, 2015. Atlantic City, NJ.
157. Robert P. Trevino, Steve A. Kawamoto, Thomas J. Lamkin, and Huan Liu. “Cell Analytics in Compound Hit Selection of Bacterial Inhibitors”. In Proceedings of IEEE International Conference on Big Data (IEEE BigData 2015), October 29 - November 1, 2015. Santa Clara, CA.
158. Yunzhong Liu, Yi Chen, Jiliang Tang, and Huan Liu. “Context-Aware Experience Extraction from Online Health Forums”. IEEE International Conference on Healthcare Informatics (ICHI2015), October 21-23, 2015. Dallas Texas.
159. Reza Zafarani and Huan Liu. “10 Bits of Surprise: Detecting Malicious Users with Minimum Information”. ACM International Conference of Information and Knowledge Management (CIKM2015), October 19-23, 2015. Memlboun, Australia.
160. Jundong Li, Jiliang Tang, Xia Hu, and Huan Liu. “Unsupervised Streaming Feature Selection in Social Media”. ACM International Conference of Information and Knowledge Management (CIKM2015), October 19-23, 2015. Memlboun, Australia.
161. Suhang Wang, Jiliang Tang, and Huan Liu. “Toward Dual Roles of Users in Recommender Systems”. ACM International Conference of Information and Knowledge Management (CIKM2015), October 19-23, 2015. Memlboun, Australia.
162. Fred Morstatter, Jrgen Pfeffer, Katja Mayer and Huan Liu. “Text, Topics, and Turkers: Evaluation of Statistical Topics”, the 26th ACM Conference on Hypertext and Social Media (Hypertext2015), September 1-4, 2015. Cyprus.
163. Justin Sampson, Fred Morstatter, Ross Maciejewski and Huan Liu. “Surpassing the Limit: Keyword Clustering to Improve Twitter Sample Coverage”, the 26th ACM Conference on Hypertext and Social Media (Hypertext2015), September 1-4, 2015. Cyprus.
164. Shamanth Kumar, Huan Liu, Sameep Mehta, and L. Venkata Subramaniam. “Exploring a Scalable Solution to Identifying Events in Noisy Twitter Streams”, short paper, IEEE/ACM International Conference on Advances in Social Network Analysis and Mining (ASONAM2015), August 25-28, 2015, Paris, France.
165. Zhen Yang, Isaac Jones, Xia Hu, and Huan Liu. “Finding the Right Social Media Site for Questions”, short paper, IEEE/ACM International Conference on Advances in Social Network Analysis and Mining (ASONAM2015), August 25-28, 2015, Paris, France.

166. Wei Wei, Kenneth Joseph, Huan Liu, and Kathleen Carley. “The Fragility of Twitter Social Networks Against Suspended Users”. IEEE/ACM International Conference on Advances in Social Network Analysis and Mining (ASONAM2015), August 25-28, 2015, Paris, France.
167. Suhang Wang, Jiliang Tang, Yilin Wang, and Huan Liu. “Exploring Implicit Hierarchical Structures for Recommender Systems”, the Proceedings of IJCAI 2015, July 25 - 31, 2015. Buenos Aires, Argentina.
168. Yilin Wang, Suhang Wang, Jiliang Tang, Huan Liu, and Baoxin Li. “Unsupervised Sentiment Analysis for Social Media Images”, the Proceedings of IJCAI 2015, July 25 - 31, 2015. Buenos Aires, Argentina.
169. Jiliang Tang, Chikashi Nobata, Anlei Dong, Yi Chang, and Huan Liu. “Propagation-based Sentiment Analysis for Microblogging Data”, SIAM International Conference on Data Mining (SDM15), April 30 - May 2, 2015. Vancouver, British Columbia, Canada.
170. Yu Cheng, Ankit Agrawal, Alok Choudhary, and Huan Liu. “Legislative Prediction with Dual Uncertainty Minimization from Heterogeneous Information”, SIAM International Conference on Data Mining (SDM15), April 30 - May 2, 2015. Vancouver, British Columbia, Canada.
171. Jiliang Tang, Shiyu Chang, Charu Aggarwal, and Huan Liu. “Negative Link Prediction in Social Media”. ACM International Conference on Web Search and Data Mining (WSDM2015), February 2-6, 2015. Shanghai, China.
172. Ashwin Rajadesingan, Reza Zafarani and Huan Liu. “Sarcasm Detection on Twitter: A Behavioral Modeling Approach”. ACM International Conference on Web Search and Data Mining (WSDM2015), February 2-6, 2015. Shanghai, China.
173. Suhas Ranganath, Jiliang Tang, Xia Hu, Hari Sundaram and Huan Liu. “Leveraging Social Foci for Information Seeking in Social Media”. The 29th AAAI Conference on Artificial Intelligence (AAAI2015), January 25- 30, 2015. Austin, TX.
174. Huiji Gao, Jiliang Tang, Xia Hu and Huan Liu. “Content-Aware Point of Interest Recommendation on Location-Based Social Networks”. The 29th AAAI Conference on Artificial Intelligence (AAAI2015), January 25- 30, 2015. Austin, TX.
175. Suhang Wang, Jiliang Tang, and Huan Liu. “Embedded Unsupervised Feature Selection”. The 29th AAAI Conference on Artificial Intelligence (AAAI2015), January 25- 30, 2015. Austin, TX.
176. Xia Hu, Jiliang Tang, Huiji Gao, and Huan Liu. “Social Spammer Detection with Sentiment Information”. In Proceedings of the IEEE International Conference on Data Mining (ICDM 2014). December 14-17, 2014. Shenzhen, China.
177. Xinxin Zhao, Huiji Gao, Lingjun Li, Huan Liu, and Guoliang Xue. “An Efficient Privacy Preserving Location Based Service System”, IEEE GLOBECOM2014 - Communication and Information System Security Symposium, December 8-12, 2014. Austin, Texas.
178. Jiliang Tang, Xia Hu, Yi Chang, and Huan Liu. “Predictability of Distrust with Interaction Data”, ACM International Conference of Information and Knowledge Management (CIKM2014), November 3-7, 2014. Shanghai, China.

179. Fred Morstatter, Shamanth Kumar, Joshua Stiefer, Justin Sampson, Daniel Howe, Grant Marshall, David Kahn, Terrance Williams, Wesley Bowman, and Huan Liu. “CrisisTracker: Connecting First Responders to Twitter Analysis”, IEEE Global Humanitarian Technology Conference (GHTC2014), poster, October 10 - 13, 2014. Silicon Valley/San Jose, CA.
180. Jiliang Tang, Xia Hu, and Huan Liu. “Is Distrust the Negation of Trust? The Value of Distrust in Social Media”, 25th ACM Conference on Hypertext and Social Media (HT2014), 14 Sep 2014, Santiago, Chile.
181. Shamanth Kumar, Xia Hu, and Huan Liu. “A Behavior Analytics Approach to Identifying Tweets from Crisis Regions”, short paper, 25th ACM Conference on Hypertext and Social Media (HT2014), 14 Sep 2014, Santiago, Chile.
182. Mohammad Ali Abbasi, Jiliang Tang, and Huan Liu. “Scalable Learning of Users’ Preferences Using Networked Data”, 25th ACM Conference on Hypertext and Social Media (HT2014), 14 Sep 2014, Santiago, Chile.
183. Mohammad Ali Abbasi, Reza Zafarani and Huan Liu. “Am I More Similar to My Followers or Followees? Homophily Effect in Directed Online Social Networks”, short paper, 25th ACM Conference on Hypertext and Social Media (HT2014), 14 Sep 2014, Santiago, Chile.
184. Xia Hu, Jiliang Tang, and Huan Liu. “Online Social Spammer Detection”. In Proceedings of the 28th AAAI Conference on Artificial Intelligence (AAAI 2014). July 27-31, 2014. Quebec City, Quebec, Canada.
185. Xia Hu, Jiliang Tang, and Huan Liu. “Leveraging Knowledge across Media for Spammer Detection in Microblogging”. In Proceedings of the 37th Annual ACM SIGIR Conference (SIGIR 2014). July 6-11, 2014. Gold Coast, Australia.
186. Reza Zafarani and Huan Liu. “Users Joining Multiple Sites: Distributions and Patterns”, poster. The Eighth International AAAI Conference on Weblogs and Social Media (ICWSM 2014) , June 2-4, 2014. Ann Arbor, MI.
187. Fred Morstatter, Jurgen Pfeffer, and Huan Liu. “When is it Biased? Assessing the Representativeness of Twitter’s Streaming API”, poster paper, The 23rd International World Wide Web Conference, WWW2014 Web Science Track. April 10-11, 2014. Seoul, Korea.
188. Jiliang Tang and Huan Liu. “Discriminant Analysis for Unsupervised Feature Selection”, SIAM International Conference on Data Mining (SDM14), April 24 -26, 2014. poster presentation. Philadelphia, Pennsylvania.
189. Reza Zafarani and Huan Liu. “Finding Friends on a New Site Using Minimum Information”, SIAM International Conference on Data Mining (SDM14), April 24 -26, 2014. poster presentation. Philadelphia, Pennsylvania.
190. Huiji Gao, Jiliang Tang, Xia Hu, and Huan Liu. “Modeling Temporal Effects of Human Mobile Behavior on Location-Based Social Networks”, ACM International Conference of Information and Knowledge Management (CIKM2013), short paper, October 27 - November 1, 2013. San Francisco, CA.
191. Pritam Gundecha, Feng Zhuo, and Huan Liu. “Seeking Provenance of Information in Social Media”, ACM International Conference of Information and Knowledge Management (CIKM2013), short paper, October 27 - November 1, 2013. San Francisco, CA.

192. Suhas Ranganath, Pritam Gundecha, and Huan Liu. “A Tool for Assisting Provenance Search in Social Media”, Demo, ACM International Conference of Information and Knowledge Management (CIKM2013), October 27 - November 1, 2013. San Francisco, CA.
193. Huiji Gao, Jiliang Tang, Xia Hu, and Huan Liu. “Exploring Temporal Effects for Location Recommendation on Location-Based Social Networks”, the ACM Conference Series on Recommender Systems (RecSys2013), October 12-16, 2013. Hong Kong, China.
194. Jiliang Tang, Huiji Gao, Xia Hu, and Huan Liu. “Context-Aware Review Helpfulness Rating Prediction”, the ACM Conference Series on Recommender Systems (RecSys2013), October 12-16, 2013. Hong Kong, China.
195. Huiji Gao, Xufei Wang, Jiliang Tang, and Huan Liu. “Network Denoising in Social Media”, the 2013 IEEE/ACM International Conference on Advances in Social Network Analysis and Mining (ASONAM2013), August 25-28, 2013. Niagara Falls, Canada.
196. Zhuo Feng, Pritam Gundecha, and Huan Liu. “Recovering Information Recipients in Social Media via Provenance” the 2013 IEEE/ACM International Conference on Advances in Social Network Analysis and Mining (ASONAM2013), short paper, August 25-28, 2013. Niagara Falls, Canada.
197. Reza Zafarani and Huan Liu. “Connecting Users across Social Media Sites: A Behavioral-Modeling Approach”, oral presentation, the Nineteenth ACM SIGKDD International Conference on Knowledge Discovery and Data Mining (KDD’2013), August 11 - 14, 2013. Chicago, Illinois.
198. Fred Morstatter, Shamanth Kumar, Huan Liu and Ross Maciejewski. “Understanding Twitter Data with TweetXplorer”, Demo, the Nineteenth ACM SIGKDD International Conference on Knowledge Discovery and Data Mining (KDD’2013), August 11 - 14, 2013. Chicago, Illinois.
199. Pritam Gundecha, Suhas Ranganath, Zhuo Feng and Huan Liu. “A Tool for Collecting Provenance Data in Social Media”, Demo, the Nineteenth ACM SIGKDD International Conference on Knowledge Discovery and Data Mining (KDD’2013), August 11 - 14, 2013. Chicago, Illinois.
200. Xia Hu, Jiliang Tang, Huan Liu, and Zhang Yanchao. “Social Spammer Detection in Microblogging”, the Proceedings of IJCAI 2013, August 3-9, 2013. Beijing, China.
201. Jiliang Tang, Huiji Gao, Xia Hu, and Huan Liu. “Exploiting Local and Global Social Context for Recommendation”, the Proceedings of IJCAI 2013, August 3-9, 2013. Beijing, China.
202. Fred Morstatter, Jrgen Pfeffer, Huan Liu and Kathleen Carley. “Is the Sample Good Enough? Comparing Data from Twitter’s Streaming API with Twitter’s Firehose”, the Seventh International AAAI Conference on Weblogs and Social Media (ICWSM 2013) , July 8-10, 20113. Boston, MA.
203. Xia Hu, Jiliang Tang, Huiji Gao and Huan Liu. “Unsupervised Sentiment Analysis with Emotional Signals”, the 22nd International World Wide Web Conference (WWW2013). May 13 - 17, 2013. Rio de Janeiro, Brazil.
204. Xia Hu, Jiliang Tang, Huiji Gao, and Huan Liu. “ActNeT: Active Learning for Networked Texts in Microblogging”, the 13th SIAM International Conference on Data Mining (SDM 2013). May 2-4, 2013. Austin, Texas.

205. Jiliang Tang, Xia Hu, Huiji Gao, and Huan Liu. "Unsupervised Feature Selection for Multi-View Data in Social Media", the 13th SIAM International Conference on Data Mining (SDM 2013). May 2-4, 2013. Austin, Texas.
206. Jiliang Tang and Huan Liu. "CoSelect: Feature Selection with Instance Selection for Social Media Data", The 13th SIAM International Conference on Data Mining (SDM 2013). May 2-4, 2013. Austin, Texas.
207. Xia Hu, Lei Tang, Jiliang Tang, and Huan Liu. "Exploiting Social Relations for Sentiment Analysis in Microblogging", Sixth ACM International Conference on Web Search and Data Mining (WSDM2013). February 4-8, 2013. Rome, Italy.
208. Jiliang Tang, Huiji Gao, Xia Hu, and Huan Liu. "Exploiting Homophily Effect for Trust Prediction", the Sixth ACM International Conference on Web Search and Data Mining (WSDM2013). February 4-8, 2013. Rome, Italy
209. Salem Alelyani and Huan Liu: Supervised Low Rank Matrix Approximation for Stable Feature Selection. In the 11th International Conference on Machine Learning and Applications. December, 2012. Boca Raton, Florida.
210. Huiji Gao, Jiliang Tang, and Huan Liu. "gSCorr: Modeling Geo-Social Correlations for New Check-ins on Location-Based Social Networks", the 21st ACM Conference on Information and Knowledge Management (CIKM2012), short paper, October 29 - November 2, 2012. Maui, Hawaii.
211. Shamanth Kumar, Fred Morstatter, Grant Marshall, Huan Liu, and Ullas Nambiar. "Navigating Information Facets on Twitter (NIF-T)", Demo, the Eighteenth ACM SIGKDD International Conference on Knowledge Discovery and Data Mining (KDD2012), Beijing, August 12-16, 2012.
212. Jiliang Tang, Huiji Gao, Huan Liu, and Artish Das Sarma. "eTrust: Understanding Trust Evolution in an Online World," the Eighteenth ACM SIGKDD International Conference on Knowledge Discovery and Data Mining (KDD2012), Beijing, August 12-16, 2012).
213. Jiliang Tang and Huan Liu. "Unsupervised Feature Selection for Linked Social Media Data", the Eighteenth ACM SIGKDD International Conference on Knowledge Discovery and Data Mining (KDD2012), Beijing, August 12-16, 2012.
214. Huiji Gao, Jiliang Tang, and Huan Liu. "Exploring Social-Historical Ties on Location-Based Social Networks", the Sixth International AAAI Conference on Weblogs and Social Media (ICWSM2012), Dublin, Ireland. June 4-6, 2012.
215. Xia Hu and Huan Liu. "Social Status and Role Analysis of Palin's Email Network", International Conference on World Wide Web (WWW2012), poster, Lyon, France. April 16-20, 2012.
216. Jiliang Tang and Huan Liu. "Feature Selection with Linked Data in Social Media", the 12th SIAM International Conference on Data Mining (SDM2012), April 26-28, 2012. Anaheim, California.
217. Mohammad-Ali Abbasi, Sun-Ki Chai, Huan Liu, and Kiran Sagoo. "Real-World Behavior Analysis through a Social Media Lens", International Conference on Social Computing, Behavioral-Cultural Modeling, and Prediction (SBP12), April 3-5, 2012. College Park, MD. **Best Student Paper Award (Runner Up)**.

218. Mohammad-Ali Abbasi, Shamanth Kumar, Jose Augusto Andrade Filhøe, and Huan Liu. "Lessons Learned in Using Social Media for Disaster Relief - ASU Crisis Response Game", International Conference on Social Computing, Behavioral-Cultural Modeling, and Prediction (SBP12), poster, April 3-5, 2012. College Park, MD.
219. Jiliang Tang, Huiji Gao, and Huan Liu. "mTrust: Discerning Multi-Faceted Trust in a Connected World", the 5th ACM International Conference on Web Search and Data Mining (WSDM 2012), February 8-12, 2012. Seattle, Washington.
220. Xufei Wang, Jiliang Tang, and Huan Liu. "Document Clustering via Matrix Representation", the 11th IEEE International Conference on Data Mining (ICDM2011), December 11 - 14, 2011. Vancouver, Canada.
221. Salem Alelyani, Lei Wang, and Huan Liu. "The Effect of the Characteristics of the Dataset on the Selection Stability", the 23rd IEEE International Conference on Tools with Artificial Intelligence (ICTAI2011), November 7 - 9, 2011. Boca Raton, Florida.
222. Jose Augusto Andrade Filho, Andre Carlos Ponce De Leon Ferreira Carvalho, Rodrigo Fernandes Mello, Salem Alelyani and Huan Liu. "Quantifying Features Using False Nearest Neighbors: An Unsupervised Approach", the 23rd IEEE International Conference on Tools with Artificial Intelligence (ICTAI2011), November 7 - 9, 2011. Boca Raton, Florida.
223. Xia Hu, Lei Tang, and Huan Liu. "Enhancing Accessibility of Microblogging Messages Using Semantic Knowledge", the 20th ACM Conference on Information and Knowledge Management (CIKM2011), October 24-28, 2011. Glasgow, UK.
224. Xufei Wang, Huan Liu, and Wei Fan. "Connecting Users with Similar Interests via Tag Network Inference", the 20th ACM Conference on Information and Knowledge Management (CIKM2011), October 24-28, 2011. Glasgow, UK.
225. Pritam Gundecha, Geoffrey Barbier, and Huan Liu. "Exploiting Vulnerability to Secure User Privacy on a Social Networking Site", the 17th ACM SIGKDD Conference on Knowledge Discovery and Data Mining (KDD 2011), August 21-24, 2011, San Diego, CA.
226. Shamanth Kumar, Reza Zafarani, and Huan Liu. "Understanding User Migration Patterns in Social Media", the special track on AI and the Web (AIW) at the Twenty-Fifth AAAI Conference on Artificial Intelligence (AAAI-11). August 7 - 11, 2011, in San Francisco, CA.
227. Anirudh Kondaveeti, George Runger, Huan Liu and Jeremy Rowe. "Extracting Geographic Knowledge from Sensor Intervention Data Using Spatial Association Rules", the First IEEE International Conference on Spatial Data Mining and Geographical Knowledge Services (ICSDM 2011), June 28 - July 1, Fuzhou, China.
228. Huiji Gao, Xufei Wang, Geoffrey Barbier, and Huan Liu. Promoting Coordination for Disaster Relief - From Crowdsourcing to Coordination. The Fourth International Conference on Social Computing, Behavioral-Cultural Modeling, and Prediction, (SBP 2011): 197-204.
229. Geoffrey Barbier, and Huan Liu. Information Provenance in Social Media. The Fourth International Conference on Social Computing, Behavioral-Cultural Modeling, and Prediction, (SBP 2011): 276-283
230. Xufei Wang, Lei Tang, Huiji Gao, and Huan Liu. Discovering Overlapping Groups in Social Media. In Proceedings of The 10th IEEE International Conference on Data Mining (ICDM'10), 2010.

231. Zheng Zhao, Lei Wang, and Huan Liu. “Efficient Spectral Feature Selection with Minimum Redundancy”. In Proceedings of the Twenty-Fourth AAAI Conference on Artificial Intelligence (AAAI), Atlanta, Georgia, USA, July 11-15, 2010.
232. Zheng Zhao, Jiangxin Wang, Shashvata Sharma, Nitin Agarwal, Huan Liu, and Yung Chang. “An Integrative Approach to Identifying Biologically Relevant Genes”, SIAM International Conference on Data Mining (SDM’10), Columbus, Ohio. April 29 - May 1, 2010.
233. Shamanth Kumar, Nitin Agarwal, and Huan Liu. Towards Building a Social Computing Tool for Social Scientists. The 3rd International Conference on Human-centric Computing (HumanCom-10). August 11 - 13, 2010. Cebu, Philippines
234. Lei Tang, Geoffrey Barbier, Huan Liu and Jianping Zhang. “A Social Network Analysis Approach to Detecting Suspicious Online Financial Activities”. In Proceedings of International Conference on Social Computing, Behavioral Modeling and Prediction (SBP’10), pages 390-397, March 29 - April 1, 2010.
235. Shamanth Kumar, Reza Zafarani, Mohammad Ali Abbasi, Geoffrey Barbier, Huan Liu. “Convergence of Influential Bloggers for Topic Discovery in the Blogosphere”. In Proceedings of International Conference on Social Computing, Behavioral Modeling and Prediction (SBP’10), pages 406-412, March 29 - April 1, 2010.
236. Reza Zafarani, William D. Cole, Huan Liu: Sentiment Propagation in Social Networks: A Case Study in LiveJournal. In Proceedings of International Conference on Social Computing, Behavioral Modeling and Prediction (SBP’10), pages 413-420, March 29 - April 1, 2010.
237. Zheng Zhao, Jiangxin Wang, Huan Liu, Yun Chang. “Biological relevance Detection via Network Dynamic Analysis”, 2nd International Conference on Bioinformatics and Computational Biology (BICoB), Honolulu, Hawaii. March 24 - 26, 2010. **Best Paper Award**
238. Nitin Agarwal, Huan Liu, Shankara Subramanya, John Salerno, and Philip Yu. “Connecting Sparsely Distributed Similar Bloggers”, IEEE International Conference on Data Mining (ICDM’09), Dec, 2009.
239. Lei Tang, Xufei Wang, and Huan Liu. “Uncovering Groups via Heterogeneous Interaction Analysis”, IEEE International Conference on Data Mining (ICDM’09), Dec, 2009.
240. Nitin Agarwal, Shamanth Kumar, Merlyna Lim, and Huan Liu. Mapping Socio-Cultural Dynamics in Indonesian Blogosphere. 3rd AAAI International Conference on Computational Cultural Dynamics (ICCCD09), pp. 37-44, December 7-8, 2009. Washington D.C.
241. Lei Tang and Huan Liu. ”Scalable Learning of Collective Behavior based on Sparse Social Dimensions”, The 18th ACM Conference on Information and Knowledge Management (CIKM’09), Hong Kong, Nov. 2-6, 2009.
242. Zheng Zhao, Huan Liu, Jiangxin Wang, and Yung Chang. Biological relevance detection via network dynamic analysis. In The 7th Georgia Tech - ORNL Conference on Bioinformatics - In silico Biology: Genome Biology and Bioinformatics, 2009. Poster.
243. Zheng Zhao, Jiangxin Wang, Shashvata Sharma, Nitin Agarwal, Huan Liu, and Yung Chang. A knowledge-oriented framework for gene selection. In 13th Annual International Conference on Research in Computational Molecular Biology (RECOMB), 2009. Poster.

244. Sai T. Moturu and Huan Liu, “Evaluating the Trustworthiness of Wikipedia Articles through Quality and Credibility”, The 5th International Symposium on Wikis and Open Collaboration, Florida, Oct 25-27, 2009.
245. Sai T. Moturu, Jian Yang, and Huan Liu. “Quantifying Utility and Trustworthiness for Advice Shared on Online Social Media”, Symposium on Social Intelligence and Networking, IEEE International Conference on Social Computing (SocialCom’09), Vancouver, Canada, Aug 29-31, 2009.
246. Nitin Agarwal, Shamanth Kumar, Huan Liu, and Reza Zafarani. ”Investigating Behavioral Patterns Across Social Media: from Blogging to Microblogging”, Human, Social, Cultural, and Behavioral Modeling Conference (HSCB), August 4-7, 2009.
247. Z. Zhao, L. Sun, S. Yu, H. Liu, J. Ye. “Multiclass Probabilistic Kernel Discriminant Analysis”, IJCAI’09
248. L. Tang and H. Liu. “Relational Learning via Latent Social Dimension”, Poster Paper, The 15th ACM SIGKDD Conference on Knowledge Discovery and Data Mining (KDD’09), Paris, France, August 2009.
249. N. Agarwal, H. Liu, S. Murthy, A. Sen, X. Wang. “A Social Identity Approach to Identify Familiar Strangers in a Social Network”, Third International Conference on Weblogs and Social Media (ICWSM09), Full Paper, May 17 - 20, 2009, San Jose, California.
250. N. Agarwal, S. Kumar, H. Liu, M. Woodward. “BlogTrackers: A Tool for Sociologists to Track and Analyze Blogosphere”, Third International Conference on Weblogs and Social Media (ICWSM09), Demo Paper, May 17 - 20, 2009, San Jose, California.
251. R. Zafarani, H. Liu. “Connecting Corresponding Identities across Communities”, Third International Conference on Weblogs and Social Media (ICWSM09), Poster Paper, May 17 - 20, 2009, San Jose, California.
252. N. Agarwal, H. Liu, J. Salerno, and S. Sundararajan. “Understanding Group Interaction in Blogosphere: A Case Study”, Second International Conference on Computational Cultural Dynamics (ICCCD08), pp 9 – 17. September 15-16, 2008. University of Maryland, College Park, Maryland.
253. L. Tang, H. Liu, J. Zhang, and Z. Nazeri. “Community Evolution in Dynamic Multi-Mode Networks”, ACM SIGKDD’08, pp 677-685. August 24-27, 2008. Las Vegas, Nevada.
254. Z. Zhao, J. Wang, H. Liu, J. Ye, and Y. Chang. “Identifying Biologically Relevant Genes via Multiple Heterogeneous Data Sources”, In Proceedings of The 14th International Conference on Knowledge Discovery and Data Mining (ACM SIGKDD), pp 839-847. August 24-27, 2008. Las Vegas, Nevada.
255. J. Ye, K. Chen, T. Wu, J. Li, Z. Zhao, R. Patel, M. Bae, R. Janardan, H. Liu, G.A. Ander, and E. Reiman. “Heterogeneous data fusion for alzheimer’s disease study”. In Proceedings of The 14th International Conference on Knowledge Discovery and Data Mining (ACM SIGKDD), August 24-27, 2008. Las Vegas, Nevada, August 24-27, 2008. Las Vegas, Nevada.
256. S. Subramanya, B. Li, and H. Liu. “Robust Integration of Multiple Information Sources by View Completion”, IEEE International Conference on Information Reuse and Integration 2008 (IEEE IRI), pp 398–403. July 13 -15, 2008. Las Vegas, Nevada.

257. N. Agarwal, M. Galan, H. Liu, S. Subramanya. “Clustering Blogs with Collective Wisdom”, 8th International Conference on Web Engineering (ICWE08), July 14-18, 2008. Yorktown Heights, NY. (short paper, pp 336–339).
258. W.K. Wong, D. W.L. Cheung, E. Hung, and H. Liu. “Protecting Privacy in Incremental Maintenance for Distributed Association Rule Mining”, Pacific Asia Conference on Knowledge Discovery and Data Mining (PAKDD), pp 381-392, May 22 - 23, 2008. Osaka, Japan.
259. N. Agarwal, H. Liu, L. Tang, and P. Yu. “Identifying Influential Bloggers in a Community”, First International Conference on Web Search and Data Mining (WSDM08), Stanford, California, pp 207-218, February 11-12, 2008.
260. S. Moturu, H. Liu, W. Johnson. “Health Care Risk Modeling For Medicaid Patients: The Impact of Sampling on the Prediction of High-Cost Patients”, International Conference on Health Informatics (HEALTHINF), pp 126-133, Madeira, Portugal, January 28-31, 2008. **Best Student Paper Award**
261. S. Moturu, W. Johnson, and H. Liu. “Predicting Future High-Cost Patients: A Real-World Risk Modeling Application”, IEEE International Conference on Bioinformatics and Biomedicine (IEEE BIBM 2007), pp 202-208, San Jose, CA, Nov 2-4, 2007.
262. N. Agarwal, H. Liu, J. Salerno, and P. Yu. “Searching for ‘Familiar Strangers on Blogosphere”, National Science Foundation Symposium on Next Generation of Data Mining and Cyber-Enabled Discovery for Innovation (NSF NGDM07). 5 pages. October 10 - 12, 2007. Baltimore, MD.
263. G.P.C. Fung, J.X. Yu, H. Liu, P.S. Yu. “Time-dependent event hierarchy construction.” International Conference on Knowledge Discovery and Data Mining, KDD07, 2007: 300-309.
264. J. Chen, Z. Zhao, J. Ye, Huan Liu. “Nonlinear adaptive distance metric learning for clustering.” International Conference on Knowledge Discovery and Data Mining, KDD07, 2007: 123-132.
265. Z. Zhao and H. Liu. “Spectral Feature Selection for Supervised and Unsupervised Learning”. International Conference on Machine Learning (ICML-07), pp 1151-1157. June 20-24, 2007, Corvallis, Oregon.
266. J. Ye, Z. Zhao, and H. Liu. “Adaptive Distance Metric Learning for Clustering”. IEEE Computer Society Conference on Computer Vision and Pattern Recognition (CVPR-07), June 18-23, 2007, Minneapolis, Minnesota.
267. Z. Zhao and H. Liu. “Semi-supervised Feature Selection via Spectral Analysis”, SIAM International Conference on Data Mining (SDM-07), pp 641–646. April 26-28, 2007, Minneapolis, Minnesota.
268. Z. Zhao and H. Liu. “Searching for Interacting Features”, The 20th International Joint Conference on AI (IJCAI-07), pp 1156-1161. January 6-12, 2007. Hyderabad, India.
269. Gabriel P.C. Fung, J. Yu, H. Wang, D.W. Cheung, and H. Liu. “A Balanced Ensemble Approach to Weighting Classifiers for Text Classification”, IEEE International Conference on Data Mining (ICDM’06). pp 869–873. December 18-22, Hong Kong.
270. L. Tang, J. Zhang, and H. Liu. “Acclimatizing Taxonomic Semantics for Hierarchical Content Classification”, The 12th ACM SIGKDD International Conference on Knowledge Discovery and Data Mining (KDD2006), pp 384-393. August, 2006. Philadelphia.

271. S.K. Singhi and H. Liu. "Feature Subset Selection Bias for Classification Learning", The 23rd International Conference on Machine Learning (ICML), pp. 849-856. Pittsburgh, Pennsylvania, June, 2006.
272. P. Wu, J.R. Wen, H. Liu, W.Y. Ma. "Query Selection Techniques for Efficient Crawling of Structured Web Sources", The 22nd International Conference on Data Engineering (ICDE), pp 47-56. Atlanta, Georgia, 2006.
273. L. Tang and H. Liu. "Bias Analysis in Text Classification for Highly Skewed Data", The Fifth IEEE International Conference on Data Mining (ICDM), pp 781-784. November, 2005. New Orleans, Louisiana.
274. S. Singhi and H. Liu. "Error-Sensitive Grading for Model Combination", Proceedings of the European Conference on Machine Learning (ECML/PKDD). pp 724-732, October, 2005. Porto, Portugal.
275. N. Agarwal, E. Haque, H. Liu, L. Parsons. "Research Paper Recommender System: A Subspace Clustering Approach", The 6th International Conference on Web-Age Information Management (WAIM 2005), pp. 475 - 491, October 11-13, 2005, Hang Zhou, China.
276. R. Jin, H. Liu. "A Novel Approach to Model Generation for Heterogeneous Data Classification", the 19th International Joint Conference on AI (IJCAI-05), pp 746-751. July 30 - August 5, 2005. Edinburgh, Scotland. online proceedings.
277. R. Jin, H. Liu, K. Feng. "Learning with Labeled Sessions", the 19th International Joint Conference on AI (IJCAI-05), pp 740-745. July 30 - August 5, 2005. Edinburgh, Scotland.
278. J. Sun, H. Zeng, H. Liu, Y. Lu, Z. Chen. "CubeSVD: A Novel Approach to Personalized Web Search", the 14th International World Wide Web Conference (WWW2005), pp 382-390. May 10- 14, Chiba, Japan.
279. K. Torkkola, S. Venkatesan, and H. Liu. "Sensor Sequence Modeling for Driving", the 18th International FLAIRS Conference, pp 721-727. May 15-17, 2005, Clearwater Beach, Florida.
280. M. Galan, H. Liu, K. Torkkola. "Intelligent Instance Selection of Data Streams for Smart Sensor Applications", SPIE Defense & Security Symposium, Intelligent Computing: Theory and Applications III, Orlando, Florida, March 28-29, 2005. Volume 5803. pp. 108 - 119.
281. L. Yu, C. Baral, S. Kim, J. L Rennert, D. Hoelzinger, M.E. Berens, and H. Liu. "Discriminative Gene Selection for Brain Tumor Migration". Pacific Symposium on Biocomputing (PSB), 2005.
282. D. Banks, G. Dong, H. Liu, and A. Mandvikar. "Teaching Undergraduate Data Mining in Engineering Program", Frontiers in Education Conference, pp F4C (1-6). October 20-23, 2004, Savannah, Georgia.
283. K. Torkkola, S. Venkatesan, and H. Liu. "Sensor Selection for Maneuver Classification", The 7th IEEE International Conference on Intelligent Transportation Systems (ITSC2004), October 3-6, 2004, Loews L'Enfant Plaza Hotel, Washington DC.
284. R. Jin and H. Liu. "SWITCH: A Novel Approach to Ensemble Learning for Heterogeneous Data", The 15th European Conference on Machine Learning, pp 560-562. September 20-24, 2004, Pisa, Italy.

285. L. Yu and H. Liu. “Redundancy Based Feature Selection for Microarray Data”, SIGKDD, KDD 2004, pp 737-742. August, 22 - 25, 2004. Seattle, Washington.
286. H. Liu, A. Mandvikar, and J. Mody. “An Empirical Study of Building Compact Ensembles for Classification”, The Fifth International Conference on Web-Age Information Management (WAIM), pp 622-627. 15 - 17 July 2004, Dalian, China.
287. R. Jing and H. Liu. “Robust Feature Induction for Support Vector Machines”, the 21st International Conference on Machine Learning, pp 57-64. July, 2004.
288. A. Mandvikar, H. Liu, and H. Motoda. “Compact Dual Ensemble for Active Learning”, The Eighth Pacific-Asia Conference on Knowledge Discovery and Data Mining (PAKDD), pp 293-297. May 26 - 28, 2004, Sydney, Australia.
289. A. Mandvikar and H. Liu. “Class-Specific Ensembles for Active Learning in Digital Imagery”, SIAM International Conference on Data Mining 2004, April 22-24, 2004. pp 412-421. Lake Buena Vista, Florida.
290. P. Foschi, D. Kolippakkam, and H. Liu, “Feature Selection for Image Data via Learning”, IMMCN 2003, September 26-30, 2003, North Carolina, USA.
291. L. Yu and H. Liu, “Efficiently Handling Feature Redundancy in High-Dimensional Data”. In Proceedings of The Ninth ACM SIGKDD International Conference on Knowledge Discovery and Data Mining, Washington, D.C., pp 685-690. August 24 - 27, 2003.
292. L. Yu and H. Liu. “Feature Selection for High-Dimensional Data: A Fast Correlation-Based Filter Solution”. In Proceedings of The Twentieth International Conference on Machine Learning (ICML-03), Washington, D.C., pp 856-863. August 21-24, 2003.
293. H. Liu, A. Mandvikar, P. Foschi, and K. Torkkola, “Active Learning with Ensembles for Image Mining”, International Joint Conference on AI (IJCAI’2003). pp 1435-1436. Acapulco, Mexico. August 9-15, 2003.
294. H. Liu, H. Lu, and L. Yu. “Active Sampling: An Effective Approach to Feature Selection”, SIAM Data Mining, 2003. pp 244 – 248. San Francisco, CA.
295. H. Liu, L. Yu, M. Dash, H. Motoda. “Active Feature Selection Using Classes”, PAKDD 2003, pp 474-485. Seoul, Korea.
296. S.S. Yau, H. Liu, D. Huang, Y. Yao. “Situation-aware Personalized Information Retrieval for Mobile Internet”, Proceedings of the 27th Annual International Conference on Computer Software and Applications Conference, 2003. COMPSAC 2003, pp 639-644. 3-6 Nov. 2003.
297. H. Nguyen, P. Velamuru, D. Kolippakkam, H. Davulcu and H. Liu, “Mining ‘Hidden Phrase’ Definitions from the Web”, Proceedings of The Fifth Asia Pacific Web Conference, 27-29 Sept., 2003. pp. 156 - 165. Xi’an China.
298. D. Manoranjan, K. Choi, P. Scheuermann, H. Liu, “Feature Selection for Clustering - A Filter Solution”, Proceedings of ICDM 2002. pp 115-122. Dec 9 - 12, 2002, Japan.
299. H. Liu, H. Motoda, and L. Yu, “Feature Selection with Selective Sampling”, Proceedings of the 19th International Conference on Machine Learning. pp 395-402. July 8-12, 2002. Sydney, Australia.

300. W.M. Campbell and H. Liu, "Using Feature Transformation and Selection with Polynomial Networks," Proceedings of the SPIE - The International Society for Optical Engineering vol.4390 p.175-86. Publisher: SPIE-Int. Soc. Opt. Eng. Applications and Science of Computational Intelligence IV. Orlando, Florida, April 16-20, 2001.
301. M. Dash, K. L. Tan, and H. Liu, "Efficient Yet Accurate Clustering". (ICDM-2001), IEEE International Conference on Data Mining, November 2001. pp 99–106.
302. B. Gu, B. Liu, F. Hu, and H. Liu, "Efficiently Determining the Starting Sample Size for Progressive Sampling", Proceedings of the 12th European Conference on Machine Learning, Machine Learning: ECML-2001, L. De Raedt, P. Flach (Eds.) Sept 3 - 7, 2001. Freiburg, Germany. pp 192–202, Springer-Verlag.
303. B. Gu, F. Hu, H. Liu, "Modeling Classification Performance for Large Data Sets", WAIM'2001, Proceedings of the Second International Conference of Web-Age Information Management, Xi'an, China. July, 2001. pp 317–328.
304. C. Wen, H. Liu, W.X. Wen, J. Zheng, "A Distributed Hierarchical Clustering System for Web Mining", WAIM'2001, Proceedings of the Second International Conference of Web-Age Information Management, Xi'an, China. July, 2001. pp 103–113.
305. M. Dash, H. Liu, and X. Xu, "'1 + 1 > 2': Merging Distance and Density Based Clustering", the 7th International Conference on Database Systems for Advanced Applications, DASFAA 2001, pages 32-39, HongKong. IEEE Computer Society Publisher. April, 2001.
306. M. Dash and H. Liu. "Efficient Hierarchical Clustering Algorithms using Partially Overlapping Partitions", the 5th Pacific Asia Conference on Knowledge Discovery and Data Mining, PAKDD 2001, HongKong.
307. D.P. Makawita, K.L. Tan and H. Liu. "Sampling from Databases Using B^+ -Trees", Conference on Information and Knowledge Management (CIKM 2000), Washington, DC, Nov 6-11, 2000.
308. "Consistency based feature selection", (with Dash, M. and Motoda, H.), the 4th Pacific Asia Conference on Knowledge Discovery and Data Mining, PAKDD 2000, Kyoto, Japan.
309. "Feature Selection for Clustering", (with Dash, M.), the 4th Pacific Asia Conference on Knowledge Discovery and Data Mining, PAKDD 2000, Kyoto, Japan. (After 10 years at PAKDD 2010, this paper received "**the Most Influential Paper**" award.)
310. "Exception Rule Mining with a Relative Interestingness Measure", (with Hussain, F., Suzuki, E. and Lu, H), the 4th Pacific Asia Conference on Knowledge Discovery and Data Mining, PAKDD 2000, Kyoto, Japan.
311. "A Study of Support Vectors on Model Independent Example Selection", (with Syed, N.A. and Sung, K.K), ACM SIGKDD Conference on Knowledge Discovery and Data Mining, 1999, San Diego, USA.
312. "Handling Concept Drifts in Incremental Learning with Support Vector Machines", (with Syed, N.A. and Sung, K.K), ACM SIGKDD Conference on Knowledge Discovery and Data Mining, 1999, San Diego, USA.
313. "Efficient Search of Reliable Exceptions", (with H. Lu, L. Feng and F. Hussain), the 3rd Pacific-Asia Conference on Knowledge Discovery and Data Mining (PAKDD'99), April, 1999. Beijing, China. Springer-Verlag.

314. "Feature Transformation and Multivariate Decision Tree Induction", (with R. Setiono), Proceedings of the First International Conference on Discovery Science (DS'98), Fukuoka, Japan. December 14-16, 1998. Springer-Verlag.
315. "Hybrid Search of Feature Subsets", (with M. Dash), Pacific Rim International Conference on AI (PRICAI'98), 22-27 November, 1998. Singapore. Springer-Verlag.
316. "Fragmentation Problem and Automated Feature Construction", (with R. Setiono), Proceedings of the Tenth IEEE International Conference on Tools with AI (ICTAI'98), November 10-12, 1998. Taipei, Taiwan. IEEE Computer Society.
317. "A Data Mining Application: Customer Retention at the Port of Singapore Authority (PSA)", (with K.S. Ng and H.B. Kwah), SIGMOD'98, June 1-4, 1998. Seattle, Washington, USA.
318. "A Monotonic Measure for Optimal Feature Selection", (with H. Motoda and M. Dash), 10th European Conference on Machine Learning (ECML-98), April 21-24, 1998. Chemnitz, Germany. Springer-Verlag.
319. "Identifying Relevant Databases for Multidatabase Mining", (with H. Lu and J. Yao), the 2nd Pacific-Asia Conference on Knowledge Discovery and Data Mining (PAKDD'98), April 15-18, 1998. Melbourne, Australia. Springer-Verlag.
320. "Scalable Feature Selection for Large Sized Databases", (with R. Setiono), the Fourth World Congress on Expert Systems (WCES'98), March 1998, Mexico City, Mexico.
321. "Dimensionality Reduction of Unsupervised Data", (with M. Dash and J. Yao), the Ninth IEEE International Conference on Tools with AI (ICTAI'97), Nov., 1997, Newport Beach, California.
322. "NeuralLinear: A System for Extracting Oblique Decision Rules from Neural Networks", (with R. Setiono), the 9th European Conference on Machine Learning (ECML'97), 23-26 April, 1997. Prague, Czech Republic.
323. "Searching Multiple Databases for Interesting Complexes", (with J. Yao), the 1st Pacific-Asia Conference on Knowledge Discovery and Data Mining (PAKDD'97), 23-24 Feb., 1997, pp. 198-210. Singapore.
324. "A probabilistic approach to feature selection - A filter solution", (with R. Setiono), the 13th International Conference on Machine Learning (ICML'96), July 1996, pp. 319-327. Bari, Italy.
325. "Feature selection and classification - A probabilistic wrapper approach", (with R. Setiono), the 9th International Conference on Industrial & Engineering Applications of Artificial Intelligence & Expert Systems" (IEA-AIE'96), June 1996, pp. 419-424. Fukuoka, Japan.
326. "Chi2: Feature selection and discretization of numeric attributes", (with R. Setiono), the 7th IEEE International Conference on Tools with Artificial Intelligence (TAI'95), Nov.1995, Washington D.C., USA. PP 388 - 391.
327. "X2R: A Fast Rule Generator", with (S.T. Tan), IEEE International Conference on Systems, Man and Cybernetics (SMC'95), Oct. 1995, Vancouver, Canada. PP 1631-1635.
328. "NeuroRule: A Connectionist Approach to Data Mining", with (H. Lu and R.Setiono), International Conference on Very Large Databases (VLDB'95), Oct. 1995, Zurich, Switzerland. PP 478 - 489.

329. "Understanding Neural Networks via Rule Extraction", (with R. Setiono), International Joint Conference on Artificial Intelligence (IJCAI-95), Aug. 1995, Montreal, Canada. pp 480-485.
330. "A Feature Weighting Method for Inductive Learning", (with W.X. Wen), The Third Pacific Rim International Conference on Artificial Intelligence, August 15-18, 1994, Beijing, China. pp 338-344.
331. "Making Use of Class Information in Self-Generating Neural Networks", (with W.X. Wen), Proceedings of ACNN'94 (the 5th Australian Neural Network Conference), Jan. 31 - Feb. 2, 1994, Brisbane, Australia.
332. "Concept Learning through Feature Selection", (with W.X. Wen), The First Australian and New Zealand Conference on Intelligent Information Systems, 1-3 December, 1993, Perth, Western Australia.
333. "Supervised Learning for Self-Generating Neural Trees", (with W.X. Wen and A. Jennings), 1993 World Congress on Neural Networks, Portland, Oregon, USA.
334. "Some Performance Comparisons for SGNT", (with W.X. Wen and A. Jennings), the 4th Australian National Conference on Artificial Intelligence, November 16-18, 1992, Hobart, Tasmania.
335. "Critics in Knowledge-Based Design Systems", (with C. Rowles and W.X. Wen), *ibid.*
336. "Artificial Intelligence – Operational Perspective: the CANES Example", (with C.D. Rowles, C. Leckie, and A. Jennings), National Technology in Government Conference, Feb. 1992, Canberra, Australia.
337. "Learning a Neural Tree", (with W.X. Wen and A. Jennings), the International Joint Conference on Neural Networks, IJCNN'92, November 3-6, 1992, Beijing, China. pp II-751 - II-756.
338. "A Performance Analysis of Self-Generating Neural Trees", (with W.X. Wen and A. Jennings), *ibid.* pp II-283 - II-288.
339. "Evolving a Design", (with C. Rowles), the First Singapore International Conference on Intelligent Systems, Sept. 28-Oct. 2, 1992, Singapore. pp 337 - 342.
340. "Joint Concept Formation and Abstraction", (with W. Wen), the Pacific Rim International Conference on Artificial Intelligence, September 15-18, 1992, Seoul, South Korea.
341. "Planning with Intentions", (with C. Rowles and G.A. Bekey), *ibid.*
342. "Self-Generating Neural Networks and Their Applications to Telecommunications", (with W. Wen and A. Jennings), the International Conference on Communication Technology, September 16-18, 1992, Beijing, China.
343. "Self-Generating Neural Networks", (with W. Wen and A. Jennings), the International Joint Conference on Neural Networks, June 7-11, 1992, Baltimore, U.S.A. pp IV-779 - IV-784.
344. "Design, Evaluation and Redesign - Handling the ad-hocness of a knowledge-based design system", (with C.D. Rowles and W. Wen), the IEEE Conference on AI Applications, March 1992, California, U.S.A.
345. "Knowledge-based Models of Human and Robot Grasping", (with G.A. Bekey, T. Iberall and R. Tomovic), IFAC Symposium on Systems Identification, July, 1991, Budapest, Yugoslavia.

346. “Automating the Design of Telecommunication Distribution Networks”, (with C. Rowles, C. Leckie and W. Wen), the First International Conference on Artificial Intelligence in Design, 25-27 June, 1991, Edinburgh, UK.
347. “Optimizing Knowledge-based Systems Design”, (with W. Wen and C.D. Rowles), the IEEE Conference on AI Applications, February, 1991, Miami, Florida, U.S.A.
348. “Integrating Design Principles in Automated Layout Design” (with C.D. Rowles and C. Leckie), the International Conference on Automation, Computer Vision and Robotics, September, 1990, Singapore. pp 180 - 184.
349. “Acquisition of Grasping Heuristics for Robot Hand Control”, the 3rd Australian National Conference on Artificial Intelligence, Nov. 1990, Perth, Australia.
350. “Machine Regeneration of Solver’s Problem Solving” (with H.A. Rowe), the First Annual Conference of Australasian Cognitive Science, Nov. 1990, University of New South Wales, Australia.
351. “Knowledge-based Multifingered Robot Hand Grasping”, the 3rd Australian National Conference on Robotics, June, 1990, Melbourne, Australia.
352. “Intention Attributes in Planning” (with C.D. Rowles), the Pacific Rim International Conference on Artificial Intelligence’90, November, 1990, Nagoya, Japan.
353. “The Multi-dimensional quality of task requirements for dextrous robot hand control” (with T. Iberall and G.A. Bekey), the IEEE International Conference on Robotics and Automation, May, 1989, Scottsdale, Arizona.
354. “Building a generic architecture for robot hand control” (with T. Iberall and G.A. Bekey), the IEEE International Conference on Neural Networks, July, 1988, San Diego, California.
355. “Robot hand-eye coordination: shape description and grasping”, (with K. Rao, G. Medioni and G.A. Bekey) the IEEE International Conference on Robotics and Automation, April, 1988, Philadelphia, Pennsylvania.
356. “Reasoning about grasping from task description” (with T. Iberall and G.A. Bekey), Advances in Intelligent Robotics Systems, SPIE’s Cambridge Symposium on Optical and Optoelectronic Engineering, November, 1988, Cambridge, Massachusetts.
357. “Learning activities in robot hand control” (with G.A. Bekey), the Robotics and Automation Symposium, the International Association of Science and Technology for Development, May, 1987, Santa Babra, California.

WORKSHOPS

1. Kaize Ding, Kai Shu, Yichuan Li Amrita Bhattacharjee, and Huan Liu. “Challenges in Combating COVID-19 Infodemic - Data, Tools, and Ethics”, 5th International Workshop on Mining Actionable Insights from Social Networks (MAISoN). In Proceedings of the CIKM 2020 Workshops co-located with 29th ACM International Conference on Information and Knowledge Management (CIKM 2020), October 19-23, 2020. Galway, Ireland,

2. Lu Cheng, Ruocheng Guo, and Huan Liu. “Robust Cyberbullying Detection with Causal Interpretation”. In Proceedings of the WWW’19 CyberSafety Workshop, May 13, San Francisco, CA.
3. Ghazaleh Beigi, Suhas Ranganath, and Huan Liu. “Signed Link Prediction with Sparse Data: The Role of Personality Information”, In the Proceedings of the WWW’19 Women in Web Data Science Workshop (WinDS19), May 13-17, San Francisco, CA
4. Kai Shu, Suhang Wang, and Huan Liu. Understanding User Profiles on Social Media for Fake News Detection. The First IEEE International Workshop on Fake MultiMedia (FakeMM2018), April 10-12, 2018. Miami, FL.
5. Yafeng Lu, Xia Hu, Feng Wang, Shamanth Kumar, Huan Liu and Ross Maciejewski. “Visualizing Social Media Sentiment in Disaster Scenarios”. The WWW2015 Workshop on Social Web for Disaster Management (SWDM), May 18, 2015. Florence, Italy.
6. Dror Kenett, Fred Morstatter, Gene Stanley and Huan Liu. “Extreme Event Detection in Online Social Media using Social Focus”, The 2014 KDD Workshop on Learning about Emergencies from Social Information (KDD-LESI2014), New York, NY. August 24, 2014.
7. Fred Morstatter, Nichola Lubold, Heather Pon-Barry, Jrgen Pfeffer, and Huan Liu. “Finding Eyewitness Tweets During Crises”, ACL Workshop on Language Technology and Computational Social Science, Baltimore, Maryland. June 22-27, 2014.
8. Shamanth Kumar, Huan Liu, and Fred Morstatter. “Social Computing and Information in the New Information Age, presentation”, Intelligence in Science. Brussels, Belgium. October 8-9, 2013
9. Huiji Gao, Jiliang Tang, and Huan Liu. Mobile Location Prediction in a Spatio-Temporal Context. In Workshop on Mobile Data Challenge by Nokia, Pervasive 2012, Newcastle, UK. June 18-22, 2012. **Winner of the 3rd Place Dedicated Task 2: Next Location Prediction.**
10. Lei Tang, Huiji Gao, and Huan Liu. Network Quantification Despite Biased Labels. In Workshop on Mining and Learning with Graphs, KDD 2010.
11. Lei Tang, Xufei Wang, Huan Liu and Lei Wang. A Multi-Resolution Approach to Learning with Overlapping Communities. In Workshop on Social Media Analytics, KDD 2010
12. Huan Liu, Hiroshi Motoda, Rudy Setiono, and Zheng Zhao. Feature Selection: An Ever Evolving Frontier in Data Mining, Journal of Machine Learning Research, Workshop and Conference Proceedings Volume 10, 10:4-13, 2010.
13. Zheng Zhao, Jiangxin Wang, Shashvata Sharma, Nitin Agarwal, Huan Liu, and Yung Chang. “Integrating knowledge in search of biologically relevant genes”. In The 3rd International Workshop on Domain Driven Data Mining (DDDM), 2009.
14. Sai Moturu and Huan Liu. “Trust Assessment in Social Media”, (poster presentation) Second Annual Workshop on Information Assurance Research and Education, Information Assurance Center, Arizona State University, May 6, 2009.
15. Lei Tang and Huan Liu. Uncovering Cross-Dimension Group Structures in Multi-Dimensional Networks, Workshop on Analysis of Dynamic Networks at the SIAM International Conference on Data Mining, May 2, 2009.

16. Shankara Subramanya and Huan Liu. "SocialTagger - Collaborative Tagging for Blogs in the Long Tail", Workshop on Search in Social Media, ACM 17th Conference on Information and Knowledge Management, October 26-30, 2008. Napa Valley, California.
17. P. Refaeilzadeh, L. Tang, H. Liu. "On Comparison of Feature Selection Algorithms", AAAI 2007 Workshop on Evaluation Methods for Machine Learning II, Vancouver, British Columbia, Canada. July 22, 2007.
18. P. Singh, R. Bhimavarapu, H. Davulcu, C. Baral, S. Kim, H. Liu, M. Bittner and I.V. Ramakrishnan. "BioLog: A Browser Based Collaboration and Resource Navigation Assistant for BioMedical Researchers", 2nd International Workshop on Data Integration in the Life Sciences (DILS 2005) University of California, San Diego July 20 - 22, 2005.
19. K. S. Candan, J.W. Kim, H. Liu, and R. Suvarna. "Structure-based Mining of Hierarchical Media data, Metadata, and Ontologies", Fifth International Workshop on Multimedia Data Mining (MDM/KDD 2004), August 22 - 25, 2004, Seattle, WA, USA.
20. P. Foschi, G. Fields II, and H. Liu. "Detecting a Spectrally Variable Subject in Color Infrared Imagery Using Data-Mining and Knowledge-Engine Methods". 3rd International workshop on Pattern Recognition in Remote Sensing, Kingston University, Kingston upon Thames, August 27, 2004.
21. L. Parsons, E. Haque, and H. Liu. "Evaluating subspace clustering algorithms". In Workshop on Clustering High Dimensional Data and its Applications, SIAM International Conference on Data Mining (SDM 2004), pages 48-56, 2004.
22. Y. Ding, H. Liu, A. Ramineni, A. Sen. "Detecting Hidden Messages in Images: A Comparative Study", 2nd Workshop on Privacy Preserving Data Mining (PPDM), Melbourne, Florida, USA, November 19, 2003.
23. P. Foschi, D. Kolippakkam, H. Liu, A. Mandvikar, "Feature Extraction for Image Mining", International Workshop on Multimedia Information Systems (MIS 2002), 10/30/02 - 11/1/02, Tempe, Arizona.
24. P. Foschi and H. Liu, "Active Learning for Classifying a Spectrally Variable Subject", the 2nd International Workshop on Pattern Recognition for Remote Sensing, (PRRS 2002), August 16, 2002. Niagara Falls, Canada.
25. B. Gu, B. Liu, F. Hu, and H. Liu, "Efficiently Determining Initial Sample Size for Progressive Sampling", SIGMOD Data Mining and Knowledge Discovery Workshop, (DMDK), May 20, 2001, Santa Barbra, USA.
26. D. Manoranjan and H. Liu. "Attribute Hierarchy: A Fast and Memory-Efficient Approach to Density-Based Clustering", ACM SIGKDD Workshop on Distributed and Parallel Knowledge Discovery (DPKD-2000), Boston, August 2000.
27. "Incremental Learning with Support Vector Machines", (with Syed, N.A. and K.K. Sung), International Joint Conference on Artificial Intelligence (IJCAI'99), Workshop on Support Vector Machines, August 2, 1999, Stockholm, Sweden.
28. "Handling Large Unsupervised Data via Dimensionality Reduction", (with M. Dash), SIGMOD Data Mining and Knowledge Discovery Workshop (DMKD), May 30, 1999. Philadelphia, USA.

29. "A Belief-Based Approach to Knowledge Discovery in Databases", (with K.S. Ng), Second Pacific Rim Knowledge Acquisition Workshop, 22-23 November 1998, Singapore.
30. "An Efficient Approach to Searching for 'Reliable' Exceptions", (with F. Hussain and K.S. Ng), Knowledge Discovery and Data Mining Workshop at PRICAI'98, 22-27 November 1998, Singapore.
31. "Towards Effective Classification Rule Extraction", (with H. Lu and R. Setiono), DOOD'95 workshop on Integration of Knowledge Discovery in Databases with Deductive and Object-Oriented Databases, Dec. 1995, Singapore.
32. "Representation of Designs and Design Knowledge", (with C.D. Rowles and C. Leckie), IJCAI'91 workshop on "AI in Design", August, 1991, Sydney, Australia.
33. "A Personal News Service Based on a User Model Neural Network", (with A. Jennings and H. Higuchi), IJCAI'91 workshop on "Modeling for Intelligent Interaction", *ibid*.
34. "Task analysis: a method of robot hand control", Simulation'87, Society of Manufacturing Engineers, AI in Manufacturing, October, 1987, Long Beach, California.

Ph.D. THESIS

"Knowledge-Based Grasp Planning for Robot Hands", Computer Science Department, University of Southern California, Los Angeles, CA 90089, 1989.
Thesis Advisor: Dr. George A. Bekey.

TECHNICAL REPORTS and DOCTORAL CONSORTIA

1. Lu Cheng, Yasin N. Silva, Deborah Hall, and Huan Liu. "Personalized Learning for Cyberbullying Detection", SBP-BRiMS Doctoral Consortium, 2018.
2. Jundong Li, Kewei Cheng, Suhang Wang, Fred Morstatter, Rober P. Trevino, Jiliang Tang, and Huan Liu. "Feature Selection: A Data Perspective", submitted on January 29, 2016. <http://arxiv.org/abs/1601.07996>
3. Nitin Agarwal, Sean Andrist, Dan Bohus, Fei Fang, Laurie Fenstermacher, Lalana Kagal, Takashi Kido, Christopher Kiekintveld, William F. Lawless, Huan Liu, Andrew McCallum, Hemant Purohit, Oshani Seneviratne, Keiki Takadama, Gavin Taylor: "Reports on the 2015 AAAI Spring Symposium Series". *AI Magazine* 36(3): 113-119 (2015).
4. Xufei Wang, Huan Liu, Peng Zhang and Baoxin Li. "Identifying Information Spreaders in Twitter Follower Networks", Technical Report, TR-12-001, School of Computing, Informatics, and Decision Systems Engineering, Arizona State University, Tempe, AZ 85287, 2012.
5. Xia Hu and Huan Liu. "Social Status and Role Analysis of Palin's Email Network", ASUCIDSE-2011-007, School of Computing, Informatics, and Decision Systems Engineering, Arizona State University, AZ 85287. Nov. 2011.
6. Pritam Gundecha and Huan Liu. "Minimizing User Vulnerability and Retaining Social Utility in Social Media", ASUCIDSE-2011-006, School of Computing, Informatics, and Decision Systems Engineering, Arizona State University, AZ 85287. Nov. 2011.

7. Jiliang Tang and Huna Liu. “Feature Selection with Linked Data in Social Media”, ASUCISE-2011-005, School of Computing, Informatics, and Decision Systems Engineering, Arizona State University, AZ 85287. Nov. 2011.
8. Huiji Gao, Xufei Wang, Jiliang Tang, and Huan Liu. “Network Denoising in Social Media”, TR-11-002, School of Computing, Informatics, and Decision Systems Engineering, Arizona State University, AZ 85287, Feb. 2011.
9. Pritam Gundecha, Geoffrey Barbier, and Huan Liu. “Exploiting Vulnerability to Secure User Privacy on Social Networking Sites”, TR-11-001, School of Computing, Informatics, and Decision Systems Engineering, Arizona State University, AZ 85287, Feb. 2011.
10. N. Agarwal, H. Liu, J. Salerno, S. Subramanya, and P. Yu. “Familiar Strangers: Connecting Dots on Blogosphere”, Technical Report, TR-08-005, School of Computing Informatics, Arizona State University, Tempe, AZ 85287, 2008.
11. N. Agarwal, M. Galan, H. Liu, S. Subramanya. “Clustering with Collective Wisdom - A Comparative Study”, Technical Report, TR-08-004, School of Computing Informatics, Arizona State University, Tempe, AZ 85287, 2008.
12. S. Subramanya, B. Li, C. Gries and H. Liu. Selecting Complementary Features from Multiple Data Sources for Information Integration, Technical Report, TR-07-009, School of Computing Informatics, Arizona State University, Tempe, AZ 85287, 2007.
13. N. Agarwal, H. Liu, J. Salerno, P. Yu. “Searching for ‘Familiar Strangers’ on Blogosphere”, Technical Report, TR-07-008, CSE, School of Computing Informatics, Arizona State University, Tempe, AZ 85287, 2007.
14. N. Agarwal, H. Liu, L. Tang. “Identifying the Influentials in Blogosphere”, Technical Report, TR-07-004, CSE, School of Computing Informatics, Arizona State University, Tempe, AZ 85287, 2007.
15. Z. Zhao and H. Liu. “Semi-supervised Feature Selection via Spectral Analysis”, Technical Report, TR-06-022, Department of Computer Science and Engineering, Arizona State University, Tempe, AZ 85287, 2006.
16. J. Ye, L. Yu, and H. Liu. “Sparse Linear Discriminant Analysis”, Technical Report, TR-06-010, Department of Computer Science and Engineering, Arizona State University, Tempe, AZ 85287, 2006.
17. L. Tang, J. Zhang, and H. Liu, “Acclimatizing Taxonomic Semantics for Hierarchical Content Classification”, Technical Report, TR-06-004, Department fo Computer Scienceand Engineering, Arizona State University, Tempe, AZ 85287, 2006.
18. L. Tang and H. Liu, “Bia Analysis in Text Classification for Highly Skewed Data”, Technical Report, TR-05-008, Department of Computer Science and Engineering, Arizona State University, Tempe, AZ 85287, 2005.
19. L. Yu, J. Rennert, H. Liu, and M.E. Berens, “Exploiting Statistical Redundancy in Expression Microarray Data to Foster Biological Relevance”, Technical Report, TR-05-005, Department of Computer Science and Engineering, Arizona State University, Tempe, AZ 85287, 2005.

20. D. Kolippakkam, H. Liu, A. Joy, C. Beaudry, M.E. Berens, “An Image Mining Approach for Measuring Intensity, Size and Geographical localization of Stained Bodies in Cultured Cells: Application in Apoptosis Detection”, Technical Report, TR-03-010, Department of Computer Science and Engineering, Arizona State University, Tempe, AZ 85287, 2003.
21. B. Gu, F. Hu, and H. Liu, “Sampling and Its Applications in Data Mining: A Survey”, School of Computing, National University of Singapore, Technical Report, TRA6-00, 2000.
22. F. Hussain, H. Liu, C.L. Tan, and M. Dash, “Discretization: An Enabling Technique”, Technical Report, TRC6/99, School of Computing, National University of Singapore, June, 1999.
23. N.A. Syed, H. Liu and K.K. Sung, “From Incremental Learning to Model Independent Instance Selection - A Support Vector Machine Approach”, Technical Report, TRA9/99, School of Computing, National University of Singapore, September, 1999.

Book Reviews

1. “Machine Learning, Neural and Statistical Classification” edited by D. Michie, D.J. Spielhalter and C.C. Taylor. SIGART BULLETIN, - A Quarterly Publication of ACM, vol.7 no.1. (January 1996):16.
2. “Neural Networks for Statistical Modeling” by M. Smith. The Australian Computer Journal, vol. 25, no. 4 (November 1993): 165.
3. “AI in Engineering Design” edited by C. Tsong and D. Sriram. The Australian Computer Journal, vol. 25, no. 4 (November 1993): 163.

INVITED TALKS

- “Social Media Mining: A Bountiful Frontier in AI and Data Science”, ACM SIGKDD 2022 Innovation Award Speech, August 15, 2022. Washington DC
- “Defense against Disinformation on Social Media and Its Challenges”, Keynote, ACM SIGKDD Workshop on Mis2-TrueFact 2022: Joint International Workshop on Misinformation and Misbehavior Mining on the Web & Making a Credible Web for Tomorrow, August 15, 2022. Washington DC
- ”Striving for Socially Responsible AI”, Keynote, First ACM SIGKDD Workshop on Ethical Artificial Intelligence: Methods and Applications (EAI), August 15, 2022. Washington DC
- “Defense against Disinformation on Social Media and Its Challenges”, Invited, ICML Workshop on Disinformation Countermeasures and Machine Learning (DisCoML), July 23, 2022
- “Social Media Mining: A Bountiful Frontier in AI and Data Science”, The Hong Kong Polytechnic University Distinguished Data Science and AI Seminar, May 6, 2022
- “Defense against Disinformation on Social Media and Its Challenges” Keynote, The International Symposium on Foundations and Practice of Security (FPS 2021), December 7, 2021
- “Social Media Mining: A Bountiful Frontier in AI and Data Science”, CS Invited Speaker Colloquia, Binghamton University, SUNY. October 15, 2021

- “Striving for Socially Responsible AI in Data Science”, Keynote, APWeb-WAIM2021, August 23, 2021
- “Next Frontiers in Combating Cyber Social Threats”, Keynote, the Cyber Social Threats Workshop (CySoc) at ICWSM 2021, June 7, 2021.
- “The Role of AI in the Future of News Intelligence”, Panel on The Future of News Intelligence, The First International Workshop on News Recommendation and Intelligence at the The Web Conference, April 14, 2021
- “Some Unique Problems with Social Media Data for Machine Learning and AI”, ASU Mathematics NSF-Sponsored Research Training Group Seminar, April 12, 2021
- “Some Unique Problems with Social Media Data for Machine Learning and AI”, ASU New College, Machine Learning Day, Keynote, April 9, 2021
- “Some Unique Challenges for Social Media Mining”, Amazon Tech Talk, 3/12/2021
- “Some Unique Problems with Social Media Mining”, Google Tech Talk, 3/4/2021
- “Big Social Media Data: Challenges and Opportunities for AI, CS, and Data Science”, CS Colloquium, Rice University, December 3, 2020
- “Some Challenges in Combating Disinformation on Social Media”, Melbourne Center for Data Science Seminar, Australia, October 30, 2020
- “Privacy Paradox on Social Media - Can Users Have Privacy?”, GAITC Secure Collaborative Intelligence Forum, July 26, 2020
- “Challenges in Combating Disinformation on Social Media”, BAAI Conference, Invited Talk, Track on Intelligent Information Retrieval and Mining, Beijing, 6/23/2020
- “Lessons Learned from Fake News Detection on Social Media”, Invited Talk, Chongqing University, CCF Forum, online presentation. June 7, 2020.
- “Some Lessons Learned in Detecting and Explaining Fake News on Social Media”, Invited Talk with Kai Shu, online presentation at the Data Science for Fake News workshop, PAKDD 2020, Singapore. May 11, 2020.
- “Illuminating Social-Media Intelligence with Cognitive Science”, UCSB Mind & Machine Intelligence Workshop, Santa Barbara, CA. 2/19-21/2020 Disinformation, Countermeasures, and Future Technologies, Facilitator, NAS Facilitating Greater S&T Access Workshop, Washington DC, 2/7/2020
- “Social Media Intelligence - a New Breed of Intelligence” at the Conference Panel on “Human Intelligence and Machine Intelligence: Friend or Foe”, IEEE CIC, IEEE CogMI and IEEE TPS, December 13, 2019. Los Angeles, CA.
- “The Need for Knowledge in Machine Learning in the Age of Big Data”, Keynote, Track on Cognitive Graphs and Reasoning, CNCC2019, Suzhou, China. October 17, 2019.
- “Drowning in Misinformation - A Pressing Need for Multidisciplinary Research”, Social Cybersecurity Working Group, Oct 3, 2019. “Data, Privacy, and Evaluation at Scale: Some Challenging Problems with Big Social Media Data and NLP”, Keynote, NLP Track, Aspara Conference (Yunqi), Hangzhou, China, Sept 26, 2019.

- “Big Social Media Data and Challenges for KDD”, Keynote, 15th International Workshop on Mining and Learning with Graphs (MLG19), in conjunction with KDD’19, August 5, 2019. Anchorage, Alaska.
- “Some New Data Challenges in Data Science”, Keynote, IEEE 20th International Conference on Information Reuse and Integration for Data Science (IEEE IRI2019), Los Angeles, CA. July 30, 2019.
- “Beyond Competition: What else can we use social media data for?”, July 8, 2019; “Some Interesting Problems with Big Social Media Data and Machine Learning”, July 9, 2019. Tencent Advertisement Algorithms Competition. Shenzhen, China.
- “AI, Adversarial Learning, and Looming Threats”, TSA-CAOE Symposium on Innovations in Transportation Security, Panel Session 3: Transportation Security Threat Deterrence, Tempe, AZ. June 25-26, 2019
- “Big Social Media Data and New Challenges for Machine Learning”, Keynote, the 6th International Symposium on Networks, Computers and Communications (ISNCC 2019), Istanbul, Turkey. June 18-20, 2019.
- “Big Social Media Data and New Challenges for Machine Learning”, Invited Talk, School of EIEE, Shanghai Jiaotong University, April 19, 2019.
- “Big Social Media Data and New Challenges for Machine Learning”, Invited Talk, Department of Computing, Hong Kong Polytechnic University, April, 2019.
- “Big Social Media Data and New Challenges for Machine Learning”, Keynote, 16th International Conference on Information Technology: New Generations, Las Vegas, April 2, 2019.
- “Introduction of Data Mining and Machine Learning”, Invited Talk, meeting with fellows at Knowledge Exchange for Resilience (KER), ASU, Feb 22, 2019.
- “Big Social Media Data and New Challenges for Machine Learning”, Invited Talk, ASU NSF RTG Seminar on ”Data-Oriented Mathematical and Statistical Sciences.” Feb 4, 2019.
- “Big Social Media Data and New Challenges for Machine Learning”, Invited Talk as a distinguished speaker, 2018 International Conference on Data Science, Shanghai. December 15-18, 2018.
- “Data and Evaluation Challenges in Social Media Mining”, Keynote, the Second International Workshop on Automation in Machine Learning and Big Data (AtuoML), co-located with IEEE BigData2018, Seattle, Washington. December 13, 2018.
- “Research Opportunities in Social Media Mining: Tools, Data, and Challenges”, Second International Workshop on Artificial Intelligence and Optimization (WAIO18), remote participation via video conferencing, Chiapas, Mexico. November 8, 2018
- “Big Social Media Data and Challenges for Machine Learning”, School of Computer Science, Beijing University of Posts and Telecommunication, Beijing, October 17, 2018
- “Hypes, Reality, and Opportunities of Big Social Data”, Panelist, IEEE Services 2018, San Francisco, CA. July 6, 2018.
- “Big Social Media Data and Some Associated Challenges”, Northwestern Polytechnical University, Xi’an. June 7, 2018.

- “Big Social Media Data and Some Associated Challenges”, FuDan University, Shanghai. June 4, 2018.
- “Mining Misinformation and Fake News on Social Media”, The First Joint CS Guest Seminar and ISCS AT&T Distinguished Speaker Series, University of Texas, San Antonio, March 27, 2018.
- “Social Computing Challenges in the Age of Misinformation/Fake News”, Invited Lightning Talk, South Big Data Hub ”Security, Networks, and Social Computing Working Group”, March 1, 2018.
- “Challenges in Acquiring Social Media Intelligence from Data”, ARL Research Talk, Adelphi, MD, Feb 21, 2018
- “Big Social Media Data and Some Associated Challenges”, Invited Talk in Big Data Analytics, International Conference on Data Science, Shanghai, China. December 17 - 19, 2017.
- “Ethics and Professionalism in the age of Social Data”, Panel, IEEE International Conference on Data Mining (ICDM), New Orleans, Louisiana. November 21, 2017.
- “From AI to AI: Acquiring Intelligence in Big Data - A Social Media Study”, Taian, AI and Technology Track, AI and Law Conference, Taian, Shandong, China. September 1, 2017.
- “Big Data + Deep Learning = A Universal Solution?”, Keynote, 6th International Workshop on Big Data, Streams and Heterogeneous Source Mining: Algorithms, Systems, Programming Models and Applications (KDD BigMine 17), Halifax, Nova Scotia, Canada. August 14, 2017.
- “From AI to AI: Acquiring Social Media Intelligence via ‘Big’ Data”, Keynote, International Conference on Social Computing, Behavioral-Cultural Modeling & Prediction and Behavior Representation in Modeling and Simulation (SBP-BRiMS2017), Washington DC, July 7, 2017.
- “Tactics, Techniques and Procedures in the Social Media Environment”, Panel, Trends in Social Media and Their Further Development Seminar, Riga, Latvia. March 20, 2017.
- “When AI Meets Social Media Intelligence - The Need for New Thinking and New Methods”, South Big Data Hub, Data Science Roundtable on Anti-Social Computing: Bots, Lies, and the New Information Environment, Institute for Software Research, CMU. March 9, 2017.
- “The Good, the Bad and the Ugly: Uncovering Novel Opportunities of Data Science”, Shanghai Jiao Tong University, Shanghai, China, December 26, 2016.
- “Searching for Credible Information via Social Media Mining”, Beijing University of Technology (BJUT), Beijing, China, December 22, 2016.
- “Evaluation Dilemmas in Social Media Research”, Keynote, NLPCC-ICCPOL2016, Kunming, China, December 2-6, 2016
- “Fundamentals and Challenges in Mining Social Media”, NLPCC-ICCPOL 2016 Tutorials / ADL 74 Program, Kunming, China, December 2-4, 2016.
- “The Good, the Bad and the Ugly: Uncovering Novel Opportunities of Data Science”, Keynote, Duke Forest Conference 2016, Durham North Carolina, November 11-13, 2016
- “Some Challenges in Using Social Media Data for Disaster Response”, Keynote, CIKM2016 Workshop on Social Web for Disaster Management (SWDM’16) October 28, 2016

- “Evaluation Dilemmas in Social Media Research”, Keynote, 28th Conference on Computational Linguistics and Speech Processing (ROCLING2016), Tainan, Taiwan, October 6-7, 2016
- “The Good, the Bad and the Ugly: Uncovering Novel Opportunities of Data Science”, CUHK, June 16, 2016
- “The Good, the Bad and the Ugly: Uncovering Novel Opportunities of Data Science”, CAS Institute of Software, June 14, 2016
- “The Good, the Bad and the Ugly: Uncovering Novel Opportunities of Data Science”, MSRA, June 13, 2016
- “Big Data and Deep Learning: Are They Made for Each Other?”, NSF Panel, SIAM International Conference on Data Mining (SDM2016), Miami, FL. May 6, 2016.
- “The Good, the Bad and the Ugly: Uncovering Novel Opportunities of Data Science”, University of Technology Sydney, AAI, Australia, April 19, 2016.
- “The Good, the Bad and the Ugly: Uncovering Novel Opportunities of Data Science”, IACS, Stony Brook University, NY, April 7, 2016.
- “Mining Social Media Data”, Hohai University, Jan 21, 2016; Nanjing University of Posts and Telecommunications, Jan 22, 2016.
- “Mining Social Media Data: Some Lessons Learned”, CS Graduate Colloquium, Brigham Young University, Nov 5, 2015
- “Discovering Negative Links on Social Networking Sites”, Yahoo!-DAIS Seminar, UIUC, Oct 30, 2015
- “Machine Learning for Computational Social Science”, CCS2015 Satellite Workshop of Computational Social Science: Contagion, Collective Behaviour, and Networks”, Tempe, AZ. October 1, 2015.
- “Mining Social Media Data for Behavior Analytics”, Plenary Presentation, Conference on Complex Systems (CCS2015) , Tempe, AZ. September 29, 2015.
- “Discovering Negative Links on Social Networking Sites”, Keynote, AusDM2015 and ICDS2015, Sydney, Australia. August 8-9, 2015
- “Employing Machine Learning to Help Verifying Research Hypotheses”, Invited Talk, Sister-Conference Presentation in Machine Learning Track, IJCAI2015. Buenos Aries, Argentina. July 30, 2015.
- “Data Mining and Advanced Topics”, Chinese Academy of Sciences (CAS) DragonStar Summer Lectures, Guilin, China. July 9-14, 2015
- “Advancing the Frontier of Social Media Mining”, invited talk, ICDM2014 Workshop on Social Multimedia Data Mining, Shenzhen, China. December 14, 2014.
- “Social Media Mining: Looking Ahead”, invited talk, Second HKUST-USC Big Data Applications Workshop, HKUST, China. December 12, 2014.
- “Social Meida Mining: Looking Ahead”, invited talk, Third China National Conference on Social Media Processing, Beijing, China. November 2, 2014.

- “Mining Social Media: Big Data, New Challenges”, keynote, Big Data Summit, Sydney, Australia. October 27 - 28, 2014.
- “Deepening Our Understanding of Social Media via Data Mining”, invited talk, LinkedIn, CA. October 6, 2014.
- “Keeping Pace with Big Data: A Data Mining Perspective”, keynote, NSF Workshop on Big Data Analytics for Infrastructure and Building Resilience and Sustainability, Beijing. Sept 19-20, 2014.
- “Advancing the Frontier of Social Media Mining”, CIDSE Faculty Talk Series, School of Computing, Informatics, and Decision Systems Engineering, Arizona State University, Tempe, AZ. September, 2014.
- Summer School on Foundations and Applications of Social Network Analysis & Mining, Hellenic American College, Athens, Greece. June 2-6, 2014.
- “Deepening Our Understanding of Social Media via Data Mining”, complexnetworks.fr, Jussieu, Universit Pierre-et-Marie-Curie, Paris. May 30, 2014.
- “Advancing the Frontier of Social Media Mining”, keynote 2014 AI Forum, National Taipei University, New Taipei City. May 17, 2014.
- “Some Challenging Problems in Mining Social Media”, Academic Seminar, East Bank, University of Minnesota, SOBACO (Social Media and Business Analytics Collaborative), April 22, 2014.
- “New Data Mining Opportunities of Social Media”, Industry Seminar Carlson School of Management, West Bank, University of Minnesota, SOBACO (Social Media and Business Analytics Collaborative), April 22, 2014.
- “Deception and Detection in Social Media”, AAAI2014 Spring Symposium on Social Hacking and Cognitive Security on the Internet and New Media, March 24, 2014. Stanford University
- “Too Messy to Understand? New Challenge in Mining Social Media”, CSE, Texas A&M University, December 4, 2013.
- “Too Messy to Understand? New Challenge in Mining Social Media”, EECS, Northwestern University, November 12, 2013.
- “Social Computing Challenges in Research and Applications” at Seminar on Social Computing and Crisis in the New Information Age, October 8 - 9, 2013. Brussels, Belgium. <http://www.iscintelligence.com/event.php?id=107>
- “Some Computational Challenges in Mining Social Media”, Keynote, The 2013 IEEE/ACM (ASONAM2013) International Conference on Advances in Social Network Analysis and Mining, August 25-28. Niagra Falls, Canada.
- “Making Sense of Social Media Data - Some of Our Lessons”, Invited Talk, Yahoo!-DAIS Seminar, UIUC. August 22, 2013.
- “A Brief Introduction to Social Media Mining”, China Computer Federation (CCF), Advanced Disciplines Lectures on Social Networks and Data Mining, Invited Lecture, August 3, 2013. Beijing, China.

- “Making Sense of Social Media Data - Some of Our Lessons”, Invited Talk, Seminar on Social Media and Big Data. August 2, 2013. Tsinghua University, Beijing.
- “Understanding Behavior in a Networked World via Social Media”, Invited Talk, July 30, 2013. National Cheng Kung University, Tainan.
- “Understanding Behavior in a Networked World via Social Media”, Invited Talk, July 26, 2013. National Taiwan University, Taipei.
- “Some Computational Challenges in Mining Social Media”, Invited Talk, July 25, 2013. Sinica Academia, Taipei.
- “Understanding Behavior in a Networked World via Social Media”, Plenary Talk, International Conference on Social Intelligence and Technology, SOCIETY2013, State College, Pennsylvania. May 9, 2013.
- “Some New Data-Mining Challenges with Social Media Data”, Keynote, the 17th Pacific-Asia Conference on Knowledge Discovery and Data Mining, Gold Coast, Australia. April 16, 2013.
- “Understanding Behavior in a Networked World via Social Media Data”, Invited Plenary Talk, International Conference on Computing, Networking and Communications, San Diego, CA. January 30, 2013.
- “Computing with Social Media Data”, Invited Talk, the Center for Social Dynamics & Complexity”, Arizona State University, January 24, 2013.
- “Some Computing Challenges in Understanding Social Media Data”, Keynote, the 4th China National Conference on Social Computing, November 15-16, 2012. Beijing, China.
- “Location-Based Social Networks”, Mobile Cloud Computing Panel, 26th IEEE Annual Computer Communications Workshop (CCW), November 9, 2012. Sedona, AZ.
- “Mining Social Media - A Brief Introduction”, Invited Tutorial, INFORMS, Annual Meeting, October 16, 2012. Phoenix, AZ.
- “Mining Social Media - A Brief Introduction”, Decision Systems Seminar, School of Computing, Informatics, and Decision Systems Engineering, October 11, 2012
- “Some ‘Big Data’ Challenges in Mining Social Media Data”, Computer and Information Science, IUPUI, September 7, 2012
- 3 Invited Talks on Social Computing, Beihang University, Beijing, August 8, 15 and 16, 2012
- “Some Challenges in Understanding Social Media”, Shanghai Jiaotong University, Shanghai, May 28, 2012.
- “Some Challenges in Mining Social Media Data”, Chinese Academy of Sciences, Beijing, May 25, 2012.
- “Some Challenges in Understanding Social Media”, Renmin University of China, Beijing, May 24, 2012.
- “Social Computing: Developing Theories and Advancing Applications”, Symposium on Web Data Science and Engineering - A New Inter-discipline, the Xiangshan Science Conference Series, Beijing, May 23, 2012.

- “Mining Social Media for Actionable Knowledge”, Integrated R&D Informatics & and Knowledge Management, the 19th Molecular Med TRI-CON 2012, Moscone North Convention Center, San Francisco, CA. Feb 22, 2012.
- “Mining Patterns in Social Media - A New Frontier”, The 3rd Workshop on Domain-Driven Data Mining with ICDM 2011, Keynote, Vancouver, Canada. December 11th, 2011.
- “Mining Social Media - Issues sand Challenges”, The 3rd SIGMM Workshop on Social Media in Conjunction with ACM Multimedia 2011, Keynote, Scottsdale, AZ. November 29th, 2011.
- “Understanding Collective Behavior in Social Media”, The 23rd IEEE International Conference on Tools with AI, Keynote, Boca Raton, Florida. November 8th, 2011.
- “When Connected, Are We Still in Control of Our Destinies?”, Language Technologies Institute Colloquium, Carnegie Mellon University, October 7, 2011.
- “In Social Media, Your Vulnerability May Be Beyond Your Control”, Information Assurance Center Monthly Seminar, Arizona State University, September 30, 2011. co-presentation with Pritam Gundecha.
- Invited Tutorial on “Exploiting Attribute-Value and Linked Data - Complexities and Opportunities in Social Computing”, Air Force Research Lab - Wright Patterson Workshop on “Computational Methods for Complex Data Analysis”, September 6-7, 2011.
- Invited Lecture, Lipari School of Computational Social Science on “Community Detection and Mining in Social Media”, Lipari Island, Italy, July 16 - 23, 2011.
- “Studying Human Behavior in Social Media”, LinkedIn, Mountain View, CA. July 7, 2011.
- “Studying Social Behavior in Social Media”, Department of Information Science and Electronic Engineering, Zhejiang University, December 18, 2010.
- “Studying Social Behavior in Social Media”, PAKDD2010 Workshop on Behavior Informatics (BI’10), June 21, 2010. Hyderabad, India.
- “Building a Social Media Tool for Sociological Studies”, ”Social Science and Social Computing: Steps to Integration” Workshop, May 22-23, 2010, University of Hawaii, Hawaii.
- “Searching for ‘Familiar Strangers’ in Blogosphere”, Annual Workshop on Information Assurance Research and Education, Information Assurance Center, Arizona State University, May 6, 2009.
- “Searching for Influencers and ‘Familiar Strangers’ in Blogosphere”, Navy Center for Applied Research in Artificial Intelligence, Naval Research Lab, NCARAI 2008-2009 Seminar Series, April 20, 2009.
- “Blogosphere, Communities, and Influential Bloggers”, University of Southern California, November 18, 2008.
- “Prognostics Health Management and Data Mining”, Adaptive Intelligent Materials and Systems (AIMS) Center Research Forum, Ira A. Fulton School of Engineering, Arizona State University, November 12, 2008.
- “Data Mining and Social Computing - Moving Forward in Interdisciplinary Research”, Computer Science and Engineering, Faculty Seminar Series, September 26, 2008

- “Data Mining and Machine Learning Overview”, Ira A. Fulton School Engineering, Research and Graduates Service Research Breakfast Forum on Computing and Informatics, September 24, 2008
- “Blogosphere: An Open Data Source for Social Cultural Research”, The AFOSR Workshop on Mathematical Process of Social-Cultural Modeling, Santa Barbara, September 4, 2008
- “Blog Community and Influential Bloggers”, Computer Science Department, University of California, Santa Barbara, September 2, 2008
- “Finding Influential Bloggers in a Community”, Microsoft Research, October 29, 2007
- “Searching for ‘Familiar Strangers’ on Blogosphere”, Microsoft AdCenter, October 29, 2007.
- “Evolving Feature Selection”, IBM T.J. Watson Research Center, July 6, 2007.
- “Online Group Interactions”, Air Force Research Lab, Rome, NY, June 22, 2007.
- “Active Feature Selection with Large Amounts of Data” M2004, The 7th Annual Data Mining Technology Conference, October, 2004.
- “Steganography and Data Mining”, IEEE Computer Society Phoenix, March, 2005.
- “An Introduction to Steganography with a Case Study of Steganalysis”, Lockheed-Martin and ASU Seminar, November, 2004.
- “Mining Learning and Assisting”, Microsoft Research Asia, July, 2004.
- “Data Mining and Data Warehousing”, Microsoft Research China, 2001.
- “Feature Selection and Instance Selection for Data Mining”, Management Information Systems, University of Arizona, October, 2000.
- “Feature Selection and Instance Selection”, Motorola Research Labs, June, 2000.
- “Feature Selection for Data Mining”, Microsoft Research China, 1999.
- “How the Service Industry Has Used Data Mining for Better Customer Service Management and Profitability”, Data Warehousing and Data Mining Conference – Using Information Technology to Achieve Business Goals, Asia Business Forum, 25 - 26 January 1999, Singapore.
- “A Brief Introduction of AI”, Singapore Ministry of Education Gifted Education Program 1998.
- “Preprocessing Tasks in Data Mining”, Kansai Advanced Research Center, Japan, May, 1997.
- “Data Mining and Applications”, Computer Science and Engineering, Kyushu Institute of Technology, Japan, May, 1997.
- “Feature Selection for Machine Learning”, Graduate School of Systems Management, The University of Tsukuba, Tokyo, Japan, May 1997.
- “Feature Selection for Machine Learning”, Computer Science, Tokyo Institute of Technology, Japan, May 1997.
- “An Approach to Verifying Knowledge Bases”, Computer Science Department, Monash University, Clayton, Australia, April, 1993.

- “Using Features in Concept Learning and Formation”, Robotics and Digital Technology Department, Monash University, Clayton, Australia, March, 1993.
- “Acquiring Knowledge through Concept Formation”, Systems Engineering Department, The Chinese University of Hong Kong, Hong Kong, March, 1993.
- “Planning with Intentions”, Computer Science Department, Hong Kong University of Science and Technology, Hong Kong. October, 1992.
- “Joint Concept Formation and Abstraction”, Computer Science Department, Hong Kong University, Hong Kong. September, 1992.
- “Concept Formation”, Computer Science Department, National University of Singapore, Singapore. September, 1992.
- “Applying Artificial Intelligence (AI) to Telecommunications”, Computer Science Department, Australia National University, Canberra, Australia. June, 1991.
- “AI in Telecommunications Networks Design”, Computer Science Department, University of Southern California, Los Angeles, U.S.A. Feb. 1991.
- “Grasping, Intentions and Planning”, Communications Research Laboratory, Kansai Advanced Research Center, Japan. Nov. 1990.
- “Some Cognitive Processes in Problem Solving”, (with Helga Rowe from ACER, Melbourne), at the Cognitive Science Meeting in Psychology and Computer Science Departments, Melbourne University, Melbourne, Australia. Oct. 1990.

PROFESSIONAL ACTIVITIES

EDITORIAL BOARD/ASSOCIATE EDITOR/ADVISORY BOARD

- Editor in Chief, ACM Transactions on Intelligent Systems and Technology (TIST) (August 1, 2021 - July 31, 2024)
- Founding Field Chief Editor Frontiers in Big Data (2019 -) and founding Specialty Chief Editor for Data Mining and Management (2018 -)
- SAGE Field Methods, Editorial Board, (2020 -)
- Founding Book Series Editor on Understanding AI: NLP, Causality, Fairness and Ethics, CRC Press (2019 -)
- Online Social Networks and Media (OSNEM), Elsevier (2017 - 2018)
- ACM Transactions on Social Computing, (2016 - 2019)
- Encyclopedia of Social Network Analysis and Mining, Section Editor of Social Communities (2012 -), Board Member (2016 -); 1st edition published in 2014
- ACM Transactions on Intelligent Systems and Technology (TIST), (Editorial Board) 2010 - ; Interim Editor in Chief, January - May, 2015
- IEEE Transactions on Network Science and Engineering, Associate Editor, 2014 - 2018

- Lecture Notes in Social Networks by Springer, Advisory Board, 2012 - 2017; Series Editor, 2017 -
- Social Network Analysis and Mining Journal, Editorial Board, Springer, 2011 -
- Wiley Statistical Analysis and Data Mining, 2008 -
- Editorial Board, Applied Intelligence, 2006 - 2011;
- The Encyclopedia of Data Warehousing and Mining, Idea Group, Inc. 2004 - 2009;
- The Handbook of Data Mining, Lawrence Erlbaum Associates, Inc. Publishers, 2002 - 2004;
- Knowledge and Information Systems, 2003 - 2006;
- Informatica - An International Journal of Computing and Informatics, 1999 - 2011;

ADVISORY BOARD/COMMITTEE

- The Arkansas National Science Foundation EPSCoR Track-1 project, Data Analytics that are Robust and Trusted (DART), 2021 -
- Department of Computing, The Hong Kong Polytechnic University, DAC, 2020 -
- Centre for Trusted Internet and Communities, National University of Singapore, External Panel, 2020 -
- University of Southern California, Information Sciences Institute 50th Anniversary - Advisory Committee, 2021

INVITED SPECIALIST MEETING AND INITIATIVES

- National Academy of Sciences (NAS) Workshop Facilitator, on “Facilitating Greater S&T Access”, Feb 7-8, 2020. Washington DC.
- NSF SCS Diffusion Workshop on “Social Cyber-Security and Disinformation”. May 30 - 31, 2019. Washington DC
- American Statistical Association (ASA) President (Karen Kafadar)’s **Initiative** on the Role of Statistics and Computer Science in Fake News chaired by Jun Yang and Jessica Utts, 2019
- ARPA-E’s Machine Learning-Enhanced Energy-Product Development, Falls Church, June 21-22, 2018.
- ARL Science Planning & Strategy Meeting (ASPSM), Uncertainty Quantification, Los Angeles, January 30, 2018.
- Microsoft Faculty Summit, Seattle, July 16-18, 2017.
- Microsoft Faculty Summit, Seattle, July 13-15, 2016.
- Adobe’s Data Science Symposium, May 26, 2016. Silicone Valley, CA.
- ARO Workshop on Trustworthy Human-Centric Social Networking, May 12 -13, 2016. Phoenix, AZ.

- IARPA Societally Impactful Rare Events (SIRE) Technical Workshop, April 4-5, 2016. Falls Church, Virginia.
- Dark Web Workshop, March 22-24, 2016. Naval Postgraduate School, Monterey, California.
- Adobe's Data Science Symposium, May 28, 2015. Silicone Valley, CA.
- ARO's Computing Sciences Strategy Planning Workshop, Oct 14-15, 2014. Adelphi Laboratory Center.
- AAAI2014 Spring Symposium on Social Hacking and Cognitive Security on the Internet and New Media, March 24-26, 2014. Stanford University.
- NSF/ACM Workshop on Social Computing, Arlington, October 3-5, 2013. Arlington, VA.
- Symposium on Web Data Science and Engineering - A New Inter-discipline, the Xiangshan Science Conference Series, Beijing, May 23, 2012.
- DARPA Workshop on Big Data and Health, March 23, 2012, Arlington, VA.
- NSF Discovery Informatics Workshop: Science Challenges for Intelligent Systems, February 2 - 3, 2012 <http://diw.isi.edu/diw2012>, Arlington, VA.
- ARO Workshop on Weak Social Ties: Quantification, Metrics and Modeling, by-invitation only workshop, December 1-2, 2011, Duke University.
- ARO Spatio-Temporal Constraints on Social Networks, December 13-14, 2010, UC Santa Barbara.
- National Research Council Workshop on New Research Directions for National Geospatial-Intelligence Agency (NGA) May 17-19, 2010, Washington, D.C.
- Google Faculty Summit, July 24-25, 2008.

STEERING COMMITTEE

International Conference on Social Computing, Behavioral-Cultural Modeling, and Prediction, 2009 - 2015, Co-Chair; 2009 - present, Member.

Pacific-Asia Conference Series on Knowledge Discovery and Data Mining, 1998 - present, Member.

AWARD COMMITTEES

IEEE 2022 Computer Society Fellow Evaluating Committee

SIGKDD2019 Test of Time Award

SIGKDD2019 Doctoral Dissertation Award

SDM/IBM 2019 Early Career Data Mining Researcher Award

PAKDD 2018, 2019 Awards Committee

SIGDD 2017 Doctoral Dissertation Awards

SBP 2015, Best Papers and Best Student Papers Award Committee, Washington D.C.
March 31 - April 3, 2015.

SIGKDD 2014, Best Dissertation Award Committee, Chair. New York, August, 2014.

Pacific-Asia Conference Series on Knowledge Discovery and Data Mining (PAKDD 2014),
Most Influential Paper Award Committee, Chair. Tainan, May 2014.

CONFERENCE OR PROGRAM COMMITTEE CO-CHAIR, AND OTHERS

- ACM WSDM 2022, Conference Co-Chair
- IEEE CogMI 2021, PC Co-Chair
- IEEE ICDM 2021, Newcomers Chair
- IJCAI 2021, Senior Area Chair
- AAAI 2021 Workshop on Combating Online Hostile Posts in Regional Languages during Emergency Situation (CONSTRAINTS), Co-Chair.
- The Second IEEE International Conference on Cognitive Machine Intelligence (CogMI), December 1-3, 2020. Online. General Co-Chair
- IEEE 2020 CogMI Plenary Panel on Cognitive Machine Intelligence and Killer Applications, December 1-3, 2020. Online. Moderator
- ACM CIKM 2020 Workshop on “Mining Actionable Insights from Social Networks”, Co-Chair
- IJCAI-PRICA 2020, Area Chair
- AAAI 2020, Area Chair
- The First IEEE International Conference on Cognitive Machine Intelligence, PC Co-Chair, December 12-14, 2019. Los Angeles, CA.
- IEEE Big Data 2018, Conference Co-Chair, Seattle, WA.
- SIGKDD Workshop on Big Scholarly Data, Co-Chair, 2018 (London, UK)
- ICDM 2019, Area Chair
- IJCAI 2019, Area Chair
- AAAI 2019, Area Chair
- ICDM 2017, Area Chair

- WWW Workshops on Big Scholar Data, Co-Chair, 2014 (Seoul, Korea), 2015 (Florence, Italy), 2016 (Montreal, Canada), 2017 (Perth, Australia)
- ICDM 2016, Area Chair
- IJCAI 2016, Area Chair of Machine Learning, New York, NY.
- ICDM15 Workshop Co-Chair BEAMS2015: Behavior Analysis, Modeling, and Steering, November 14, 2015, Atlantic City, NJ.
- ASONAM 2015, General Co-Chair, Paris, France. August 25 - 28, 2015.
- IJCAI 2015, Area Chair of AI and Web, Buenos Aires, Argentina. July 25 - 31, 2015.
- AAAI2015 Spring Symposium (SS-15-05), Co-Chair, Sociotechnical Behavior Mining: From Data to Decision, Palo Alto, CA. March 23, 2015.
- ICDM 2014, Area Chair, Shenzhen, China. December 14 - 17, 2014.
- CIKM 2014, PC Track Chair on Web and Social Data Management, Shanghai, China. November 3 - 7, 2014.
- First WWW2014 Workshop on Big Scholarly Data: Towards the Web of Scholars, Seoul, Korea, April 8, 2014.
- IEEE ICC 2014 Symposium on Social Networks and Big Data, Co-Chair, Shanghai, China, October 13-15, 2014.
- The 14th International Conference on Web-Age Information Management (WAIM 2013), Beidaihe, China, June 14-16, 2013.
- ARO Workshop on Human-Centric Computing with Collective Intelligence, co-organizer, October 30-31, 2012
- SIAM International Conference on Data Mining (SDM'11 and SDM'12), Conference co-chair, 2011 and 2012.
- International Conference on Social Computing, Behavioral-Cultural Modeling, and Prediction, Sponsorship Co-Chair, 2011, 2012.
- IEEE/ACM International Conference on Cyber, Physical, and Social Computing (CPSCom'11), Panel Chair, 2011.
- IEEE/ACM International Conference on Cyber, Physical, and Social Computing (CPSCom'10), Conference co-chair, 2010.
- IEEE/ACM CPSCom'10, Panel Chair on Research Directions and Opportunities in Cyber, Physical, and Social Computing, 2010.
- International Workshop on Feature Selection for Data Mining (FSDM), Co-organizer, at PAKDD 2010.
- SIAM International Conference on Data Mining (SDM'09), PC co-chair, 2009.
- The Second International Workshop on Social Computing, Behavioral Modeling, and Prediction (SBP), Co-organizer, 2009

- International Workshop on Feature Selection for Data Mining (FSDM), Co-organizer, at ECML/PKDD 2008
- The First International Workshop on Social Computing, Behavioral Modeling, and Prediction (SBP), Co-organizer, 2008
- The 12th Pacific Asia Conference on Knowledge Discovery and Data Mining (PAKDD), Conference Co-Chair, 2008
- SIAM International Conference on Data Mining (SDM'08) 2008, Workshop Chair
- The 11th Pacific Asia Conference on Knowledge Discovery and Data Mining (PAKDD), PC Area Chair, 2007
- SIAM International Conference on Data Mining (SDM) 2007, Tutorial Chair
- The Second Feature Selection for Data Mining Workshop (FSDM) 2006, Co-Chair
- Pacific Rim International Conference on AI (PRICAI), PC Vice Chair, 2006
- The Tenth Pacific Asia Conference on Knowledge Discovery and Data Mining (PAKDD) 2006, Workshop Co-Chair
- PAKDD Distinguished Contribution Awards Committee member (2005, 2006)
- The Seventh Web-Age Information Management Conference (WAIM) 2006, Publicity Co-Chair
- The Ninth Pacific Asia Conference on Knowledge Discovery and Data Mining (PAKDD) 2005, PC Co-Chair
- The Symposium on Applications and Internet (SAINT) 2005, Proceedings Co-Chair
- The First Feature Selection for Data Mining Workshop (FSDM) 2005, Co-Chair
- Pacific Rim International Conference on AI (PRICAI) 2000, Workshop Chair
- The Sixth Pacific Asia Conference on Knowledge Discovery and Data Mining (PAKDD) 2002, Workshop Chair
- IJCAI 2001 Workshop on Wrapper Methods, Workshop Co-Chair
- The Fourth Pacific Asia Conference on Knowledge Discovery and Data Mining (PAKDD) 2000, PC Co-Chair
- The First Pacific Asia Conference on Knowledge Discovery and Data Mining (PAKDD) 1997, Publicity Chair
- The Sixth Australian Joint Conference on AI 1993, Organizing Co-Chair

BOOK SERIES EDITOR

- A New Book Series from CRC Press on Understanding AI: NLP, Causality, Fairness, and Ethics since 2019

GUEST EDITOR/CO-EDITOR

- Elsevier Information Management & Processing - Special Issue on Dis/Misinforamtion Mining from Social Media, due 1/20/2021, decision on 4/1/2021
- Springer Social Network Analysis and Mining (SNAM) - Special Issue on Tackling COVID-19 Infodemic, 2020 October due, 2021 to appear
- ACM Journal DTRAP: Special Issue on Fake-News Research, 2019 due, 2020 to appear
- IEEE Intelligent Systems: Special Issue on Non-IID Outlier Detection in Complex Contexts, 2019 due, 2020 to appear
- IEEE Intelligent Systems, Special Issue on Online Behavioral Analysis and Modeling, co-editor with Cui Peng, Charu Agarwal, and Fei Wang, 2016
- Uncovering Deception in Social Media, co-editor with Jiawei Han and Hiroshi Motoda, Springer Journal of Social Network Analysis and Mining, 2014
- AI, Social Network and Cultural Modeling, co-editor with Data Nau, ACM Transactions on Intelligent Systems ad Technology, (Part I) 2010, (Part II) 2012
- Social Computing in the Blogosphere, co-editor with Philip Yu, Nitin Agarwal, and Torsen Suel, IEEE Internet Computing, 2010
- Social Computing, Behavioral Modeling, and Prediction, co-editor with John Salerno, Michael Young, Rakesh Agrawal, and Philip Yu, ACM Transactions on Knowledge Discovery from Data, 2008
- Mining Streaming Data, co-editor with Jianping Zhang and Paul Wong, Journal of Information Sciences, Elsevier, 2006
- Evolving Feature Selection, IEEE Intelligent Systems, Trends and Controversies, Nov/Dec, 2005
- Instance Selection, Journal of Data Mining and Knowledge Discovery, co-editor with Hiroshi Motoda, 2001
- Feature Transformation and Subset Selection, co-editor with Hiroshi Motoda, IEEE Intelligent Systems, March/April, 1998.

CONFERENCE TUTORIALS

- SBP-BRiMS2022 Tutorial on “Machine Learning for Causal Inference”, September 20, CMU, Pittsburgh, PA. Raha Moraffah and Adrienne Raglin.
- SIG KDD 2022 Tutorial on “Toward Graph Minimally-Supervised Learning”, August 14-18, 2022. Washington, DC. Kaize Ding, Chuxu Zhang, Nitesh Chawla, Jie Tang.
- SDM 2022 Tutorial on “Socially Responsible AI for Data Mining: Theories and Practice”, April 29, 2022. Alexandria, Virginia. Hybrid. Lu Cheng, Fred Morstatter, HV Jagadish.
- ACM WSDM 2022 Tutorial on “Graph Minimally-supervised Learning”, February 21, 2022. Online. Kaize Ding, Jundong Li, Nitesh Chawla.
- SBP-BRiMS2021 Tutorial on “Socially Responsible AI Algorithms: Issues, Purposes, and Challenges”, with Lu Cheng and Fred Morstatter. Online

- SIGKDD2019 Tutorial on “Fake News Research: Theories, Detection Strategies, and Open Problems”, August, 2019, with Reza Zafarani, Xinyi Zhou, and Kai Shu. Anchorage, Alaska.
- ACM WSDM2019 Tutorial on Fake News: Fundamental Theories, Detection Strategies and Challenges, February 2019, with Xinyi Zhou, Reza Zafarani, and Kai Shu. Melbourne, Australia.
- IEEE ICDM2017 Tutorial on Mining Misinformation in Social Media: Understanding Its Rampant Spread, Harm, and Intervention, November 21, 2017, with Liang Wu and Giovanni Luca Ciampaglia. New Orleans, Louisiana.
- SIGKDD2017 Tutorial on Recent Advances in Feature Selection: A Data Perspective, August 13, 2017, with Jundong Li. Halifax, Nova Scotia, Canada.
- AAAI2017 Tutorial on *Social Data Bias in Machine Learning: Impact, Evaluation, and Correction*, with Fred Morstatter. February 4, 2017, San Francisco, CA.
- SBP-BRiMS2016 Tutorial on *Misinformation in Social Media: Diffusion, Detection and Intervention*, June 28, 2016, with Liang Wu and Fred Morstatter. Washington D.C.
- ASONAM2015 Tutorial on *Bot Detection in Social Media: Networks, Behavior, and Evaluation*, August 25, 2015, with Fred Morstatter and Kathleen Carley. Paris, France.
- International World Wide Web Conference, May 18, 2015. *LIKE and Recommendation in Social Media*, with Dongwon Lee. Florence, Italy.
- ACM RecSys October 6, 2014. *Personalized Location Recommendation on Location-based Social Networks*, with Huiji Gao and Jiliang Tang. Silicon Valley, CA.
- ACM SIGKDD August 24, 2014. *Recommendation in Social Media - Recent Advances and New Frontiers*, with Jiliang Tang and Jie Tang. New York, NY.
- Pacific-Asia Conference on Knowledge Discovery and Data Mining, May 14, 2014. *Mining Spammers in Social Media: Techniques and Applications*, with Xia Ben Hu. Tainan, Taiwan.
- International World Wide Web Conference, April 8, 2014. *Trust in Social Computing*, with Jiliang Tang. Seoul, Korea.
- IEEE International Conference on Data Mining, December 10, 2013. *Social Media Mining: Fundamental Issues and Challenges*, with Ali Abbasi and Reza Zafarani. Dallas, TX.
- INFORMS Annual Meeting, October 2012, *Mining Social Media - A Brief Introduction*, with Pritam Gundechar. Phoenix, AZ.
- The First IEEE International Conference on Social Computing (SocialCom’09), *Community Detection and Behavior Prediction for Social Computing*, with Lei Tang and Nitin Agarwal.
- The 14th ACM SIGKDD International Conference on Knowledge Discovery and Data Mining (KDD’08), *Blogosphere: Research Issues, Applications, and Tools*, with Nitin Agarwal.
- SIAM Data Mining (SDM) 2007, *Dimensionality Reduction for Data Mining - Techniques, Applications, and Trends*, with Lei Yu and Jieping Ye.
- National Conference on AI (AAAI) 2005, *Downsizing High-Dimensional Data for High Performance*, with Robert Stine.

- Pacific Rim International Conference on AI (PRICAI) 1998, *Data Mining: Process and Techniques*, with Bing Liu.

PROGRAM COMMITTEE MEMBER (RECENT AND SELECTED)

- ACM SIGKDD International Conference on Knowledge Discovery and Data Mining (KDD) 2000, 2006, 2007, 2008 (Senior PC member), 2009, 2010, 2011, 2012 - 2015, 2016 (Senior PC), 2017-2020, 2021 (Senior PC member), 2022 (Senior PC member)
- ACM International Conference on Web Search and Data Mining (WSDM), 2010, 2013, 2014, 2015 (Senior PC), 2016 (PC, Best Paper Awards), 2017 (Senior PC), 2018 (Senior PC, Best Paper Co-Chair), 2019, 2021 (Senior PC)
- International Conference on Machine Learning (ICML), 2021, 2022
- AAAI International Conference on Weblog and Social Media (ICWSM), 2014 - 2019
- National Conference on AI (AAAI) 2005 (Senior Member), 2007, 2008, 2016, 2017, 2018 (Senior PC), 2019 (Area Chair), 2020 (Area Chair), 2021 (PC, Best Paper Committee)
- International Joint Conference on AI (IJCAI), 2011 (IEAI Track), 2013 (Senior PC), 2015 (Area Chair), 2016 (Area Chair), 2018 (Senior PC), 2019 (Area Chair), 2021 (Senior Area Chair)
- ACM Conference Recommender Systems (RecSys), 2014, 2015, 2016, 2017
- ACM SIGIR 2017-2019, 2020 (Short-Paper Track), 2022
- International Conference on Advances in Social Network Analysis and Mining (ASONAM), 2011, 2012 (tutorial co-chair), 2013, 2015 (conf co-chair), 2016 - 2021
- SIAM International Conference on Data Mining (SDM) 2005, 2006, 2007, 2008, 2009 (Program Co-Chair), 2010 (Senior PC), 2011 (Conf Co-Chair), 2012 (Conf Co-Chair), 2013, 2014 (Senior PC), 2015 (Senior PC), 2017, 2022 (Senior PC)
- Pacific Asia Conference on Knowledge Discovery and Data Mining (PAKDD) 1997 - 2009, 2011, 2012, 2013 (Senior PC), 2014 (Senior PC)
- IEEE International Conference on Data Mining (ICDM) 2001 - 2007, 2009, 2010, 2011, 2013, 2014 (area chair), 2016 (Area Chair), 2017 (Area Chair + PhD Forum), 2019 (Area Chair), 2020, 2021 (Area Chair)
- International World Wide Web Conference (WWW), 2008, 2010, 2012, 2013 (PC and Demo), 2014 (PC and Demo), 2015, 2016 (Web Mining), WebConf 2020 (Senior PC, Web Mining & Content Analysis), 2022 (Senior PC)
- ACM Conference on Information and Knowledge Management (CIKM), 2006 - 2011, 2012 (Senior PC), 2013 (Senior PC), 2015 (Area Chair), 2016 (Senior PC), 2019 (Senior PC, Long, Short, Applied)
- IEEE International Conference on Big Data, 2013, 2017 (Senior PC), 2018 (PC Co-Chair), 2020, 2021, 2022

- International Conference on Social Computing, Behavioral-Cultural Modeling, and Prediction (SBP), 2010 - 2022, (Best Paper Awards, 2015)
- ACM Conference on Online Network Science (CONS), 2015
- International Workshop on Social Computing, Behavioral Modeling, and Prediction (SBP), 2008, 2009
- European Conference on Machine Learning/Practical Knowledge Discovery and Data mining (ECML/PKDD), 2008, 2010, 2011, 2017 PhD Forum, 2020
- ACM Workshop on Social Network Mining and Analysis with KDD (SNAKDD), 2010.
- IEEE International Conference on Social Computing (SocialCom), 2009, 2010
- International Conference on Pattern Recognition (ICPR), 2008, 2010
- Asian Conference on Machine Learning (ACML), 2009 (Area Chair), 2010 (Senior PC)
- Pacific Knowledge Acquisition Workshop (PKAW), 1998, 2002, 2004, 2010
- IEEE International Conference on Data Engineering Demo PC, 2009
- AAAI-09 Spring Symposium on Technosocial Predictive Analytics, 2009.
- IEEE International Conference on Granular Computing (GrC), 2006, 2008, 2009, 2010
- European Conference on Machine Learning/Practical Knowledge Discovery and Data Mining (ECML/PKDD), 2008, Antwerp, Belgium.
- ECML PKDD 2008 Workshop on New Challenges for Feature Selection in Data Mining and Knowledge Discovery (FSDM08), 2008, Antwerp, Belgium.
- International Conference on Machine Learning (ICML) 2000, 2005, 2006, 2008
- IEEE Symposium on Computer Intelligence and Data Mining (CIDM) 2007
- IEEE International Conference on Tools with Artificial Intelligence (ICTAI), 2006
- European Conference on Machine Learning (ECML) 2005
- International Conference, EC-Web, 2001 - 2007
- Asia Pacific Web Conference (APWeb), 2003 - 2005
- WebKDD, 2005, 2006, 2007, 2008
- Web-Age Information Management Conference (WAIM) 2001 - 2004, 2008
- ICML 2002 Workshop on Data Mining Lessons Learned
- SIAM 2002 Workshop on Web Analytics
- ICDM Workshop on Active Mining, 2002 - 2004

REVIEWING FOR JOURNALS

- Nature Scientific Reports
- Data Mining and Knowledge Discovery
- Journal of AI Research
- Journal Machine Learning Research
- Big Data & Society
- Machine Learning
- ACM Transactions on Knowledge Discovery from Data
- ACM Transactions on Intelligent Systems and Technology
- ACM Transactions on Information Systems
- ACM Transactions on Multimedia, Computing, Communications and Applications
- ACM Transaction on Web
- Computers in Human Behavior, Elsevier
- Journal of Computer and System Sciences
- Bioinformatics
- Journal of Intelligent Material Systems and Structures
- IEEE IEEE/ACM Trans on Computational Biology and Bioinformatics
- IEEE Trans. on Pattern Recognition and Machine Intelligence
- IEEE Trans. on Knowledge and Data Engineering
- IEEE Trans. on Cybernetics
- IEEE Trans. on Systems, Man, and Cybernetics
- IEEE Trans. on Neural Networks
- IEEE Trans. on Evolutionary Computing
- IEEE Trans. on Signal Processing
- Pattern Recognition
- Pattern Recognition Letters
- Knowledge and Information Systems
- Neurocomputing
- Applied Intelligence
- Multimedia Systems Journal
- ASME Trans. Journal of Computing and Information Science in Engineering

- Computers and Mathematics with Applications
- Decision Support Systems
- New Generation Computing
- Information Processing Letters,
- Journal of Decision Support Systems,
- International Journal of Computer Science and Applications
- Journal of Intelligent Information Systems
- International Journal of Adaptive Control and Signal Processing
- Informatica
- Data and Knowledge Engineering (DKE)

REVIEWING FOR BOOKS

- SAS
- SAGE
- Chapman & Hall/CRC
- John Wiley & Sons, Inc.
- Addison-Wesley
- Springer
- IEEE Press

GRANT PROPOSAL REVIEW/PANEL

- National Science Foundation, 2002-2004, 2007-2012, 2014, 2015, 2016, 2017, 2018, 2020, 2021
- Netherlands Organisation for Scientific Research (NWO), 2021
- AFOSR, 2009, 2011, 2012, 2015
- ARO, 2009, 2011, 2012, 2018, 2020, 2021, 2022
- NASA, 2004
- Swiss National Science Foundation, 2016
- National Commission for Scientific and Technological Research, Chile, 2013
- Hong Kong Research Grants Council, 2001, 2002, 2005-2011
- Science Foundation Ireland, 2001

UNIVERSITY SERVICES

- ASU SCAI Director Search Committee, Spring 2022 -
- ASU CIDSE Recruitment Committee for HPML-BD, Spring 2021
- ASU CIDSE Personnel Committee, Chair, Fall 2009; Member Spring 2010; Member Spring 2014 - Spring 2016; Chair, Fall 2015; Fall 2018 - Spring 2020
- ASU CIDSE Recruitment Committee for AI and ML, Spring 2019
- ASU University Working Group on Research Computing, Fall 2015 - Spring 2019
- ASU CIDSE Administration and Planning Committee, Spring 2013 - Spring 2014, Fall 2016 - Spring 2018; Fall 2020 -
- ASU FSE/CIDSE Director Search Committee, Fall 2015 - Spring 2016, Fall 2016 - Spring 2017, Fall 2017 - January 2018
- ASU Fulton Schools of Engineering, Faculty Assembly Secretary Search Committee, Fall 2015
- ASU Fulton Schools of Engineering, Executive Committee, Fall 2011 - Spring 2013, Fall 2013 - Spring 2015, Chair (2014 - 2015), Fall 2017 - Spring 2018.
- ASU Fulton Schools of Engineering, Reputation Sub-Committee, Spring 2014 - Fall 2015
- ASU CIDSE Recruitment Committee - Social Computing, Fall 2012 - Spring 2013
- ASU Fulton Schools of Engineering, Committee on the Quality of Instruction, Spring 2012 - Spring 2013
- ASU Fulton Schools of Engineering, Curriculum Committee, Fall 2010 - Spring 2013
- ASU CIDSE Graduate Program Committee, Fall 2010 - Spring 2013
- ASU CIDSE Ad-hoc Committee for CSE Operating Procedures, Fall 2010 - Spring 2011
- ASU Fulton School of Engineering, Recruitment Committee, Fall 2009 - Spring 2010
- ASU University Senate 2007 - 2009
- ASU CSE Personnel Committee, Fall 2001, Spring 2002, 2008 - Spring 2009
- ASU CSE Graduate Admission Committee Spring 2000 - Spring 2001, Fall 2002, Spring 2003 - Spring 2005 (Chair), Spring 2008 - Spring 2010.
- ASU CSE Executive Committee 2003 - 2004, 2005 - 2007, Spring 2008.
- ASU CSE TA Selection Committee, Spring, 2002
- ASU CSE Faculty Sabbatical Committee, Fall 2000 - Spring 2003,
- ASU Fulton School Senate, Fall 2003 - Fall 2006

The following duties were performed at National University of Singapore (1994 - 1999)

Curriculum Committee	Member, Advisor for the field of Humans and Computers.
Student Exchange Program Coordinator	establishing exchange programs with leading overseas universities, sending and receiving exchange students.
Student Industrial Attachment Program	liason with industrial organizations for student final year on-site projects.
Work Improvement Teams	constantly improving the working environment.
Quotation/Tender Opening Committee	checking all school equipment purchasing quotations.
Social and Recreation Committee	organizing activities to promote better relationship among staff and students.

PROFESSIONAL ASSOCIATIONS

- Association for the Advancement of AI (AAAI), Fellow
- American Association for the Advancement of Science (AAAS), Fellow
- Association for Computing Machinery (ACM), Fellow
- Institute of Electrical and Electronics Engineers (IEEE), Fellow
- American Society for Engineering Education (ASEE)
- Society of Industrial and Applied Mathematics (SIAM)