

# Kai Shu

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CONTACT INFORMATION      226D Stuart Building  
10 W 31st Street  
Chicago, IL, USA, 60616      *Mobile:* +1-480-8198058  
*E-mail:* kshu@iit.edu  
<http://www.cs.iit.edu/~kshu/>

RESEARCH INTERESTS      Data Mining, Machine Learning, Social Computing, Artificial Intelligence

EDUCATION      **Arizona State University** (ASU), Tempe, AZ, USA      Sept. 2015 - July 2020

- Ph.D. in Computer Science
- Dissertation: Understanding Disinformation: Learning with Weak Social Supervision
- Dean's Dissertation Award Winner, ASU Fulton Schools of Engineering
- Advisor: Professor Huan Liu (Fellow of ACM, AAAS, IEEE, AAI)
- GPA: 4.0/4.0

**Chongqing University**, Chongqing, China      Sept. 2012 – Jun. 2015

- Master of Science, Computer Science and Technology

**Chongqing University**, Chongqing, China      Sept. 2008 – Jun. 2012

- Bachelor of Engineering, Network Engineering

PROFESSIONAL EXPERIENCES      **Illinois Institute of Technology**, Chicago, Illinois      Aug. 2020 - Present  
*Gladwin Development Chair Assistant Professor*

**Arizona State University**, Tempe, Arizona      Sep. 2015 – July 2020  
*Research Assistant, Supervisor: Huan Liu*

**Microsoft Research**, Redmond, Washington      May. 2019 – Aug. 2019  
*Research Intern, Mentors: Ahmed Hassan Awadallah and Susan Dumais*

**Yahoo Research**, Sunnyvale, California      May. 2018 – Aug. 2018  
*Research Intern, Mentors: Liangda Li and Yunhong Zhou*

**Chinese Academy of Science**, Beijing, China      Jun. 2014 – Jun. 2015  
*Research Visiting Scholar, Host: Ping Luo*

**Hewlett-Packard Labs**, Beijing, China      Mar. 2012 – Sept. 2013  
*Research Intern, Mentor: Ping Luo*

SUMMARY OF PUBLICATIONS      **Published:** 1 monograph, 1 book, 2 tutorials, 2 book chapters, 30 conference papers, 9 journal papers, 9 preprints, 3 patents, 2 workshop paper, and 1 demo paper.  
**Impact:** 3100+ citations, h-index: 20, i10-index: 29 (as of May 17th 2020)

\*\*\*Please refer to the details about the list of publications at my google scholar profile page:  
<https://scholar.google.com/citations?user=-6bAV2cAAAAJ&hl=en>

My publication can be generally categorized into the following areas, and a representative paper is listed under each area:

- **Disinformation/Fake News Detection** [1][2][3][4][15][19][21][23][25][26][48][46][6][59][64]

- **Kai Shu**, Limeng Cui, Suhang Wang, Dongwon Lee, and Huan Liu, “dEFEND: Explainable Fake News Detection” in the 25th ACM SIGKDD Conference on Knowledge Discovery and Data Mining (**KDD 2019**)
- **Recommendation and Ranking** [35][27][30][34][36][47][60][2]
  - **Kai Shu**, Suhang Wang, Jiliang Tang, Yilin Wang, Huan Liu “CrossFire: Cross Media Joint Friend and Item Recommendations” the 11th International Conference on Web Search and Data Mining (**WSDM 2018**).
- **Security and Privacy** [38][32][33][29]
  - **Kai Shu**, Ping Luo, Li Wan, Peifeng Yin, Linpeng Tang, “Deal or Deceit: Detecting Cheating in Distribution Channels”, in the 23rd ACM International Conference on Information and Knowledge Management (**CIKM 2014**)
- **Text Generation** [11][12][28]
  - **Kai Shu**, Yichuan Li, Kaize Ding, and Huan Liu, “Fact-enhanced Synthetic News Generation”, in proceedings of Thirty-Fifth AAAI Conference on Artificial Intelligence (**AAAI 2021**)

#### TUTORIALS

- [1] Reza Zafarani, Xinyi Zhou, **Kai Shu**, Huan Liu “Fake News Research: Theories, Detection Strategies, and Open Problems”, the 25th ACM SIGKDD Conference on Knowledge Discovery and Data Mining (**KDD 2019**).  
[Media coverage](#): [A Blog in Japanese][Datanami]
- [2] Xinyi Zhou, Reza Zafarani, **Kai Shu**, Huan Liu “Fake News: Fundamental Theories, Detection Strategies and Challenges”, the 12th International Conference on Web Search and Data Mining (**WSDM 2019**).  
[Media coverage](#): [Psychology Today]

#### BOOKS OR BOOK CHAPTERS

- [3] **Kai Shu**, Suhang Wang, Dongwon Lee, and Huan Liu, “Mining Disinformation and Fake News: Concepts, Methods, and Recent Advancements. ”, Lecture Notes in Social Network (LNSN), Springer Press, 2020.
- [4] **Kai Shu**, Suhang Wang, Dongwon Lee, and Huan Liu, Editors. “Fake News, Disinformation, and Misinformation in Social Media”, Springer, to appear in early 2020. Forthcoming.
- [5] **Kai Shu** and Huan Liu “Detecting Fake News on Social Media”, Morgan & Claypool Publishers, 2019.
- [6] **Kai Shu**, H. Russell Bernard, Huan Liu “Studying Fake News via Network Analysis: Detection and Mitigation.”, chapter. Editors: Nitin Agarwal, Nima Dokoohaki, and Serpil Tokdemir. Lecture Notes in Social Networks (**LNSN**), Springer Press, 2018.

#### REFEREED CONFERENCE PUBLICATIONS

- [7] Lu Cheng, Ruocheng Guo, **Kai Shu**, and Huan Liu, “Causal Understanding of Fake News Dissemination on Social Media”, in proceedings of 27th ACM SIGKDD Conference on Knowledge Discovery and Data Mining (**KDD 2021**)
- [8] Enyan Dai, **Kai Shu**, Yiwei Sun, and Suhang Wang, “Labeled Data Generation with Inexact Supervision”, in proceedings of 27th ACM SIGKDD Conference on Knowledge Discovery and Data Mining (**KDD 2021**)

- [9] Yingtong Dou, **Kai Shu**, Congying Xia, Philip Yu, and Lichao Sun, “User Preference-aware Fake News Detection”, in proceedings of 44th International ACM SIGIR Conference on Research and Development in Information (**SIGIR 2021**)
- [10] Xueyao Zhang, Juan Cao, Xirong Li, Qiang Sheng, Lei Zhong, and **Kai Shu**, “Mining Dual Emotion for Fake News Detection”, in proceedings of 30th The Web Conference (**WWW 2021**)
- [11] **Kai Shu**, Yichuan Li, Kaize Ding, and Huan Liu, “Fact-enhanced Synthetic News Generation”, in proceedings of Thirty-Fifth AAAI Conference on Artificial Intelligence (**AAAI 2021**)
- [12] Adaku Uchendu, Thai Le, **Kai Shu** and Dongwon Lee, “Authorship Attribution for Neural Text Generation”, in proceedings of the 2020 Conference on Empirical Methods in Natural Language Processing (**EMNLP 2020**)
- [13] Lu Cheng, **Kai Shu**, Siqi Wu, Yasin 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 2020**)
- [14] 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 2020**)
- [15] **Kai Shu**, Guoqing Zheng, Yichuan Li, Subhabrata Mukherjee, Ahmed Hassan Awadallah, Scott Ruston, and Huan Liu, “Leveraging Multi-Source Weak Social Supervision for Early Detection of Fake News”, in proceedings of the 18th European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases (**ECML-PKDD 2020**)
- [16] Qianru Wang, Bin Guo, Yi Ouyang, **Kai Shu**, Zhiwei Yu, Huan Liu, “Spatial Community-Informed Evolving Graphs for Demand Prediction”, in proceedings of the 18th European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases (**ECML-PKDD 2020**)
- [17] **Kai Shu**, Subhabrata Mukherjee\*, Guoqing Zheng\*, Ahmed Hassan Awadallah, Milad Shokouhi and Susan Dumais, “Learning with Weak Supervision for Email Intent Detection”, in proceedings of 43rd International ACM SIGIR Conference on Research and Development in Information Retrieval (**SIGIR 2020**)
- [18] **Kai Shu**, Liangda Li, Suhan Wang, Yunhong Zhou, and Huan Liu, “Joint Local and Global Sequence Modeling in Temporal Correlation Networks for Trending Topic Detection”, in Proceedings of 12th ACM Web Science Conference (**WebSci 2020**)
- [19] **Kai Shu**, Deepak Mahudeswaran, Suhan Wang, and Huan Liu, “Hierarchical Propagation Networks for Fake News Detection: Investigation and Exploitation”, in Proceedings of 14th the International AAAI Conference on Web and Social Media (**ICWSM 2020**)
- [20] Ghazaleh Beigi, **Kai Shu**, Ruocheng Guo, Suhan Wang, Huan Liu “Differentially Privacy Preserving Text Representation Learning”, in Proceedings of the 30th ACM Conference on Hypertext and Social Media (**HT 2019**) (Poster Paper)
- [21] **Kai Shu**, Suhan Wang, Xinyi Zhou, Reza Zafarani, and Huan Liu “The Role of User Profiles for Fake News Detection”, in 2019 IEEE/ACM International Conference on Advances in Social Networks Analysis and Mining (**ASONAM 2019**)

- [22] 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 2019 IEEE/ACM International Conference on Advances in Social Networks Analysis and Mining (**ASONAM 2019**)  
[Media coverage](#): [Newswise]
- [23] **Kai Shu**, Limeng Cui, Suhang Wang, Dongwon Lee, and Huan Liu, “dEFEND: Explainable Fake News Detection” in the 25th ACM SIGKDD Conference on Knowledge Discovery and Data Mining (**KDD 2019**)  
[Media coverage](#): [Techxplore][Penn State News]
- [24] Jayashree Subramanian\*, Varun Sridharan\*, **Kai Shu**, and Huan Liu, “Exploiting Emojis for Sarcasm Detection” in the International Conference on Social Computing, Behavior-Culture Modeling, and Prediction (**SBP 2019**).
- [25] Shuo Yang, **Kai Shu**, Suhang Wang, Renjie Gu, Fan Wu, and Huan Liu, “Unsupervised Fake News Detection on Social Media: A Generative Approach”, in the 33rd AAAI Conference on Artificial Intelligence (**AAAI 2019**).
- [26] **Kai Shu**, Suhang Wang, and Huan Liu, “Beyond News Content: The Role of Social Context for Fake News Detection”, in the 12th International Conference on Web Search and Data Mining (**WSDM 2019**).  
[Media coverage](#): [KDNuggets][The Morning Paper]
- [27] Vineeth Rakesh, Suhang Wang, **Kai Shu**, Huan Liu, “Linked Variational AutoEncoders for Inferring Substitutable and Supplementary Items”, in the 12th International Conference on Web Search and Data Mining (**WSDM 2019**).
- [28] **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 (**ICDM 2018**)
- [29] Amy Sliva, **Kai Shu**, and Huan Liu, “Using Social Media to Understand Cyber Attack Behavior”, in the 9th International Conference on Applied Human Factors and Ergonomics (**AHFE 2018**)
- [30] **Kai Shu**, Suhang Wang, Jiliang Tang, Yi Chang, Ping Luo, and Huan Liu, “Exploiting User Actions for App Recommendations”, in the 2018 IEEE/ACM International Conference on Advances in Social Networks Analysis and Mining (**ASONAM 2018**)
- [31] Wen Zhang, **Kai Shu**, Suhang Wang, Huan Liu, and Yalin Wang, “Multimodal Fusion of Brain Networks with Longitudinal Couplings” in the 21th International Conference on Medical Image Computing and Computer Assisted Intervention (**MICCAI 2018**)
- [32] Ghazaleh Beigi, **Kai Shu**, Huan Liu, “Securing Social Media User Data - An Adversarial Approach” in the 29th ACM Conference on HyperText and Social Media (**HT 2018**).
- [33] **Kai Shu**, Amy Sliva, Justin Sampson, Huan Liu, “Understanding Cyber Attack Behaviors with Sentiment Information on Social Media”, in the International Conference on Social Computing, Behavior-Culture Modeling, and Prediction (**SBP 2018**).
- [34] Xuying Meng, Suhang Wang, **Kai Shu**, Jundong Li, Bo Chen, Huan Liu, Yujun Zhang, “Personalized Privacy-Preserving Social Recommendation”, in the 32nd AAAI Conference on Artificial Intelligence (**AAAI 2018**).
- [35] **Kai Shu**, Suhang Wang, Jiliang Tang, Yilin Wang, Huan Liu “CrossFire: Cross Media Joint Friend and Item Recommendations” the 11th International Conference on Web Search and Data Mining (**WSDM 2018**).

- [36] Suhang Wang, Yilin Wang, Jiliang Tang, **Kai Shu**, Suhas Ranganath, Huan Liu, "What Your Images Reveal: Exploiting Visual Contents for Point-of-Interest Recommendation", in the 26th International World Wide Web Conference (**WWW 2017**).
- [37] Ling Jian, Jundong Li, **Kai Shu**, Huan Liu "Multi-Label Informed Feature Selection", in the 25th International Joint Conference on Artificial Intelligence (**IJCAI 2016**).
- [38] **Kai Shu**, Ping Luo, Li Wan, Peifeng Yin, Linpeng Tang, "Deal or Deceit: Detecting Cheating in Distribution Channels", in the 23rd ACM International Conference on Information and Knowledge Management (**CIKM 2014**).
- [39] Li Wan, **Kai Shu**, Yu Guo, "Sequences Modeling and Analysis Based on Complex Network", in the International Conference on Communications and Information Processing (**ICCIP 2012**).

REFEREED  
JOURNAL  
PUBLICATIONS

- [40] Wen Zhang, Brittany Blair Braden, Gustavo Miranda, **Kai Shu**, Suhang Wang, Huan Liu, and Yalin Wang, "Integrating Multimodal and Longitudinal Neuroimaging Data with Multi-Source Network Representation Learning", Neuroinformatics, 2021.
- [41] **Kai Shu**, Amrita Bhattacharjee, Faisal Alatawi, Tahora H. Nazer, Kaize Ding, Mansoor Karami, and Huan Liu, "Detecting and Mitigating Disinformation in a Social Media Age", in WIREs Data Mining and Knowledge Discovery, 2020
- [42] **Kai Shu**, Ahmed Hassan Awadallah, Susan Dumais, and Huan Liu, "Detecting Fake News with Weak Social Supervision", in **IEEE Intelligent Systems Media coverage**: [Venturebeat] [Digital Information World] [Report Door].
- [43] **Kai Shu**, Deepak Mahudeswaran, Suhang Wang, Dongwon Lee, Huan Liu "FakeNewsNet: A Data Repository with News Content, Social Context and Dynamic Information for Studying Fake News on Social Media", in **Journal of Big Data, Mary Ann Liebert, Inc. Publishers**
- [44] Qun Zhao, Yuelong Zhu, **Kai Shu**, Dingsheng Wan, Yufeng Yu, Xudong Zhou, and Huan Liu, "Joint Spatial and Temporal Modeling for Hydrological Prediction", in **IEEE Access 2020**
- [45] Ping Luo, **Kai Shu**, Junjie Wu, Li Wan, and Yong Tan, "Exploring Correlation Network for Cheating Detection", in **ACM TIST 2019**
- [46] **Kai Shu**, Deepak Mahudeswaran, and Huan Liu, "FakeNewsTracker: A Tool for Fake News Collection, Detection, and Visualization" in the Computational and Mathematical Organization Theory (**CMOT 2018**) (**Best of SBP**)
- [47] Xuying Meng, Suhang Wang, **Kai Shu**, Jundong Li, Bo Chen, Huan Liu, and Yujun Zhang "Towards Privacy Preserving Social Recommendation under Personalized Privacy Settings" **World Wide Web Journal**, 2018
- [48] **Kai Shu**, Amy Sliva, Suhang Wang, Jiliang Tang, Huan Liu "Fake News Detection on Social Media: A Data Mining Perspective", in **SIGKDD explorations 2017**.  
**Included in the curriculum at**: [Worcester Polytechnic Institute], [The Hang Seng University of Hong Kong]  
**Media coverage**: [KDnuggets] [ASLI Facebook] [Data Skeptic] [A Chinese Blog] [Another Chinese Blog] [A Korean Blog] [Wikipedia] [Hackernoon]
- [49] **Kai Shu**, Suhang Wang, Jiliang Tang, Reza Zafarani, Huan Liu, "User Identity Linkage across Online Social Networks", in **SIGKDD explorations 2016**.

## PREPRINTS

- [50] Ahmadreza Mosallanezhad, **Kai Shu**, Huan Liu, “Topic Preserved News Generation Using Deep Reinforcement Learning”, (Submitted to IJCAI’20)
- [51] **Kai Shu**, Ahmadreza Mosallanezhad, Steve Jadav and Huan Liu, “Cross Domain Fake News Detection”, (Submitted to AAAI’20)
- [52] Kaize Ding, **Kai Shu**, Jundong Li, and Huan Liu, “Cross-domain Anomaly Detection on Attributed Networks” (Submitted to Neural Computing)
- [53] Wen Zhang, **Kai Shu**, Yalin Wang, and Huan Liu, “Graph Neural Networks for User Identity Linkage”
- [54] Raha Moraffah, **Kai Shu**, and Huan Liu, “DCDAN: Deep Causal Representation Learning for Unsupervised Domain Adaptation”
- [55] Jiachen Wang, Juan Cao, **Kai Shu**, Yuting Yang, Jintao Li, and Huan Liu, “Style Guided Bilinear Neural Networks for Fake News Detection”
- [56] **Kai Shu**, Liangda Li, Suhang Wang, Yunhong Zhou, Huan Liu “Modeling Diversity, Temporality, and Engagement for Search Trending Topic Detection via QNTRank”
- [57] Fred Morstatter, **Kai Shu**, Suhang Wang, Huan Liu “Cross-Platform Emoji Interpretation: Analysis, a solution, and Applications”

PATENT  
APPLICATIONS

- [58] **Kai Shu**, Subhabrata Mukherjee, Guoqing Zheng, Ahmed Hassan Awadallah, Milad Shokouhi, and Susan Dumais “Joint Learning from Explicit and Inferred Labels”, 2020, US Patent App, 16/876,931
- [59] **Kai Shu**, Deepak Mahudeswaran, Huan Liu “Method and Apparatus for Collecting, Detecting and Visualizing Fake News”, 2018. US Patent App, 62/904,558
- [60] **Kai Shu**, Suhang Wang, Jiliang Tang, Yilin Wang, Huan Liu “Systems and Methods for A Cross Media Joint Friend and Item Recommendation Framework”, 2018. Provisional Patent Application

WORKSHOP AND  
DEMO PAPERS

- [61] Yichuan Li, Bohan Jiang, **Kai Shu**, and Huan Liu, “Toward A Multilingual and Multimodal Data Repository for COVID-19 Disinformation”, in **IEEE BigData 2020**
- [62] Kaize Ding, **Kai Shu**, Yichuan Li, Amrita Bhattacharjee, and Huan Liu, “Challenges in Combating COVID-19 Infodemic - Data, Tools, and Ethics”, in **ACM CIKM 2020**.
- [63] Limeng Cui, **Kai Shu**, Suhang Wang, Dongwon Lee, Huan Liu, “dEFEND: An Explainable Fake News Detection System”, in **ACM CIKM 2019**.
- [64] **Kai Shu**, Suhang Wang, Huan Liu, “Understanding User Profiles on Social Media for Fake News Detection”, in **FakeMM 2018**.

MENTORING  
EXPERIENCE

**PhD Students**

- Yichuan Li, CS@Worcester Polytechnic Institute  
Research Topic: Weak supervision learning  
Research Papers: [11] Sep. 2019 – Present
- Ahmadrza Mosallanezhad, CSE@Arizona State Univ.  
Research Topic: Neural Text Generation  
Research co-advised with Prof. Huan Liu Sep. 2019 – Present
- Kaize Ding, CSE@Arizona State Univ.  
Research Topic: Cross-domain Anomaly Detection  
Research Papers: [52] May. 2019 – Present  
Research co-advised with Prof. Huan Liu
- Lu Cheng, CSE@Arizona State Univ  
Research Topic: Unsupervised Cyberbullying Detection  
Research Papers: [13] March. 2019 – Present  
Research co-advised with Prof. Huan Liu
- Shuo Yang, CSE@Shanghai Jiao Tong Univ.  
Research Topic: Unsupervised Fake News Detection  
Research Papers: [25] Sep. 2017 – Sep. 2018  
Research co-advised with Prof. Huan Liu
- Thai Le, CSE@Penn State Univ.  
Research topic: clickbait generation and detection  
Research Papers: [22] Oct. 2018 – July. 2019  
Research co-advised with Prof. Dongwon Lee
- Chuan Guo, CSE@ Univ. of Chinese Academy of Sciences  
Research Topic: Emotion-based Fake News Detection, [10] Jan. 2019 – Present  
Research co-advised with Prof. Juan Cao
- Qiang Sheng, CSE@ Univ. of Chinese Academy of Sciences  
Research Topic: Topic-oriented False News Analysis  
Research co-advised with Prof. Juan Cao Jan. 2019 – Present

**Master Students**

- Deepak Mahudeswaran, CSE@Arizona State Univ.  
Research Topic: Fake News Detection and Mitigation  
Research Papers: [46], [43] Sep. 2017 – Present
- Jayashree Subramanian, CSE@Arizona State Univ.  
Research Topic: Sarcasm Detection on Social Media  
Research Papers: [24] Feb. 2019 – Present
- Varun Sridharan, CSE@Arizona State Univ.  
Research Topic: Sarcasm Detection on Social Media  
Research Papers: [24] Feb. 2019 – Present

TEACHING EXPERIENCES	<ul style="list-style-type: none"> <li>• <b>Instructor</b> CS 579: Online Social Network Analysis, IIT <span style="float: right;">Fall'2020</span></li> <li>• <b>Co-Instructor &amp; Teaching Assistant</b> CSE 472: Social Media Mining, ASU <span style="float: right;">Fall'2019</span> Instructor: Professor Huan Liu</li> <li>• <b>Teaching Assistant</b> CSE 472: Social Media Mining, ASU <span style="float: right;">Fall'2018</span> Instructor: Professor Huan Liu</li> <li>• <b>Teaching Assistant</b> CSE Applied Cryptography, ASU <span style="float: right;">Fall'2015</span> Instructor: Prof. Rida Bazzi</li> <li>• <b>Teaching Assistant</b> CSE 572: Data Mining, ASU <span style="float: right;">Spring'2016</span> Instructor: Prof. Frank Calliss</li> </ul>
HONERS & AWARDS	<ul style="list-style-type: none"> <li>• IDDP Research Fellowship, GWU <span style="float: right;">Jan. 2021</span></li> <li>• Dean's Dissertation Award, ASU <span style="float: right;">Nov. 2020</span></li> <li>• Rising Star Award, BDSC 2020 <span style="float: right;">Aug. 2020</span></li> <li>• Best Reviewer Award, ICWSM 2020 <span style="float: right;">June 2020</span></li> <li>• CIDSE Doctoral Fellowship Award, Arizona State University <span style="float: right;">March 2020</span></li> <li>• ACM SIGKDD Student Travel Award <span style="float: right;">June 2019</span></li> <li>• SBP Challenge Award Winner <span style="float: right;">July 2018</span></li> <li>• CIDSE Doctoral Fellowship Award, Arizona State University <span style="float: right;">Aug. 2015</span></li> <li>• Outstanding Graduate Student, Chongqing Province <span style="float: right;">Jul. 2012</span></li> <li>• National Encouragement Scholarships (1/53) <span style="float: right;">Oct. 2009</span></li> </ul>
RESEARCH GRANTS	<ul style="list-style-type: none"> <li>• GWU IDDP Research Fellowship Award <ul style="list-style-type: none"> <li>• Role: Sole PI</li> <li>• Personal Share: \$25,000 (100%); Total: \$25,000</li> <li>• The George Washington University (GWU)</li> <li>• 1/1/2021 to 12/31/2021</li> </ul> </li> </ul>
SELECTED MEDIA COVERAGES	<ul style="list-style-type: none"> <li>• Penn State News (2021): Researchers test detection methods for AI-generated content</li> <li>• IIT News (2021): Computer Science Professor to Expand Award-Winning Fake News Research</li> <li>• Brookings (2021): How to deal with AI-enabled disinformation</li> <li>• ASU Knowledge Enterprise (2020): An algorithm to detect fake news</li> <li>• Venturebeat (2020): AI tools could improve fake news detection by analyzing users' interactions and comments</li> <li>• Analyticsindiamag (2020): How Microsoft Set A New Benchmark To Track Fake News</li> <li>• Venturebeat (2020): Microsoft claims its AI framework spots fake news better than state-of-the-art baselines</li> <li>• Analyticsindiamag (2020): Top ML Projects To Fight Fake News Fatigue During COVID-19</li> <li>• Arizona PBS Cronkite News (2019): Fires in the Amazon: Arizona researchers determine</li> </ul>



what's true, what's not

- Penn State News (2019): What makes a piece of news fake?
- Datanami (2019): AI Squares Off Against Fake News
- Newswise (2019): Clickbait Secrets Exposed! Humans and AI team up to improve clickbait detection
- Psychology Today (2019): What is Fake News? Is Debate Worth the Effort?
- The Morning Paper (2019): Beyond news contents: the role of social context for fake news detection
- ASU Full Cycle (2019): Students' Fresh Perspectives Lead ASU Researcher to Success.
- ASU News/Co Lab blog (2019): Can AI help discern fact from fake on social media?
- Data Skeptic (2018): Algorithmic Detection of Fake News
- ASU Now (2018): The data defenders
- KD Nuggets (2017): A Quick Guide to Fake News Detection on Social Media

SELECTED  
PROFESSIONAL  
TALKS

- "Learning with Weak Social Supervision for Disinformation Detection", distinguish talk at IGDTUW, India, Jan., 2021
- "Learning with Weak Social Supervision for Disinformation Detection", China University of Petroleum - Huadong, Dec., 2020
- "Learning with Weak Social Supervision for Disinformation Detection", Hohai University, Nov., 2020
- "Understanding Disinformation: Learning with Weak Social Supervision", Pinterest ML Lunch talk, Aug., 2020
- "Challenges in Combating COVID-19 Infodemic", invited talk at the first WHO Infodemiology Conference, July, 2020
- "Some Lessons Learned in Detecting and Explaining Fake News on Social Media", keynote talk at the workshop on data science for Fake News, co-presented remotely, May, 2020.
- "Learning with Weak Supervision from User Interactions", invited talk at Microsoft Research AI Power Lunch talk series, August, 2019.
- "dEFEND: Explainable Fake News Detection", invited talk at KDD workshop on "Truth Discovery and Fact Checking: Theory and Practice", August, 2019.
- "Beyond News Contents: The Role of Social Context for Fake News Detection", invited talk at Microsoft Research AI Power Lunch talk series, June, 2019.
- "Detecting Fake News on Social Media", invited talk at News Co/Lab at ASU, June, 2019.
- "Fake News: Fundamental Theories, Detection Strategies and Challenges.", tutorial in the 12th International Conference on Web Search and Data Mining (WSDM 2019)
- "Fake News on Social Media: Characterization and Detection", Second International Workshop on Artificial Intelligence and Optimization (WAIO18), remote participation via video conferencing, Chiapas, Mexico. November 8, 2018
- "FakeNewsTracker: A Tools for Fake News Collection, Detection and Visualization", Global Engagement Center (GEC)'s Tech Innovation Program, the US Department of State. December 20, 2018
- "Fake News on Social Media: Characterization and Detection", Institute of Computing Technology, Chinese Academy of Sciences, remote participation via video conference. January 3, 2019

PROFESSIONAL  
SERVICES

**Editors**

- Book editor, Fake News, Disinformation, and Misinformation, Springer, 2019
- Guest co-editor, Special Section on Fusion of Deep Learning Methodologies and Applications for Fake News on Social Media, IEEE Access, 2019

**Book/Book Proposal Review**

- CRC Press/Taylor and Francis

### **Panel and Review for Funding Agencies**

- Air Force Office of Scientific Research (AFOSR) (2021)
- NSF (2021)
- Swiss NSF (2021)

### **Chairs, Organizers, and Panels**

- Co-organizer, Second International MIS2 Workshop: Misinformation and Misbehavior Mining on the Web (MIS2 2021), collocated with The ACM KDD 2021.
- PC Chair, ASONAM 2021.
- Panelist, Technology and Social Justice Series on AI Bias and Fairness.
- Co-organizer, The WebConf 2021. The First International Workshop on News Recommendation and Intelligence (MIND 2020).
- PC Chairs, ICWSM 2021 Data Challenge.
- Steering Committee, the First Workshop on Combating Online Hostile Posts in Regional Languages during Emergency Situation (CONSTRAINT), Collocated with AAAI 2021.
- Organizer, Springer Social Network Analysis and Mining (SNAM) - Special Issue on Tackling COVID-19 Infodemic.
- Panelist, the First Global WHO Infodemiology Conference, July, 2020.
- Panelist, Online Safety Panel in ICWSM Data Challenge, June 8th, 2020
- SIAM SDM Workshop on FEND Publicity Chair, 2019
- Co-organizer, ACM CIKM, The 5th International Workshop on Mining Actionable Insights from Social Networks (MAISoN 2020)

### **Program Committees**

- The 15th ACM international Conference on Web Search and Data Mining (WSDM'22)
- The 2021 Conference on Empirical Methods in Natural Language Processing (EMNLP'21)
- 30th ACM International Conference on Information and Knowledge Management (CIKM'21)
- ACM Web Science Conference (WebSci'21)
- ACM SIGKDD Conference on Knowledge Discovery and Data Mining (KDD' 21)
- The 59th Annual Meeting of the Association for Computational Linguistics (ACL'21)
- The 43rd European Conference on Information Retrieval (ECIR'21)
- The Thirty-Fifth AAAI Conference on Artificial Intelligence (AAAI'21)
- SIAM International Conference on Data Mining (SDM), 2021
- TheWebConf, 2020
- ACM International Conference on Web Search and Data Mining (WSDM), 2020
- The 12th International ACM Conference on Web Science (WebSci'20)
- The 14th IEEE International Conference on Semantic Computing (ICSC 2020)
- The Thirty-Fourth AAAI Conference on Artificial Intelligence (AAAI'20)
- 2019 IEEE International Conference on Cognitive Machine Intelligence (CogMI'19)
- 28th International Conference on Artificial Neural Networks (ICANN'19)
- The IEEE/ACM International Conference on Advances in Social Networks Analysis and Mining (ASONAM), 2019, 2020
- SIGIR workshop on Reducing Online Misinformation Exposure (ROME'19)
- International AAAI Conference on Web and Social Media (ICWSM), 2019
- IEEE International Conference on Big Data (BigData), 2016, 2017, 2018

### **Journal Reviewers**

- Proceedings of the National Academy of Sciences of the United States of America (PNAS)
- Frontiers in Big Data
- Policy Sciences
- Concurrency and Computation: Practice and Experience
- Frontiers in Psychology
- ACM/IMS Transactions on Data Science

- Electronic Commerce Research and Applications
- Journal of Information Security and Applications
- Computer
- ACM Transactions on Knowledge Discovery from Data (TKDD)
- Knowledge and Information Systems (KAIS)
- ACM Transactions on the Web (TWEB)
- Frontiers
- ACM Computing Survey
- SAGE Open
- Springer Nature Applied Science (SNAS)
- IEEE Transactions on Knowledge and Data Engineering (TKDE)
- ACM Transactions on Intelligent Systems and Technology (TIST)
- Neurocomputing (NEUCOM)
- IEEE Transactions on Neural Networks and Learning Systems (TNNLS)
- Natural Language Engineering (NLG)
- Computers & Security (COSE)
- World Wide Web Journal (WWWJ)
- Journal of Computational Science (JOCS)

#### **Conference Reviewers**

- TheWebConf, 2019
- ACM SIGIR Conference on Research and Development in Information Retrieval (SIGIR), 2018
- International AAAI Conference on Web and Social Media (ICWSM), 2016, 2018
- Pacific Asia Knowledge Discovery and Data Mining (PAKDD), 2018
- AAAI Conference on Artificial Intelligence (AAAI), 2018
- ACM International Conference on Conference on Information and Knowledge Management (CIKM), 2017
- ACM International Conference on Web Search and Data Mining (WSDM), 2017, 2019
- IEEE/ACM International Conference on Advances in Social Networks Analysis and Mining (ASONAM), 2016, 2017, 2018
- ACM Conference on Recommender Systems (RecSys), 2016
- International Joint Conferences on Artificial Intelligence (IJCAI), 2016