

## Jessica Ouyang

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### Research Interests

Automatic summarization, including faithful summarization and summarization of scientific articles, and computational narrative, including narrative summarization and argumentation with narrative.

### Appointment

Assistant Professor of Computer Science, UT Dallas, Aug. 2019–present.

### Education

PhD in Computer Science, Columbia University, June 2019.

MS in Computer Science, Columbia University, Feb. 2015.

BAS in Computer and Cognitive Science and BA in Linguistics, University of Pennsylvania, May 2012.

### Publications

Josh Wiedemeier, Elliot Tabet, Max Zheng, Sangsoo Ko, Jessica Ouyang, Sang Kil Cha, and Kangkook Jee. PYLINGUAL: Toward Perfect Decompilation of Evolving High-Level Languages. To appear in the IEEE Symposium on Security and Privacy (Oakland) 2025.

Xiangci Li, Sihao Chen, Rajvi Kapadia, Jessica Ouyang, Fan Zhang. Minimal Evidence Group Identification for Claim Verification. To appear in TrustNLP 2025.

Xiangci Li and Jessica Ouyang. Explaining Relationships Among Related Works. COLING 2025.

Xiangci Li and Jessica Ouyang. Related Work and Citation Text Generation: A Survey. EMNLP 2024.

Xiangci Li, Yi-Hui Lee, and Jessica Ouyang. Cited Text Spans for Scientific Citation Text Generation. SDP 2024.

Candice Monson, Ariella Lenton-Brym, Alexis Collins, Jeanine Lane, Carlos Busso, Jessica Ouyang, Skye Fitzpatrick, and Janice Kuo. Using machine learning to increase access to and engagement with trauma-focused interventions for posttraumatic stress disorder. In the *British Journal of Clinical Psychology*.

Xiangci Li, Linfeng Song, Lifeng Jin, Haitao Mi, Jessica Ouyang, and Dong Yu. A Knowledge Plug-and-Play Test Bed for Open-domain Dialogue Generation. COLING 2024.

Biswadip Mandal, Xiangci Li, and Jessica Ouyang. Contextualizing Generated Citation Texts. COLING 2024.

Gerardo Ocampo Diaz and Jessica Ouyang. Measuring Cross-Text Cohesion for Segmentation Similarity Scoring. COLING 2024.

Gerardo Ocampo Diaz and Jessica Ouyang. An Alignment-based Approach to Text Segmentation Similarity Scoring. CONLL 2022.

Xiangci Li, Biswadip Mandal, and Jessica Ouyang. CORWA: A Citation-Oriented Related Work Annotation Dataset. NAACL 2022.

Pooneh Mousavi and Jessica Ouyang. Detecting Hashtag Hijacking for Hashtag Activism. NLP4PI 2021.

Sarah Grzebinski, Helen Cheung, Charles Sanky, Jessica Ouyang, and Stephen Krieger. Educational Research: Why Medical Students Choose Neurology. In *Neurology* 97(1).

Soumya Sourav and Jessica Ouyang. Lightweight Models for Multimodal Sequential Data. WASSA 2021. Best Paper Award.

Jessica Ouyang and Kathleen McKeown. Neural Network Alignment for Sentential Paraphrases. ACL 2019.

Jessica Ouyang, Boya Song, and Kathleen McKeown. A Robust Abstractive System for Cross-Lingual Summarization. NAACL-HLT 2019.

Jessica Ouyang, Serina Chang, and Kathleen McKeown. Crowd-sourced Iterative Annotation for Narrative Summarization Corpora. EACL 2017.

Jessica Ouyang and Kathleen McKeown. Modeling Reportable Events as Turning Points in Narrative. EMNLP 2015. Notable Dataset Award.

Jessica Ouyang and Kathleen McKeown. Towards Automatic Detection of Narrative Structure. LREC 2014.

## **Grants**

“Machine Learning Guided Molecular Design for Indoor Light Harvesting”; Mihaela Stefan (PI), Julia Hsu (co-PI), Jessica Ouyang (co-PI); UT Dallas SPIRe, \$100,000; 2020–2021.

## **Awards and Fellowships**

Best Paper Award, WASSA 2021.

Notable Data Set Award, EMNLP 2015.

NSF IGERT Fellowship: From Data to Solutions, Columbia University, 2012-2019.

## **Invited Talks**

“Scientific Literature Review Generation,” Rice University AI Seminar Series, Mar. 2025.

“Navigating the Generative AI Revolution,” Texas General Counsel Forum, Nov. 2024.

“Navigating Large Language Models,” Center for American and International Law, Sept. 2023.

“Adapting Automatic Summarization to New Sources of Information,” Johns Hopkins University, Mar. 2019.

“Current Research in Natural Language Processing,” The New School, Nov. 2018.

## **Campus Talks**

“Introduction to Large Language Models,” Special Topics in Materials Science and Engineering: LLMs for Scientific Research, Aug. 2024.

“Natural Language Processing,” Hobson Wildenthal Honors College Round Table Series, Oct. 2020.

“Natural Language Processing for Hashtag Activism,” keynote address, Women in Data Science (WiDS) Dallas, Mar. 2020.

“Perspectives on the PhD Process,” UT Dallas Grace Series, Jan. 2020.

“Adapting Automatic Summarization to New Sources of Information,” UT Dallas AI Society, Sept. 2019.

## **Teaching**

Instructor, Natural Language Processing, UT Dallas, Fall 2019–2023.

Instructor, Discrete Mathematics for Computing, UT Dallas, Spring 2021–2025, Fall 2024.

Instructor, Recent Advances in Computing — Advanced Natural Language Processing, UT Dallas, Spring 2020.

Guest Lecturer, Introduction to Natural Language Processing (Prof. Kathleen McKeown), Columbia University, Fall 2017.

Preceptor, Discrete Mathematics, Columbia University, Fall 2016 and Spring 2017.

Teaching Assistant, Artificial Intelligence (Prof. Dragomir Radev), Columbia University, Fall 2014.

Teaching Assistant, Topics in Information Processing: From Data to Solutions (Profs. Julia Hirschberg and Shih-Fu Chang), Columbia University, Fall 2013.

Research mentor, Egleston Scholars Program, Columbia University, Dec. 2012–May 2015.

Teaching Assistant, Introduction to Computer Systems (Prof. C.J. Taylor), University of Pennsylvania, Fall 2010 and Fall 2011.

### **Professional Activities**

Journal reviewer: *ACM Transactions on Asian and Low-Resource Language Information Processing*, 2019–present; *Computational Linguistics*, 2020–present; *ACM Transactions on Interactive Intelligent Systems*, 2021–present; *Artificial Intelligence*, 2021–present; *Data Mining and Knowledge Discovery*, 2021–present; *IEEE Transactions on Affective Computing*, 2022–present; *Journal of Intelligent Information Systems*, 2023–present.

Conference area chair (summarization track): ACL Rolling Review 2021–2024, EMNLP 2021–2022, NAACL 2022, COLING 2025.

Conference program committee: AAI 2020-2022, AACL-IJCNLP 2020, ACL 2018–2024 (Outstanding Reviewer award), CIKM 2022, COLING 2022-2025, COLM 2025, CONLL 2019-2024, EACL 2021-2022, EMNLP 2019-2023, NAACL 2021, \*SEM 2019, SDM 2020-2022.

Workshop program committee: NUSE 2020, SocialSens 2021, Insights 2021-2022, NewSum 2021-2023, WASSA 2022-2024, MIA 2022, FutureED 2024, SouthNLP 2024.

Secondary reviewer, NAACL 2018–2019.

PhD Advisor: Xiangci Li (2024); Gerardo Ocampo Diaz, Yi-Hui (Lily) Lee.

Masters Thesis Advisor: Manas Bundele (2020); Biswadip Mandal, Dat Quoc Ngo (2022); Tanmay Vakare (2023).

PhD Dissertation Committee: Jing Lu (2020); Hemeng Tao, Takshak Desai, Kusha Sridhar, Yifan Li, Dhruvkumar Patel, Parag Dakle (2021); Vinay Kothapally (2022); Shahram Ghorbani, Yibo Hu, Nursadul Mamun (2023); Hideo Kobayashi, Zhenyu Wang (2024); Wei Xia, Wei-Cheng Ling, Luay Abdeljaber, Amin Birashk, Sadaf MD Halim.

Masters Thesis Committee: Mathew Perez (2020), Saquib Irtiza (2021), Prajjwal Bhargava (2022).

### **Service**

Member, PhD Committee, Department of Computer Science, UT Dallas, 2024–present.

Member, K12 Outreach Committee, Department of Computer Science, UT Dallas, 2024–present.

Member, UT Dallas Information Security Advisory Committee, 2023–present.

Member, Jonsson School Strategic Planning Committee, 2022–2023.

Faculty Advisor, UT Dallas Girls Who Code, 2021–present.

Internal Reviewer, UT Dallas Office of Sponsored Projects, 2021–present.

Member, Graduate Admissions Committee, Department of Computer Science, UT Dallas, 2019–present.

Mailing list administrator, Natural Language Processing Group (Columbia University), 2014–2019.

Treasurer, Women in Computer Science (Columbia University), 2014–2015.

Publicity Chair, Women in Computer Science (Columbia University), 2013–2014.

### **Academic and Industry Internships**

Research Assistant, Johns Hopkins University (Human Language Technology Center of Excellence), June 2012–Aug. 2012.

Language Understanding Undergraduate Intern, Raytheon BBN Technologies, June 2011–Aug. 2011.

Associate Research Scientist, Johns Hopkins University (Human Language Technology Center of Excellence), June 2010–Aug. 2010.

Research Assistant, University of Pennsylvania (Prof. Mitch Marcus), May 2009–Aug. 2009.