

Fei Liu

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RESEARCH INTERESTS

Natural language processing, deep learning, automatic summarization, natural language generation, social media analytics, information extraction, reinforcement learning, deep neural networks

EDUCATIONAL BACKGROUND

- Postdoctoral Fellow** 2013–2015
Carnegie Mellon University, Pittsburgh, Pennsylvania
Advisors: Noah A. Smith and Norman Sadeh
- Ph.D. in Computer Science** 2007–2011
University of Texas at Dallas, Richardson, Texas
Advisor: Yang Liu. Committee members: Carlos Busso, Vincent Ng and Sanda Harabagiu
- B.S./M.S. in Computer Science** 2000–2007
Fudan University, Shanghai
Advisors: Xuanjing Huang and Lide Wu

EMPLOYMENT HISTORY

Assistant Professor of Computer Science
University of Central Florida, Orlando, Florida Aug. 2015–Present

Leads a group of researchers to develop advanced summarization and natural language generation techniques. Our research aims to generate summaries from a massive amount of texts to combat information overload. Building on recent advances in deep neural networks, Liu and her group explore both extractive and abstractive methods to generate informative, succinct and accurate summaries. [13][21][22][23][24][37].

Senior Research Scientist
Bosch Research and Technology Center, Palo Alto, California Jan. 2013–Nov. 2013

Designed and developed deep natural language understanding modules for in-car applications. Liu's work has focused on natural language interaction, spoken language understanding, summarization [38][45], social media analytics [46], and development of machine learning systems on these fronts.

Research Scientist
Bosch Research and Technology Center, Palo Alto, California May 2011–Dec. 2012

Developed one of the first text normalization systems to automatically translate non-standard English words (e.g., *tmrw*) appearing on social media into standard forms [48]; developed state-of-the-art text normalization and event summarization systems for reading out Twitter messages and trending news to car drivers using a text-to-speech (TTS) system [44][49].

HONORS AND AWARDS

Amazon AWS Machine Learning Research Award, 2020

Area Chair Favorite Paper at the 27th Intl. Conference on Computational Linguistics (COLING), 2018

Best Paper Finalist at the 25th International World Wide Web Conference (WWW), 2016

Invited to participate in **MIT Rising Stars in EECS** (An Academic Career Workshop for nearly 60 top EECS women scholars in academia), 2015

Special Performance Recognition Award, Director of Research, Bosch Research, 2012

On-Ramps into Academia workshop Travel Grant, National Science Foundation (NSF), 2012

Erik Jonsson Distinguished Research Fellowship, University of Texas at Dallas, 2007 – 2011

Academic Excellence Award, University of Texas at Dallas, 2011

CRA-W Career Mentoring Workshop Travel Grant, National Science Foundation (NSF), 2011

The Aage and Margareta Moller Endowed Scholarship, University of Texas at Dallas, 2010

ACL-IJCNLP Student Travel Grant, COLIPS Fund, 2009

SIGDIAL Conference Travel Grant, International Speech Communication Association (ISCA), 2008

PUBLICATIONS

Citation Statistics: h-index 24, i10-index 44, citations $\geq 2,100$, according to [Google Scholar](#) (11/2020).

Journal Article Publications

- [1] Shomir Wilson, Florian Schaub, Frederick Liu, Kanthashree Mysore Sathyendra, Daniel Smullen, Sebastian Zimmeck, Rohan Ramanath, Peter Story, Fei Liu, Norman Sadeh and Noah A. Smith. “[Analyzing Privacy Policies at Scale: From Crowdsourcing to Automated Annotations.](#)” *ACM Transactions on the Web (TWEB)*, Vol. 13 No. 1, February 2019.
- [2] Wencan Luo, Fei Liu, Zitao Liu and Diane Litman. “[A Novel ILP Framework for Summarizing Content with High Lexical Variety.](#)” *Natural Language Engineering*, Cambridge University Press, Vol. 24, No. 6, pp. 887–920, November 2018.
- [3] Patrícia Alves-Oliveira, Richard G Freedman, Dan Grollman, Laura Herlant, Laura Humphrey, Fei Liu, Ross Mead, Frank Stein, Tom Williams, and Shomir Wilson. “[Reports on the 2016 AAAI Fall Symposium Series.](#)” *AI Magazine*, Vol. 38, No. 2, pp. 86–90, July 2017.
- [4] Joel R. Reidenberg, Travis Breaux, Lorrie Faith Cranor, Brian French, Amanda Grannis, James T. Graves, Fei Liu, Aleecia M. McDonald, Thomas B. Norton, Rohan Ramanath, N. Cameron Russell, Norman Sadeh, and Florian Schaub. “[Disagreeable Privacy Policies: Mismatches between Meaning and Users’ Understanding.](#)” *Berkeley Law Technology Journal*, Vol. 30, 2015.
- [5] Fei Liu and Yang Liu. “[Towards Abstractive Speech Summarization: Exploring Unsupervised and Supervised Approaches for Spoken Utterance Compression.](#)” *IEEE Transactions on Audio, Speech and Language Processing*, Vol. 21, No. 7, pp. 1469–1480, July 2013.
- [6] Fei Liu, Feifan Liu and Yang Liu. “[A Supervised Framework for Keyword Extraction from Meeting Transcripts.](#)” *IEEE Transactions on Audio, Speech and Language Processing*, Vol. 19, No. 3, pp. 538–548, March 2011.
- [7] Fei Liu, Xuanjing Huang and Lide Wu. “Approach for Extracting Thematic Terms Based on Association Rules” (in Chinese). *Computer Engineering*, Vol. 34, No. 7, pp. 81–83, 2008.

Peer-Reviewed Conference and Workshop Publications

[Students under my direct supervision are denoted as ^S.]

- [8] Logan Lebanoff,^S Franck Dernoncourt, Doo Soon Kim, Lidan Wang, Walter Chang and Fei Liu. “[Learning to Fuse Sentences with Transformers for Summarization.](#)” In *Proceedings of the 2020 Conference on Empirical Methods in Natural Language Processing (EMNLP)*, 2020. [Oral Presentation] Acceptance rate: 752/3359=22.4%.
- [9] Sangwoo Cho,^S Kaiqiang Song,^S Chen Li, Dong Yu, Hassan Foroosh and Fei Liu. “[Better Highlighting: Creating Sub-Sentence Summary Highlights.](#)” In *Proceedings of the 2020 Conference on Empirical Methods in Natural Language Processing (EMNLP)*, 2020. Acceptance rate: 752/3359=22.4%.
- [10] Jia Jin Koay,^S Alexander Roustai,^S Xiaojin Dai,^S Dillon Burns,^S Alec Kerrigan,^S and Fei Liu. “[How Domain Terminology Affects Meeting Summarization Performance.](#)” In *Proceedings of the 28th International Conference on Computational Linguistics (COLING)*, 2020. Acceptance rate: 644/1956=32.9%.
- [11] Logan Lebanoff,^S Franck Dernoncourt, Doo Soon Kim, Walter Chang and Fei Liu. “[A Cascade Approach to Neural Abstractive Summarization with Content Selection and Fusion.](#)” In *Proceedings of the Conference of the Asia-Pacific Chapter of the Association for Computational Linguistics (AACL)*, 2020. [Oral Presentation] Acceptance rate: 106/375=28.3%.
- [12] Logan Lebanoff,^S John Muchovej,^S Franck Dernoncourt, Doo Soon Kim, Lidan Wang, Walter Chang and Fei Liu. “[Understanding Points of Correspondence between Sentences for Abstractive Summarization.](#)” In *Proceedings of the 58th Annual Meeting of the Association for Computational Linguistics (ACL)*, Student Research Workshop, Seattle, WA, 2020.
- [13] Kaiqiang Song,^S Bingqing Wang, Zhe Feng, Liu Ren and Fei Liu. “[Controlling the Amount of Verbatim Copying in Abstractive Summarization.](#)” In *Proceedings of the Thirty-Fourth AAAI Conference on Artificial Intelligence (AAAI)*, New York City, NY, 2020. [Spotlight Presentation] Acceptance rate: 1591/7737 = 20.6%.
- [14] Kaiqiang Song,^S Logan Lebanoff,^S Qipeng Guo, Xipeng Qiu, Xiangyang Xue, Chen Li, Dong Yu and Fei Liu. “[Joint Parsing and Generation for Abstractive Summarization.](#)” In *Proceedings of the Thirty-Fourth AAAI Conference on Artificial Intelligence (AAAI)*, New York City, NY, 2020. [Spotlight Presentation] Acceptance rate: 1591/7737 = 20.6%.
- [15] Kaiqiang Song,^S Chen Li, Xiaoyang Wang, Dong Yu and Fei Liu. “[Automatic Summarization of Open-Domain Podcast Episodes.](#)” In *Proceedings of the 29th Text REtrieval Conference (TREC)*, 2020.
- [16] Sangwoo Cho,^S Muhammad Hasan Maqbool, Fei Liu and Hassan Foroosh. “[Self-Attention Network for Skeleton-based Human Action Recognition.](#)” In *Proceedings of the 2020 IEEE Winter Applications of Computer Vision Conference (WACV)*, Colorado, 2020. Acceptance rate: 379/1096 = 34.5%.
- [17] Wei Zhao, Maxime Peyrard, Fei Liu, Yang Gao, Christian M. Meyer and Steffen Eger. “[MoverScore: Text Generation Evaluating with Contextualized Embeddings and Earth Mover Distance.](#)” In *Proceedings of the 2019 Conference on Empirical Methods in Natural Language Processing and the 9th International Joint Conference on Natural Language Processing (EMNLP)*, Hong Kong, China, 2019. [Oral Presentation] Acceptance rate: 683/2876 = 23.7%.
- [18] Sangwoo Cho,^S Chen Li, Dong Yu, Hassan Foroosh and Fei Liu. “[Multi-Document Summarization with Determinantal Point Processes and Contextualized Representations.](#)” In *Proceedings of the 2nd Workshop on New Frontiers in Summarization at EMNLP*, Hong Kong, China, 2019.
- [19] Logan Lebanoff,^S John Muchovej,^S Franck Dernoncourt, Doo Soon Kim, Seokhwan Kim, Walter Chang and Fei Liu. “[Analyzing Sentence Fusion in Abstractive Summarization.](#)” In *Proceedings of the 2nd*

Workshop on New Frontiers in Summarization at **EMNLP**, Hong Kong, China, 2019.

- [20] Kristjan Arumae,^S Parminder Bhatia and Fei Liu “[Towards Annotating and Creating Sub-Sentence Summary Highlights.](#)” In *Proceedings of the 2nd Workshop on New Frontiers in Summarization at EMNLP*, Hong Kong, China, 2019.
- [21] Logan Lebanoff,^S Kaiqiang Song,^S Franck Dernoncourt, Doo Soon Kim, Seokhwan Kim, Walter Chang and Fei Liu. “[Scoring Sentence Singletons and Pairs for Abstractive Summarization.](#)” In *Proceedings of the 57th Annual Meeting of the Association for Computational Linguistics (ACL)*, Florence, Italy, 2019. Acceptance rate: 660/2905 = 22.7%.
- [22] Sangwoo Cho,^S Logan Lebanoff,^S Hassan Foroosh and Fei Liu. “[Improving the Similarity Measure of Determinantal Point Processes for Extractive Multi-Document Summarization.](#)” In *Proceedings of the 57th Annual Meeting of the Association for Computational Linguistics (ACL)*, Florence, Italy, 2019. [Oral Presentation] Acceptance rate: 660/2905 = 22.7%.
- [23] Kristjan Arumae^S and Fei Liu. “[Guiding Extractive Summarization with Question-Answering Rewards.](#)” In *Proceedings of the 2019 Annual Conference of the North American Chapter of the Association for Computational Linguistics (NAACL)*, Minneapolis, Minnesota, 2019. [Oral Presentation] Acceptance rate: 423/1733 = 24.4%.
- [24] Logan Lebanoff,^S Kaiqiang Song^S and Fei Liu. “[Adapting the Neural Encoder-Decoder Framework from Single to Multi-Document Summarization.](#)” In *Proceedings of the 2018 Conference on Empirical Methods in Natural Language Processing (EMNLP)*, Brussels, Belgium, 2018. Acceptance rate: 351/1376=25.5%.
- [25] Logan Lebanoff^S and Fei Liu. “[Automatic Detection of Vague Words and Sentences in Privacy Policies.](#)” In *Proceedings of the 2018 Conference on Empirical Methods in Natural Language Processing (EMNLP)*, Brussels, Belgium, 2018. Acceptance rate: 351/1376=25.5%.
- [26] Kexin Liao,^S Logan Lebanoff^S and Fei Liu. “[Abstract Meaning Representation for Multi-Document Summarization.](#)” In *Proceedings of the 27th International Conference on Computational Linguistics (COLING)*, Santa Fe, New-Mexico, 2018. [Oral Presentation] **Area Chair Favorite Paper**, Acceptance rate: 44/888=5%.
- [27] Kaiqiang Song^S and Fei Liu. “[Structure-Infused Copy Mechanisms for Abstractive Summarization.](#)” In *Proceedings of the 27th International Conference on Computational Linguistics (COLING)*, Santa Fe, New-Mexico, 2018. [Oral Presentation] Acceptance rate: 331/888=37%.
- [28] Kristjan Arumae^S and Fei Liu. “[Reinforced Extractive Summarization with Question-Focused Rewards.](#)” In *Proceedings of the 56th Annual Meeting of the Association for Computational Linguistics (ACL), Student Research Workshop*, Melbourne, Australia, 2018.
- [29] Yanshan Wang, Sijia Liu, Majid Rastegar-Mojarad, Liwei Wang, Feichen Shen, Fei Liu, Hongfang Liu. “[Dependency and AMR Embeddings for Drug-Drug Interaction Extraction from Biomedical Literature.](#)” In *Proceedings of the 8th ACM International Conference on Bioinformatics, Computational Biology, and Health Informatics (ACM-BCB)*, Boston, Massachusetts, 2017.
- [30] Kristjan Arumae,^S Guo-Jun Qi and Fei Liu. “[A Study of Question Effectiveness Using Reddit ‘Ask Me Anything’ Threads.](#)” In *Proceedings of the 30th Florida Artificial Intelligence Research Society Conference (FLAIRS)*, Marco Island, Florida, 2017.
- [31] Sansiri Tarnpradab,^S Fei Liu and Kien Hua. “[Toward Extractive Summarization of Online Forum Discussions via Hierarchical Attention Networks.](#)” In *Proceedings of the 30th Florida Artificial Intelligence Research Society Conference (FLAIRS)*, Marco Island, Florida, 2017.

- [32] Shomir Wilson, Florian Schaub, Rohan Ramanath, Norman Sadeh, Fei Liu, Noah A. Smith, and Frederick Liu. “Crowdsourcing Annotations for Websites’ Privacy Policies: Can It Really Work?” In *Proceedings of the 25th International World Wide Web Conference (WWW)*, Montreal, Canada, 2016. [Oral Presentation] **Best Paper Finalist**, Acceptance rate: 5/727=0.7%.
- [33] Wencan Luo,^S Fei Liu, Zitao Liu and Diane Litman. “Automatic Summarization of Student Course Feedback.” In *Proceedings of the 15th Annual Conference of the North American Chapter of the Association for Computational Linguistics: Human Language Technologies (NAACL)*, San Diego, California, 2016. [Oral Presentation] Acceptance rate: 182/680=27%.
- [34] Wencan Luo^S, Fei Liu and Diane Litman. “An Improved Phrase-based Approach to Annotating and Summarizing Student Course Responses.” In *Proceedings of the 26th International Conference on Computational Linguistics (COLING)*, Osaka, Japan, 2016. [Oral Presentation] Acceptance rate: 337/1039=32.4%.
- [35] Fei Liu, Nicole Fella^S and Kexin Liao^S. “Modeling Language Vagueness in Privacy Policies using Deep Neural Networks.” In *Proceedings of the AAI 2016 Fall Symposium on Privacy and Language Technologies*, Washington, D.C., 2016. [Oral Presentation]
- [36] Dani Yogatama, Fei Liu and Noah A. Smith. “Extractive Summarization by Maximizing Semantic Volume”. In *Proceedings of the 2015 Conference on Empirical Methods on Natural Language Processing (EMNLP)*, Lisboa, Portugal, 2015. Acceptance rate: 312/1300=24%.
- [37] Fei Liu, Jeffrey Flanigan, Sam Thomson, Norman Sadeh and Noah A. Smith. “Toward Abstractive Summarization Using Semantic Representations.” In *Proceedings of the North American Chapter of the Association for Computational Linguistics (NAACL)*, Denver, Colorado, 2015. [Oral Presentation] Acceptance rate: 186/714=26%.
- [38] Chen Li,^S Yang Liu, Fei Liu, Lin Zhao and Fuliang Weng. “Improving Multi-document Summarization by Sentence Compression based on Expanded Constituent Parse Tree.” In *Proceedings of the 2014 Conference on Empirical Methods on Natural Language Processing (EMNLP)*, Doha, Qatar, 2014. Acceptance rate: 225/790=28%.
- [39] Fei Liu, Rohan Ramanath,^S Norman Sadeh and Noah A. Smith. “A Step Towards Usable Privacy Policy: Automatic Alignment of Privacy Statements.” In *Proceedings of the 25th International Conference on Computational Linguistics (COLING)*, Dublin, Ireland, 2014. [Oral Presentation] Acceptance rate: 217/705=31%.
- [40] Rohan Ramanath,^S Fei Liu, Norman Sadeh and Noah A. Smith. “Unsupervised Alignment of Privacy Policies using Hidden Markov Models.” In *Proceedings of the 52nd Annual Meeting of the Association for Computational Linguistics (ACL)*, Baltimore, Maryland, 2014. Acceptance rate: 285/1123=25%.
- [41] Joel R. Reidenberg, Travis Breaux, Lorrie Faith Cranor, Brian French, Amanda Grannis, James T. Graves, Fei Liu, Aleecia M. McDonald, Thomas B. Norton, Rohan Ramanath, N. Cameron Russell, Norman Sadeh, and Florian Schaub. “Disagreeable Privacy Policies: Mismatches between Meaning and Users’ Understanding.” In *Proceedings of 2014 TPRC: 42nd Research Conference on Communication, Information and Internet Policy (TPRC)*, Arlington, Virginia, 2014.
- [42] Rohan Ramanath^S, Florian Schaub, Shomir Wilson, Fei Liu, Norman Sadeh and Noah A. Smith. “Identifying Relevant Text Fragments to Help Crowdsourc Privacy Policy Annotations.” In *Proceedings of the Second AAI Conference on Human Computation and Crowdsourcing (HCOMP)*, Pittsburgh, Pennsylvania, 2014
- [43] Norman Sadeh, Alessandro Acquisti, Travis D. Breaux, Lorrie Faith Cranor, Aleecia M. McDonald,

- Joel Reidenberg, Noah A Smith, Fei Liu, N. Cameron Russell, Florian Schaub, Shomir Wilson, James T. Graves, Pedro Giovanni Leon, Rohan Ramanath and Ashwini Rao. “Towards Usable Privacy Policies: Semi-automatically Extracting Data Practices From Websites’ Privacy Policies.” In *Symposium on Usable Privacy and Security (SOUPS)*, Menlo Park, California, 2014.
- [44] Chao Shen,^S Fei Liu, Fuliang Weng, and Tao Li. “A Participant-based Approach for Event Summarization using Twitter Streams.” In *Proceedings of the North American Chapter of the Association for Computational Linguistics (NAACL)*, Atlanta, Georgia, 2013. [Oral Presentation] Acceptance rate: 146/455=32%.
- [45] Chen Li,^S Fei Liu, Fuliang Weng and Yang Liu, “Document Summarization via Guided Sentence Compression.” In *Proceedings of the 2013 Conference on Empirical Methods in Natural Language Processing (EMNLP)*, Seattle, Washington, 2013. Acceptance rate: 205/772=27%.
- [46] Fei Liu, Fuliang Weng and Xiao Jiang^S. “A Broad-coverage Normalization System for Social Media Language.” In *Proceedings of the 50th Annual Meeting of the Association for Computational Linguistics (ACL)*, Jeju Island, South Korea, 2012. Acceptance rate: 187/940=20%.
- [47] Feifan Liu, Fei Liu, and Yang Liu. “Learning from Chinese-English Parallel Data for Chinese Tense Prediction.” In *Proceedings of the International Joint Conference on Natural Language Processing (IJCNLP)*, Chiang Mai, Thailand, 2011. Acceptance rate: 176/478=36%.
- [48] Fei Liu, Fuliang Weng, Bingqing Wang, and Yang Liu, “Insertion, Deletion, or Substitution? Normalizing Text Messages without Pre-categorization nor Supervision.” In *Proceedings of the 49th Annual Meeting of the Association for Computational Linguistics (ACL)*, Portland, Oregon, 2011. [Oral Presentation] Acceptance rate: 292/1146=25%.
- [49] Fei Liu, Yang Liu and Fuliang Weng. “Why is ‘SXSX’ Trending? Exploring Multiple Text Sources for Twitter Topic Summarization.” In *Proceedings of the ACL Workshop on Language and Social Media*, Portland, Oregon, 2011.
- [50] Fei Liu and Yang Liu. “Exploring Speaker Characteristics for Meeting Summarization.” In *Proceedings of the 11th Annual Conference of the International Speech Communication Association (INTERSPEECH)*, Makuhari, Japan, 2010. Acceptance rate: 771/1324=58%.
- [51] Yang Liu, Shasha Xie and Fei Liu. “Using N-best Recognition Output for Extractive Summarization and Keyword Extraction in Meeting Speech.” In *Proceedings of the 2010 IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)*, Dallas, Texas, March 2010. Acceptance rate: 1356/2855=48%.
- [52] Fei Liu and Yang Liu. “Using Spoken Utterance Compression for Meeting Summarization: A Pilot Study.” In *Proceedings of the 2010 IEEE Workshop on Spoken Language Technology (IEEE SLT)*, Berkeley, California, 2010.
- [53] Fei Liu and Yang Liu. “From Extractive to Abstractive Meeting Summaries: Can It be Done by Sentence Compression?” In *Proceedings of the 47th Annual Mtg. of the Association for Computational Linguistics (ACL)*, Singapore, 2009. [Oral Presentation] Acceptance rate: 214/925=23%.
- [54] Feifan Liu, Deana Pennell, Fei Liu and Yang Liu. “Unsupervised Approaches to Automatic Keyword Extraction Using Meeting Transcripts.” In *Proceedings of the North American Chapter of the Association for Computational Linguistics (NAACL)*, Boulder, Colorado, 2009. [Oral Presentation] Acceptance rate: 146/438=33%.
- [55] Fei Liu, Feifan Liu and Yang Liu. “Automatic Keyword Extraction for the Meeting Corpus Using Supervised Approach and Bigram Expansion.” In *Proceedings of the IEEE Workshop on Spoken*

Language Technology (IEEE SLT), Goa, India, 2008.

- [56] Fei Liu and Yang Liu. “What are Meeting Summaries? An Analysis of Human Extractive Summaries in Meeting Corpus.” In *Proceedings of the 9th SIGDIAL Conference on Discourse and Dialogue (SIGDIAL)*, Columbus, Ohio, 2008.
- [57] Junkuo Cao, Lide Wu, Xuanjing Huang, Yaqian Zhou and Fei Liu. “Using Multiple Combined Ranker for Answering Definitional Questions.” In *Proceedings of the 4th Asia Information Retrieval Symposium (AIRS)*, Harbin, China, 2008.

Patents

- [58] Fuliang Weng, Xu Kui, Fei Liu, Lin Zhao, Zhe Feng and Zhongnan Shen. “System And Method For Dialog-Enabled Context-Dependent and User-Centric Content Presentation.” Applications US15/104,695, EP14872078.2A, CN201480076121.2A, PCT/US2014/069692. Filed by Robert Bosch LLC, December 2014. US 10,209,853 B2. **Granted**, February 2019.
- [59] Fei Liu, Fuliang Weng, Chao Shen and Lin Zhao. “System and Method for Event Summarization Using Observer Social Media Messages.” Applications US14/105,233, EP13818081.5A, PCT/US2013/074929. Filed by Robert Bosch LLC, December 2013. US 10,224,025 B2. **Granted**, March 2019.
- [60] Fei Liu and Fuliang Weng. “Broad-Coverage Normalization System for Social Media Language.” Application US13/779,083. Filed by Robert Bosch LLC, February 2013. US 9,164,983 B2. **Granted**, October 2015.
- [61] Fei Liu and Fuliang Weng. “Method and System for Text Message Normalization Based on Character Transformation and Web Data,” Applications US13/117,330, CN201280036746.7A, EP12725208.8A, PCT/US2012/038870. Filed by Robert Bosch LLC, May 2011.

Technical Reports

- [62] Norman Sadeh, Alessandro Acquisti, Travis Breaux, Lorrie Cranor, Aleecia M. McDonald, Joel Reidenberg, Noah A. Smith, **Fei Liu**, N. Cameron Russel, Florian Schaub, Shomir Wilson. “The Usable Privacy Policy Project: Combining Crowdsourcing, Machine Learning and Natural Language Processing to Semi-automatically Answer Those Privacy Questions Users Care About”. *Technical Report CMU-ISR-13-119*, Carnegie Mellon University.

INVITED TALKS

- [1] Toward Robust Abstractive Multi-Document Summarization and Information Consolidation. *DARPA ISAT Multi-Modal Understanding and Summarization (MuMUS) of Critical Events Workshop*, Philadelphia, Pennsylvania, October, 2019
- [2] How Do We Handle Errors in Summarization? *DARPA ISAT Multi-Modal Understanding and Summarization (MuMUS) of Critical Events Workshop*, Philadelphia, Pennsylvania, October, 2019
- [3] Toward Robust Abstractive Multi-Document Summarization and Information Consolidation. *Bloomberg L.P.*, New York City, NY, August, 2019
- [4] Toward Deep Abstractive Summarization Using Meaning Representations. *The ACL Workshop on Designing Meaning Representations*, Florence, Italy, August, 2019
- [5] Toward Robust Abstractive Multi-Document Summarization and Information Consolidation. *Facebook*, Menlo Park, California, July, 2019

- [6] Toward Robust Abstractive Multi-Document Summarization and Information Consolidation. *Adobe Research*, San Jose, California, June, 2019
- [7] Abstractive Multi-Document Summarization: Opportunities and Challenges. *Dagstuhl Seminar on Multi-document Information Consolidation*, Dagstuhl, Germany, May 2019.
- [8] Incorporating Linguistic Structure in Neural Abstractive Summarization. Ubiquitous Knowledge Processing (UKP) Lab, *Technische Universität Darmstadt*, Darmstadt, Germany, April 2019.
- [9] Incorporating Linguistic Structure in Neural Abstractive Summarization. *Adobe Research*, San Jose, California, September 2018.
- [10] Incorporating Linguistic Structure into Neural Abstractive Summarization Systems. *Bosch Research and Technology Center*, Sunnyvale, California, September 2018.
- [11] Deep Learning for Natural Language Processing: Summarization and Language Vagueness. Faculty Networking Seminar, *Tulane University*, New Orleans, Louisiana, February 2017.
- [12] Deep Learning for Natural Language Processing: Summarization and Language Vagueness. *Bosch Research and Technology Center*, Palo Alto, California. January 2017.
- [13] Summarizing Information in Big Data: Algorithms and Applications. *Florida Institute for Human and Machine Cognition (IHMC)*, Ocala, Florida, September 2016.
- [14] Toward Abstractive Summarization Using Semantic Representations. *MIT Rising Stars in EECS An Academic Career Workshop*, Cambridge, Massachusetts, November 2015.
- [15] Summarizing Information in Big Data: Algorithms and Applications. CS Department, *University of Central Florida*, Orlando, Florida, April 2015.
- [16] Summarizing Information in Big Data: Algorithms and Applications. CSEE Department, *University of Maryland, Baltimore County*, March 2015.
- [17] Summarizing Information in Big Data: Algorithms and Applications. CS Department, *City University of New York*, New York City, New York, March 2015.
- [18] Summarizing Information in Big Data: Algorithms and Applications. NLP+CL Seminar, *Carnegie Mellon University*, Pittsburgh, Pennsylvania, February 2015.
- [19] Automatic Summarization for Multiple Text Genres: Algorithms and Applications. CS Colloquium, *University of Pittsburgh*, Pittsburgh, Pennsylvania, November 2014.
- [20] Comprehending Social Media Text: Normalization and Summarization. Natural Language Processing Group, *Columbia University*, New York City, New York, June 2013.
- [21] Future Research Directions for NLP. Student Research Workshop at NAACL. Invited panelist, with Yejin Choi, Micha Elsner, and Luke Zettlemoyer, Atlanta, Georgia, June 2013.

PROFESSIONAL ACTIVITIES

Organizing Committee

General publication chair, 2020 Conf. on Empirical Methods in Natural Language Proc. (**EMNLP 2020**)

Senior area chair, Annual Conference of the Association for Computational Linguistics (**ACL 2020**)

Senior program committee, The Thirty-Fourth AAAI Conf. on Artificial Intelligence (**AAAI 2020**)

Publication co-chair, The 2019 Conference on Empirical Methods in Natural Language Processing and 9th International Joint Conference on Natural Language Processing (**EMNLP 2019**)

Area chair / Session chair, The 57th Annual Meeting of the Association for Comp. Ling. (**ACL 2019**)
Area chair / Session chair, The 2019 Annual Conference of the North American Chapter of the Association for Computational Linguistics (**NAACL-HLT 2019**)
Demonstrations chair, The 56th Annual Meeting of the Association for Comp. Ling. (**ACL 2018**)
Area chair / Session chair, 2018 Conf. on Empirical Methods in Natural Lang. Proc. (**EMNLP 2018**)
Area chair, The 8th International Joint Conference on Natural Language Processing (IJCNLP 2017)
Area chair, CCF Intl. Conf. on Natural Language Proc. and Chinese Computing (NLPCC 2017)
Workshop co-organizer, New Frontiers in Summarization, (**EMNLP 2017, 2019**)
Session chair, The 15th Annual Conference of the North American Chapter of the Association for Computational Linguistics: Human Language Technologies (**NAACL-HLT 2016**)
Area chair, The 16th China National Conference on Computational Linguistics (CCL 2016)
Workshop co-organizer, AAI 2016 Fall Symposium on Privacy and Language Technologies
Session chair, The 2015 Annual Conference of the North American Chapter of the Association for Computational Linguistics: Human Language Technologies (**NAACL-HLT 2015**)
Session chair, The 2015 Conference of the Association for Computational Linguistics (**ACL 2015**)
Area chair, The Annual Conference of the North American Chapter of the Association for Computational Linguistics: Human Language Technologies (**NAACL-HLT 2015**)

Journal Editorial

Standing review committee, Trans. of the Association for Computational Linguistics (TACL), 2018–
Associate editor, ACM Transactions on Asian and Low-Resource Language Info. Proc. (TALLIP), 2019–

Journal Referee

Journal of Artificial Intelligence Research, 2015, 2018, 2019
Transactions of the Association for Computational Linguistics, 2016, 2019, 2020
IEEE Transactions on Audio, Speech and Language Processing, 2011–2012, 2019
ACM Trans. on Asian and Low-Resource Language Information Processing, 2013–14, 2016, 2018
Natural Language Engineering, 2013–2014, 2016
Computer Speech & Language, 2016
Computational Linguistics, 2015
IEEE Transactions on Knowledge and Data Engineering, 2014–2015
ACM Transactions on Knowledge Discovery from Data, 2013–2014
Speech Communication, 2013
ACM Transactions on Speech and Language Processing, 2012
Data & Knowledge Engineering Journal, 2011–2012

Conference Program Committee

Annual Meeting of the Association for Computational Linguistics (**ACL**), 2012–2019
Conference on Empirical Methods on Natural Language Processing (**EMNLP**), 2013, 2015–2019
International Conference on Computational Linguistics (**COLING**), 2018
Annual Conference on Neural Information Processing Systems (**NIPS**), 2015–2016, 2018–2019

European Chapter of the Association for Computational Linguistics (**EACL**), 2012, 2017
International Conference on Machine Learning (**ICML**), 2015–2017
AAAI Conference on Artificial Intelligence (**AAAI**), 2013, 2016–2017, 2019
International Joint Conference on Artificial Intelligence (**IJCAI**) 2013, 2016, 2020
ACM International Conference on Information and Knowledge Management (**CIKM**), 2013, 2016
IEEE International Conference on Data Mining (**ICDM**) PhD Forum, 2015
ACM SIGKDD Conference on Knowledge Discovery and Data Mining (**KDD**) 2012–2015
International Conference on Acoustics, Speech, and Signal Processing (**ICASSP**) 2012–2013
NAACL Student Research Workshop (SRW) 2013, 2015–2016
AAAI Spring Symposium: Analyzing Microtext, 2013
Pacific-Asia Conference on Knowledge Discovery and Data Mining (PAKDD), 2013–2015
Asia Information Retrieval Societies Conference (AIRS), 2012
International Joint Conference on Natural Language Processing (IJCNLP), 2011
ACL Workshop on Automatic Summarization for Different Genres, Media, and Languages, 2011

Service to Government Agencies

Panelist and Ad-hoc reviewer, CISE/IIS, National Science Foundation, 2016, 2019, 2020
Grant reviewer, Research Grants Council of Hong Kong, 2020
Grant reviewer, CORE Programme, Luxembourg National Research Fund, 2018
Grant reviewer, Government grant, Autonomous Province of Bolzano, Italy, 2015

Service to Department

CS graduate committee member, 2016–2017, 2017–2018
Faculty advisor, IoT-REU Program (2015–2018); EXCEL/COMPASS Undergraduate Research Experience (URE) Program (2016–present); Flit-Path Program (2016–present)
Participated in the faculty search process to meet with faculty candidates (2016) and evaluated Learning Sciences Cluster faculty candidates, 2018–2019
Faculty mentor and final presentation committee member, CS Senior Design II, 2015
Faculty advisor, CS undergraduate student advising (2016–present, 30 students)
Advised students: Jon Guilbe (2016); Sandy Demian (2017); Krystal Siler (2017); Masaki Hook (2017); Nicolas Derosa (2017); Jacqueline Meulen (2017); James Anderson (2017); Jacqueline DeSanto (2018); Misty Au (2018); Dylan Roberts (2018); Rolando Murillo (2018); Bryce Vichi (2018); Haley Meaghan (2018); Elaine Ng (2018); Elena Berisha (2018); Jamil Gonzalez (2019); Matthew Reid (2019); Toan Vu (2019); Ben Buzzelli (2019); Levi Huchingson (2019); Alexandra Arriola (2019); Eryn Elstrom (2019); Desiree Wood (2019); Amber Hoekstra (2019); Ariane Avendano (2019); Michaela Green (2019); Caroline Nejedlo (2019); Samantha Del Rosario (2019); Shyam Parikh (2020); Camila La Rosa (2020).

Dissertation/Thesis Committee

Wencan Luo (Ph.D., University of Pittsburgh, defended in Spring 2017)
Xuhong Zhang (Ph.D., University of Central Florida, defended in Fall 2017)
Mahlagha Sedgi (M.S., University of Central Florida; graduated in 2017)

Yicong Tian (Ph.D., University of Central Florida; defended in Fall 2018)
Awrad Mohammed Ali (Ph.D., University of Central Florida, defended in Spring 2019)
Hao Hu (Ph.D., University of Central Florida; defended in Spring 2019)
Navid Kardan (Ph.D., University of Central Florida, defended in Summer 2019)
Josiah Wong (Ph.D., University of Central Florida, defended in Fall 2019)
Amir Mazaheri (Ph.D., University of Central Florida; defended in Spring 2020)
Liheng Zhang (Ph.D., University of Central Florida; defended in Spring 2020)
Amlan Talukder (Ph.D., University of Central Florida; expected N/A)
Ranjan Satapathy (Ph.D., Nanyang Technological University, Singapore; External Examiner, Spring 2020)

STUDENT ADVISEES

Students supervised by Dr. Liu @University of Central Florida

Alexander Roustai, (01/20–Present), Ph.D. student
Kaiqiang Song (08/16–Present), Ph.D. student [13][14][21][24][27]
Logan Lebanoff (01/17–Present), Ph.D. student [14][19][21][22][24][25][26]
Sangwoo Cho (06/18–Present), Ph.D. student [16][18][22], co-supervised with Hassan Foroosh
Jia Jin Koay (08/19–Present), Undergrad student
Xiaojin Dai (09/19–Present), Undergrad student, Flit-Path program
Kristjan Arumae (01/16–05/19), M.S. student [20][23][28][30], Employment: Amazon, Seattle
Sansiri Tarnpradab (10/15–12/16), Ph.D. student [31], co-advised with Kien Hua
Kexin Liao (01/16–05/18), M.S. student [26][35]. Employment: JD.com
Jongho Cha (01/16–05/16), M.S. student, Directed research.
Employment: Ministry of National Defense (South Korea)
Ray Ruitao Yan (05/17–08/17), B.S. student, Purdue University, IOTREU Program
Kevin Negy (08/16–12/16), B.S. student, Undergrad research. Interned at Florida IHMC
Now PhD Student at Cornell University
Clayton Barham (05/16–12/16), B.S. student, Undergrad research
Nicole Fella (05/16–08/16), B.S. student [35], Manhattan College, IOTREU Program
Employment: Software Developer at Morgan Stanley
Kylie McCarty (01/16–05/16), B.S. student, Undergrad research

Students supervised by Dr. Liu @Carnegie Mellon University

Eric Lee (01/14–05/14), Carnegie Mellon University, Employment: Google Inc.
Rohan Ramanath (12/13–07/14) [39][40][42], Carnegie Mellon University, Employment: LinkedIn Corp
Wencan Luo (10/14–05/17) [2][33][34], University of Pittsburgh, Employment: Google, Pittsburgh

Students supervised by Dr. Liu @Bosch Research

Chen Li (05/13–08/13) [38][45], University of Texas at Dallas, Employment: Microsoft
Chao Shen (05/12–08/12, 05/13–08/13) [44], Florida International University, Employment: Google Inc.
Xiao Jiang (10/11–08/12) [46], Cambridge University, Employment: Facebook, London