# Wei Xu

✓ wei.xu@cc.gatech.edu CODA Tech Square 1165A, Atlanta, GA, 30308 U.S.A. (Last updated: September 20, 2020) Natural Language Processing, Machine Learning, Social Media RESEARCH EDUCATION Ph.D. in Computer Science, New York University, New York, NY 2014 Thesis: Data-driven Approaches for Paraphrasing Across Language Variations Advisor: Ralph Grishman; Committee: Satoshi Sekine, Ernest Davis, Bill Dolan (Microsoft Research), Luke Zettlemoyer (University of Washington/Facebook AI Research) B.S. and M.S. in Computer Science, Tsinghua University, Beijing, CHINA 2004/2007Thesis: Event-relevance Based Summarization CITIZENSHIP APPOINTMENTS Assistant Professor, Georgia Institute of Technology, Atlanta, GA Aug 2020 – present School of Interactive Computing Assistant Professor, The Ohio State University, Columbus, OH Aug 2016 - July 2020 Department of Computer Science and Engineering Visiting Faculty, Carnegie Mellon University, Pittsburgh, PA Summer 2019 Language Technologies Institute (Host: Graham Neubig) Postdoctoral Researcher, University of Pennsylvania, Philadelphia, PA Feb 2014 - Aug 2016 Computer Information and Science Department (Advisor: Chris Callison-Burch) Visiting PhD Student, University of Washington, Seattle, WA Jan 2012 - Dec 2013Computer Science and Engineering Department Research Intern, Microsoft Research, Seattle, WA Summer 2011 Internet Services Research Center Research Intern, Educational Testing Service, Princeton, NJ Mar - May, Sep - Dec 2010 Natural Language and Speech Group Engineer Intern, Amazon.com, Seattle, WA Summer 2010 Catalog Quality Group Research Intern, Hong Kong Polytechnic University Sep 2005 – Feb 2006 Department of Computing Best Paper Award, COLING, 2018 AWARDS Criteo Faculty Research Award (\$20,000), 2018 CrowdFlower AI for Everyone Award (\$25,000), 2018 NSF CRII Award, 2018 NYU MacCracken PhD Fellowship, 2007 – 2012 GRANTS NSF Grant Collaborative Research: Automatic Text-Simplification and Reading-Assistance to Support Self-Directed Learning by Deaf and Hard-of-Hearing Computing Workers 2018 - 2021PI (100%), total \$375,732 (including \$8,000 REU supplement) NSF CRII RI: Learning a Timely Semantic Resource from Social Media Data 2018 - 2021PI (100%), total \$183,000 (including \$8,000 REU supplement) IARPA Research Grant Better Extraction from Text Towards Enhanced Retrieval 2019 - 2023co-PI (50%), total \$850,000 (prime: Brown University) DARPA Research Grant Computational Simulation of Online Social Behavior 2017 - 2021co-PI (50%), total \$600,000 (prime: Leidos) SERVICES Best Paper Award Committee: EMNLP (2018) Area Chair/Senior Area Chair: ACL (2020, 2019), AAAI (2020), NAACL (2019), COLING (2018), EMNLP (2020, 2018, 2016) Program Committee: ACL (2018, 2017, 2015, 2014, 2013), EMNLP (2017, 2015, 2014), NAACL (2015) WWW (2017, 2016, 2015), AAAI (2016, 2015, 2012), KDD (2015), COLING (2014)

Publicity Chair: EMNLP (2019), NAACL (2018, 2016)

Workshop Chair: ACL (2017) Steering Committee: SemEval (2017) NSF Review Panelist: CISE (2017)

Wei Xu – Curriculum Vitae (page 1 of 6)

**Journal Reviewer:** Transactions of the Association for Computational (TACL), Journal of Artificial Intelligence Research (JAIR)

Organizer: Workshop on Noisy User-generated Text (http://noisy-text.github.io/) at EMNLP (2020, 2019, 2018, 2017), COLING (2016), ACL (2015); Mid-Atlantic Student Colloquium on Speech, Language and Learning (2016); SemEval Task 1: Paraphrase Identification and Semantic Similarity in Twitter (2015)

#### **PUBLICATIONS**

(<u>Underline</u> is used to indicate student advisees at the Georgia Tech and Ohio State University.)

GigaBERT: A Bilingual BERT for English and Arabic

Wuwei Lan, Yang Chen, Wei Xu, Alan Ritter

EMNLP 2020, short paper (acceptance rate 16.7%)

Neural CRF Model for Sentence Alignment in Text Simplification

Chao Jiang, Mounica Maddela, Wuwei Lan, Yang Zhong, Wei Xu

ACL 2020, long paper (acceptance rate 25.2%)

An Empirical Study of Named Entity Recognition in StackOverflow

Jeniya Tabassum, Mounica Maddela, Wei Xu, Alan Ritter

ACL 2020, long paper (acceptance rate 25.2%)

 $Generalizing\ Natural\ Language\ Analysis\ through\ Span-relation\ Representations$ 

Zhengbao Jiang, Wei Xu, Jun Araki, Graham Neubig

ACL 2020, long paper (acceptance rate 25.2%)

Learning Relation Entailment with Structured and Textual Information

Zhengbao Jiang, Jun Araki, Donghan Yu, Ruohong Zhang, Wei Xu, Yiming Yang, Graham Neubig AKBC 2020, long paper

Discourse Level Factors for Sentence Deletion in Text Simplification

Yang Zhong, Chao Jiang, Wei Xu, Junyi Jessy Li

AAAI 2020, long paper (acceptance rate 20.6%; oral presentation)

Multi-task Pairwise Neural Ranking for Hashtag Segmentation

Mounica Maddela, Wei Xu, Daniel Preotiuc-Pietro

ACL 2019, long paper (acceptance rate 25.7%)

A Word-Complexity Lexicon and A Neural Readability Ranking Model for Lexical Simplification

Mounica Maddela, Wei Xu

EMNLP 2018, long paper (acceptance rate 25.8%; oral presentation)

Neural Network Models for Paraphrase Identification, Semantic Textual Similarity, Natural Language Inference, and Question Answering

Wuwei Lan, Wei Xu

COLING 2018, long paper (**Best Paper Award**; selection rate 8/888 = 0.90%)

An Annotated Corpus for Machine Reading of Instructions in Wet Lab Protocols

Chaitanya Kulkarni, Wei Xu, Alan Ritter, Raghu Machiraju

NAACL 2018, short paper (acceptance rate 29%)

Character-based Neural Networks for Sentence Pair Modeling

Wuwei Lan, Wei Xu

NAACL 2018, short paper (acceptance rate 29%)

A Continuously Growing Dataset of Sentential Paraphrases

Wuwei Lan, Siyu Qiu, Hua He, Wei Xu

EMNLP 2017, long paper (acceptance rate 25.8%)

From Shakespeare to Twitter: What are Language Styles all about?

Wei Xu

EMNLP 2017 Workshop on Stylistic Variation

A Minimally Supervised Method for Recognizing and Normalizing Time Expressions in Twitter

<u>Jeniya Tabassum</u>, Alan Ritter, Wei Xu

EMNLP 2016, long paper (acceptance rate 26%; oral presentation)

Optimizing Statistical Machine Translation for Simplification

Wei Xu, Courtney Napoles, Ellie Pavlick, Quanze Chen, Chris Callison-Burch

TACL 2016, long paper (oral presentation at ACL 2016)

Discovering User Attribute Stylistic Differences via Paraphrasing

Daniel Preotiuc-Pietro, Wei Xu, Lyle Ungar

AAAI 2016, long paper (acceptance rate 26%; oral presentation)

Results of the WNUT16 Named Entity Recognition Shared Task

Benjamin Strauss, Bethany Toma, Alan Ritter, Marie-Catherine de Marneffe, Wei Xu

COLING 2016 Workshop on Noisy User-generated Text (shared-task overview)

Problems in Current Text Simplification Research: New Data Can Help

Wei Xu, Chris Callison-Burch, Courtney Napoles

TACL 2015, long paper (oral presentation at EMNLP 2015)

Cost Optimization for Crowdsourcing Translation

Mingkun Gao, Wei Xu, Chris Callison-Burch

NAACL 2015, long paper (acceptance rate 29%)

SemEval-2015 Task 1: Paraphrase and Semantic Similarity in Twitter

Wei Xu, Chris Callison-Burch, William B. Dolan

SemEval 2015, long paper (shared-task overview)

Shared Tasks of the 2015 Workshop on Noisy User-generated Text: Twitter Lexical Normalization and Named Entity Recognition

Timothy Baldwin, Marie Catherine de Marneffe, Bo Han, Young-Bum Kim, Alan Ritter, Wei Xu

ACL 2015 Workshop on Noisy User-generated Text (shared-task overview; author ordered alphabetically)

Extracting Lexically Divergent Paraphrases from Twitter

Wei Xu, Alan Ritter, Chris Callison-Burch, William B. Dolan, Yangfeng Ji

TACL 2014, long paper (oral presentation at NAACL 2015)

Infusion of Labeled Data into Distant Supervision for Relation Extraction

Maria Pershina, Bonan Min, Wei Xu, Ralph Grishman

ACL 2014, short paper (acceptance rate 25.2%; oral presentation)

Filling Knowledge Base Gaps for Distant Supervision of Relation Extraction

Wei Xu, Raphael Hoffmann, Le Zhao, Ralph Grishman

ACL 2013, short paper (acceptance rate 24%)

Gathering and Generating Paraphrases from Twitter with Application to Normalization

Wei Xu, Alan Ritter, Ralph Grishman

ACL Workshop on Building and Using Comparable Corpora 2013

A Preliminary Study of Tweet Summarization using Information Extraction

Wei Xu, Ralph Grishman, Adam Meyers, Alan Ritter

NAACL Workshop on Language Analysis in Social Media 2013

Paraphrasing for Style

Wei Xu, Alan Ritter, Bill Dolan, Ralph Grishman, Colin Cherry

COLING 2012, long paper (acceptance rate 25%)

Exploiting Syntactic and Distributional Information for Spelling Correction with Web-Scale N-grams Models

Wei Xu, Joel Tetreault, Martin Chodorow, Ralph Grishman, Le Zhao

EMNLP 2011, long paper (acceptance rate 23.7%)

New York University 2011 System for KBP (Knowledge Base Population) Slot Filing

Ang Sun, Ralph Grishman, Wei Xu, Bonan Min

TAC 2011 (best performance system in NIST KBP-2011 evaluation)

Passage Retrieval for Information Extraction using Distant Supervision

Wei Xu, Ralph Grishman, Le Zhao

IJCNLP 2011, long paper (acceptance rate 36%)

Who, What, When, Where, Why? Comparing Multiple Approaches to the Cross-Lingual 5W Task

Kristen Parton, Kathleen McKeown, Bob Coyne, Mona Diab, Ralph Grishman, Dilek Hakkani-Tür, Mary Harper, Heng Ji, Weiyun Ma, Adam Meyers, Sara Stolbach, Ang Sun, Gokhan Tur, Wei Xu, Sibel Yaman ACL 2009, long paper (acceptance rate 21%; oral presentation)

A Parse-and-Trim Approach with Information Significance for Chinese Sentence Compression

Wei Xu, Ralph Grishman

ACL Workshop on Language Generation and Summarisation 2009

 $Transducing\ Logical\ Relations\ from\ Automatic\ and\ Manual\ Annotation$ 

Adam Meyers, Michiko Kosaka, Heng Ji, Nianwen Xue, Mary Harper, Ang Sun, Wei Xu, Shasha Liao ACL Workshop on Linguistic Annotation 2009

Automatic Recognition of Logical Relations for English, Chinese and Japanese in the GLARF Framework Adam Meyers, Michiko Kosaka, Nianwen Xue, Heng Ji, Ang Sun, Shasha Liao, Wei Xu

SemEval 2009, long paper

Extractive Summarization using Inter- and Intra- Event Relevance

Using Non-Local Features to Improve Named Entity Recognition Recall Xinnian Mao, Wei Xu, Yuan Dong, Haila Wang PACLIC 2007, long paper Deriving Event Relevance from the Ontology Constructed with Formal Concept Analysis Wei Xu, Wenjie Li, Mingli Wu, Wei Li, Chunfa Yuan CICLing 2006, long paper (acceptance rate 30.4%; oral presentation) Building Document Graph for Text Summarization: An Event-based Approach Wei Xu, Wenjie Li, Mingli Wu, Wei Li, Chunfa Yuan ICCPOL 2006 The THU/PolyU System at MSE 2006: An Event-relevance based Approach Wei Xu, Chunfa Yuan, Mingling Wu, Wenjie Li MSE 2006 STUDENTS Mounica Maddela (PhD student at GaTech) 2017 - present 2018 – present Chao Jiang (PhD student at GaTech) Wuwei Lan (PhD student at OSU) 2016 - present Jeniya Tabassum (PhD student at OSU - co-advisor: Alan Ritter) 2016 - present Yang Zhong (PhD student at OSU) 2019 - present Jonathan Zheng (undergraduate at GaTech) Autumn 2020 – present Sarah Flanagan (undergraduate at OSU) 2018 - present Kenneth Koepcke (undergraduate at OSU)  $Summer \ 2020-present$ Yulu Qin (undergraduate at OSU) Summer 2020 Brian Seeds (undergraduate at OSU) Summer 2020 Panya Bhinder (high school intern at OSU) Summer 2020 Solomon Wood (high school intern at OSU) Spring 2020 Sam Stevens (undergraduate at OSU) 2019 - 2020Ethan Lee (undergraduate at OSU) 2019 - 2020Daniel Szoke (undergraduate at OSU) 2019 - 20202019 - 2020Jaewook Lee (undergraduate at OSU) Raleigh Potluri (undergraduate student at OSU) 2018 - 2019Lillian Chow (undergraduate student at OSU) 2018 - 2019Sydney Lee (completed undergraduate at OSU, now at Capital One) 2018 - 2020Rita Tong (completed undergraduate student at OSU, now a masters student at UWisconsin) 2018 - 2019 Pravar Mahajan (completed Masters student at OSU, now at Google) 2016 - 2017Autumn 2017 Piyush Ghai (completed Masters student at OSU, now at Amazon) 2020 (expected) Sangiang Zhao (PhD student at UPitt – advisor: Daging He) THESIS COMMITTEE Kai Cao (completed PhD student at NYU – advisor: Ralph Grishman) 2017 Maria Pershina (completed PhD student at NYU – advisor: Ralph Grishman) 2014 TEACHING CSE 5539 Social Media and Text Analytics (http://socialmedia-class.org/) A new course integrated with research, covering from basic to state-of-the-art machine learning algorithms  $(teaching\ evaluation:\ 4.13/5.00\ Autumn\ 2019,\ 4.40/5.00\ Autumn\ 2017,\ 4.60/5.00\ Autumn\ 2016;\ 5.72/6.00\ Autumn\ 2016,\ 5.72/6.00\ Autumn\ 2017,\ 4.60/5.00\ Autumn\$ at NASSLLI 2015) CSE 5522 Artificial Intelligence II: Advanced Techniques Ohio State University, mixed undergraduate and graduate level (teaching evaluation: Spring 2020, 4.85/5.00 Autumn 2018, 4.50/5.00 Spring 2018) CSE 5525 Speech and Language Processing Ohio State University, mixed undergraduate and graduate level (teaching evaluation 3.80/5.00 Spring 2017) Understanding and Generating Human Language INVITED TALKS Emory University, Atlanta, GA (CS Department Seminar) Sep 2020 University of Maryland, College Park, MD (CS Colloquium) Feb 2020 Jan 2020 University of Massachusetts, Amherst, MA Georgia Institute of Technology, Atlanta, GA Dec 2019 Learning for Unlimited Human Language Peking University, Beijing, China Dec 2018 Learning Large-scale Paraphrases for Natural Language Understanding and Generation Midwest Machine Learning Symposium, Chicago, IL Jun 2018

Wenjie Li, Wei Xu, Mingli Wu, Chunfa Yuan, Qin Lu

ACL 2006, long paper (acceptance rate 23%; oral presentation)

	Facebook, Menlo Park, CA	May 2018
	Stanford Research Institute, Menlo Park, CA	May 2018
	Twitter, San Francisco, CA IBM Thomas J. Watson Research Center, New York, NY	May 2018 Nov 2017
		1107 2017
	How does AI Understand Language? Women in Analytics Conference, Columbus, OH (Main Stage Panel)	Mar 2018
		Mai 2016
	Can Paraphrase be a Ultimate Solution for NLU and NLG?	I1 9017
	Google Research, New York, NY	Jul 2017
	Paraphrase $\approx$ Monolingual Translation	
	Amazon, Berlin, Germany	Aug 2016
	Multiple Instance Learning from Unlimited Text	
	Microsoft Research Asia, Beijing, China	Dec 2016
	University of Delaware, Newark, DE University of Edinburgh, Edinburgh, United Kingdom	Sep 2016 May 2016
	Ohio State University, Columbus, OH	Apr 2016
	University of North Carolina, Chapel Hill, NC	Apr 2016
	Arizona State University, Tempe, AZ	Mar 2016
	Vanderbilt University, Nashville, TN	Mar 2016
	Imperial College London, London, United Kingdom	Mar 2016
	University of Waterloo, Waterloo, ON, Canada (CS Seminar)	Mar 2016
	Indiana University, Bloomington, IN (Computer Science Colloquium Series)	Feb 2016
	Washington University, St Louis, MI (Computer Science & Engineering Colloquia Series)	Feb 2016
	Simon Fraser University, Vancouver, BC, Canada	Feb 2016
	University of Alberta, Edmonton, AB, Canada Yale University, New Haven, CT (CS Talk)	Feb 2016 Feb 2016
	University of Maryland, College Park, MD (CLIP Colloquium)	Oct 2015
	Ohio State University, Columbus, OH (Clippers Seminar)	Oct 2015
	Large-scale Paraphrase Acquisition from Twitter	0 11 -0-0
	DARPA's DEFT Project Meeting, Boulder, CO	May 2015
		Wiay 2010
	Learning and Generating Paraphrases from Twitter and Beyond Carnegie Mellon University, Pittsburgh, PA	Apr 2015
	Columbia University, New York, NY (NLP Talk)	Apr 2015
	Johns Hopkins University, Baltimore, MD (CLSP Colloquium)	Feb 2015
	Paraphrases in Twitter	
	Twitter, San Francisco, CA	Feb 2015
	Modeling Lexically Divergent Paraphrases in Twitter (and Shakespeare!)	
	The City University of New York, New York, NY (NLP Seminar)	Mar 2015
	IBM Research - Almaden, San Jose, CA	Feb 2015
	University of California, Berkeley, CA	Feb $2015$
	The University of Texas, Austin, TX (Forum for Artificial Intelligence)	Feb 2015
	Yahoo!, New York, NY	Dec 2014
	Carnegie Mellon University, Pittsburgh, PA (CL+NLP Lunch Seminar)	Nov 2014
	Microsoft Research, Seattle, WA (Visiting Speaker Series)	Aug 2014
	Incremental Information Extraction	
	Stanford Research Institute, Palo Alto, CA	Apr 2012
	IARPA's KDD Project Meeting, San Diego, CA	May 2011
	Information Extraction Research University of Washington, Seattle, WA	Jan 2011
	Event-based Summarization	
	Thomson Reuters, Eagan, Minnesota, MN	Nov 2009
OUTREACH	Mentor, Group Mentoring Sessions for undergraduate/master students at ACL 2020	July 2020
ACTIVITIES	Speaker/Judge, Ohio High School Hackathon	Mar 2019
	Speaker, Franklin Friday art and science festival in Columbus Ohio	${\rm Mar}\ 2019$
	Panelist, CogFest - Cognitive Science Festival	Apr 2018
	Mentor, Women and Underrepresented Minorities in NLP Workshop	Jun 2018
	Mentor, OSU's AI Hackathon Specific Memorie Architics Conference	Apr 2018
	Speaker/Panelist, Women in Analytics Conference Speaker, OSU's AI Club	Mar 2018 Feb 2018
	Specifical, ODO B III Oldo	105 2010

Judge, HackOhio	Oct $2017$
Mentor, Women and Underrepresented Minorities in NLP Workshop	Jul 2017
Judge, Ohio High School Hackathon	$Mar\ 2017$
Presenter, Philadelphia Science Festival	Apr 2015
#HashtagMaster: A Semantic Analysis Tool for Hashtags	Jun 2019
https://mounicam.github.io/hashtag_master	
$Pairwise\ Neural\ Ranking\ Model\ and\ Simple PPDB++$	Oct 2018
https://github.com/lanwuwei/SPM_toolkit	
SPM Toolkit for Sentence Pair Modeling	Aug 2018
https://github.com/lanwuwei/SPM_toolkit	
LanguageNet: Large-scale Paraphrase Corpus	Sep $2017$
https://github.com/lanwuwei/paraphrase-dataset	
Syntax MT-based Text Simplification System and SARI Evaluation Metric	May 2015
https://github.com/cocoxu/simplification/ (contribution to the Joshua Machine Translation	ı Toolkit)
NEWSELA Text Simplification Corpus	Sep $2015$
$\verb https://newsela.com/data/  (widely adopted as the benchmark for text simplification research) $	
Multiple-instance Learning Paraphrase Model	$\mathrm{Dec}\ 2014$
https://github.com/cocoxu/multip	
Twitter Paraphrase Corpus (shared-task at SemEval-2015)	Oct 2014
http://alt.qcri.org/semeval2015/task1/	
Event-based Twitter Summarization System	Nov 2013
https://github.com/cocoxu/twittersummarization/	
Twitter Normalization Phrase Table	Oct 2014
https://github.com/cocoxu/twitterparaphrase/	
Parallel Shakespeare Corpus and Model	$\mathrm{Jul}\ 2012$
https://github.com/cocoxu/Shakespeare/	

#### REFERENCES

OPEN SOURCE CODE / DATA

### Chris Callison-Burch

Associate Professor, Computer and Information Science Department

University of Pennsylvania, Philadelphia, PA

Sloan Research Fellow (2014), Chair of the NAACL Executive Board (2012-2013)

 $\boxtimes$  ccb@cis.upenn.edu

http://www.cis.upenn.edu/~ccb/

## Ralph Grishman

Professor, Computer Science Department, New York University, New York, NY

ACL Fellow (2017), President of ACL (1991), Department Chairman (1986-1988)

 $\boxtimes$ grishman@cs.nyu.edu

http://cs.nyu.edu/grishman/

### Mitch Marcus

Professor Emeritus, Computer and Information Science Department

University of Pennsylvania, Philadelphia, PA

ACL fellow (2011), AAAI fellow (1992), President of ACL (1997), Department Chairman

⊠ mitch@cis.upenn.edu

https://www.cis.upenn.edu/~mitch/home.html

### Raymond Mooney

Professor, Computer Science Department, University of Texas, Austin, TX

ACL fellow (2014), ACM fellow (2010), AAAI fellow (2005)

https://www.cs.utexas.edu/~mooney/

#### Luke Zettlemoyer

Associate Professor, Allen School of Computer Science and Engineering

University of Washington, Seattle, WA / Facebook AI Research

 $\boxtimes$ lsz@cs.washington.edu

https://www.cs.washington.edu/people/faculty/lsz