

# Justine Zhang

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## Research Areas

Natural Language Processing, Computational Social Science

## Education

### PhD in Information Science

Cornell University, Ithaca, NY, USA

Minor in Computer Science

Advised by Cristian Danescu-Niculescu-Mizil

Committee: Jon Kleinberg, Lillian Lee

GPA: 4.105/4

2015–2021

(expected)

### BSc in Computer Science

Stanford University, Stanford, CA, USA

GPA: 3.93/4

2011–2015

## Awards

### Top reviewer recognition

ACL 2020, EMNLP 2018 and 2019, ICWSM 2020, NAACL 2019

### EECS Rising Star

2020

### Microsoft PhD Fellowship

2018–2020

### Cornell Information Science Fellowship

2015

## Publications

*\* indicates equal contribution*

- CSCW 2020a Quantifying the Causal Effects of Conversational Tendencies  
**Justine Zhang**, Sendhil Mullainathan, and Cristian Danescu-Niculescu-Mizil.  
Proceedings of CSCW, 2020. [[link](#)]
- ACL 2020 Balancing Objectives in Counseling Conversations: Advancing Forwards or Looking Backwards  
**Justine Zhang** and Cristian Danescu-Niculescu-Mizil.  
Proceedings of ACL, 2020. Acceptance rate: 22%. [[link](#)]
- CSCW 2020b Configuring Audiences: A Case Study of Email Communication  
**Justine Zhang**, James W. Pennebaker, Susan T. Dumais, and Eric Horvitz.  
Proceedings of CSCW, 2020. [[link](#)]
- SIGDIAL 2020 ConvoKit: A Toolkit for the Analysis of Conversations  
Jonathan P. Chang, Caleb Chiam, Liye Fu, Andrew Z. Wang, **Justine Zhang**,  
and Cristian Danescu-Niculescu-Mizil.  
Proceedings of SIGDIAL, 2020. System demo. [[link](#)]

- ACL 2019 Finding Your Voice: The Linguistic Development of Mental Health Counselors  
**Justine Zhang**, Robert Filbin, Christine Morrison, Jaclyn Weiser,  
 and Cristian Danescu-Niculescu-Mizil.  
 Proceedings of ACL, 2019. Acceptance rate: 23%. [\[link\]](#)
- CSCW 2018 Characterizing online public discussions through patterns of participant interactions  
**Justine Zhang**, Cristian Danescu-Niculescu-Mizil, Christina Sauper,  
 and Sean J. Taylor  
 Proceedings of CSCW, 2018. Acceptance rate: 26%. [\[link\]](#)
- ACL 2018 Conversations Gone Awry: Detecting Early Signs of Conversational Failure  
**Justine Zhang**, Jonathan P. Chang, Cristian Danescu-Niculescu-Mizil, Lucas Dixon,  
 Yiqing Hua, Dario Taraborelli, and Nithum Thain  
 Proceedings of ACL, 2018. Acceptance rate: 25%. [\[link\]](#)
- EMNLP 2017 Asking too much? The rhetorical role of questions in political discourse.  
**Justine Zhang**, Arthur Spirling, and Cristian Danescu-Niculescu-Mizil.  
 Proceedings of EMNLP, 2017. Acceptance rate: 26%. [\[link\]](#)
- ICWSM 2017a Community Identity and User Engagement in a Multi-Community Landscape.  
**Justine Zhang\***, William L. Hamilton\*, Cristian Danescu-Niculescu-Mizil,  
 Dan Jurafsky, and Jure Leskovec.  
 Proceedings of ICWSM, 2017. Acceptance rate: 14%. [\[link\]](#)
- ICWSM 2017b Loyalty in Online Communities.  
 William L. Hamilton\*, **Justine Zhang\***, Cristian Danescu-Niculescu-Mizil,  
 Dan Jurafsky, and Jure Leskovec.  
 Proceedings of ICWSM, 2017. Short paper. [\[link\]](#)
- NAACL 2016 Conversation flow in Oxford-style debates.  
**Justine Zhang**, Ravi Kumar, Sujith Ravi, and Cristian Danescu-Niculescu-Mizil.  
 Proceedings of NAACL, 2016. Short paper. Acceptance rate: 29%. [\[link\]](#)
- WWW 2015 QUOTUS: The Structure of Political Media Coverage as Revealed by Quoting  
 Patterns.  
 Vlad Niculae\*, Caroline Suen\*, **Justine Zhang\***, Cristian Danescu-Niculescu-Mizil,  
 and Jure Leskovec.  
 Proceedings of WWW, 2015. Acceptance rate: 14%. [\[link\]](#)

### ***External Research Experience***

- |  |      |
|--|------|
| <b>Research Intern</b> , <i>Microsoft Research</i>   | 2019 |
| Worked with Susan Dumais, Eric Horvitz, and James W. Pennebaker<br>Examining audience configurations in emailing                                   |      |
| <b>Research Fellow</b> , <i>Crisis Text Line</i>   | 2018 |
| In collaboration with Cristian Danescu-Niculescu-Mizil, analyzing crisis<br>counseling conversations; developing models of conversational dynamics |      |
| <b>Research Intern</b> , <i>Facebook</i>   | 2017 |
| Core Data Science team, worked with Sean J. Taylor and Christina Sauper<br>Characterizing public conversations                                     |      |

## ***Invited Talks***

- Towards an Actionable Understanding of Conversations** 2021  
Emory QTM, EPFL IC, Northeastern CS, UChicago CS, WUSTL CS, MPI SWS, CMU LTI
- Interdisciplinary Seminar in Quantitative Methods, University of Michigan** [\[link\]](#) 2019  
Presented research on modeling conversations and causal inference in conversations
- Text as Data Speaker Series, New York University** [\[link\]](#) 2018  
Presented research on modeling conversation dynamics

## ***Invited Workshop Participation***

- EECS Rising Stars workshop, UC Berkeley** 2020
- Microsoft Research AI Breakthroughs workshop** 2019, 2020  
Presented posters on unsupervised modeling of conversation dynamics
- Text as Data workshop, Stanford University** 2019  
Presented research on causal inference in conversations
- Microsoft Research PhD Summit** 2018  
Presented poster on modeling the rhetorical intentions of questions
- Google NLP/NLU workshop** 2017  
26 faculty and 20 students invited  
Presented poster on conversation dynamics in public debates
- Text as Data workshop, Northeastern University** 2016  
Presented research on question dodging in debates

## ***Media Coverage***

- Cornell Chronicle:** AI analysis gives guidance to crisis counselors [\[link\]](#)
- Fast Company:** Scientists are building a detector for conversations likely to go bad [\[link\]](#)
- MIT Technology Review:** Machine learning could stop an online war of words before it starts [\[link\]](#)
- The Verge:** Machine learning is helping computers spot arguments online before they happen [\[link\]](#)

## ***Service***

- Area chair:** NAACL 2021, Computational Social Science and Social Media track
- Reviewer (conferences):** ACL (2018, 2019, 2020); CSCW (2018, 2020); CHI (2020); EMNLP (2017, 2018, 2019); ICWSM (2018, 2019, 2020); NAACL (2019)
- Reviewer (journals):** TKDD; First Monday; PLOS ONE
- Reviewer (workshops):** ACL Student Research Workshop (2019); EMNLP Noisy User-Generated Text Workshop (2018); NAACL Student Research Workshop (2018); WebSci Poster Track (2019)

## Data and Code

**ConvoKit** [\[link\]](#): Open-source toolkit to analyze conversational behaviours.  
Includes implementations of methodology and analyses for the following publications:  
EMNLP 2017, ACL 2018, CSCW 2018, ACL 2019, ACL 2020 and SIGDIAL 2020 papers.

*Datasets released via ConvoKit*: Parliamentary questions period corpus (EMNLP 2017),  
Conversations Gone Awry dataset (ACL 2018), Supreme Court Oral Arguments corpus (ACL 2020)

**QUOTUS** [\[link\]](#): Interactive visualization of media coverage of political speeches, and dataset, for  
WWW 2015 paper.

**Intelligence Squared Debates Dataset** [\[link\]](#): For NAACL 2016 paper

## References

### **Cristian Danescu-Niculescu-Mizil**

Associate Professor, Department of Information Science  
Cornell University  
[cristian@cs.cornell.edu](mailto:cristian@cs.cornell.edu)

### **Susan Dumais**

Technical Fellow & Managing Director  
Microsoft Research New England, New York City and Montreal  
[sdumais@microsoft.com](mailto:sdumais@microsoft.com)

### **Eric Horvitz**

Technical Fellow and Chief Scientific Officer  
Microsoft  
[horvitz@microsoft.com](mailto:horvitz@microsoft.com)

### **Dan Jurafsky**

Jackson Eli Reynolds Professor in Humanities, Professor of Linguistics, Professor of Computer  
Science  
Stanford University  
[jurafsky@stanford.edu](mailto:jurafsky@stanford.edu)

### **Sendhil Mullainathan**

Roman Family University Professor of Computation and Behavioral Science  
The University of Chicago, Booth School of Business  
[sendhil@chicagobooth.edu](mailto:sendhil@chicagobooth.edu)