

# Eugenia H. Rho

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## Research Interests

Human-Computer Interaction (HCI), Natural Language Processing (NLP), Human-AI Interaction, Statistics, Machine Learning (ML), Computational Social Science, Social Computing

My research lies at the intersection of Natural Language Processing (NLP) and Human-Computer Interaction (HCI). My work aims to advance Computational Social Science (CSS) by using computational linguistics to better understand how AI-mediated systems impact interactions across people and machines.

## Education

- 2015 – 2021 **University of California, Irvine**, Irvine, CA  
Ph.D. in Informatics  
Thesis: Design of Online Environments and the Quality of Democratic Discourse At-Scale  
Committee: Melissa Mazmanian (chair), Judy Olson, Kai Zheng
- 2007 – 2011 **Columbia University (Columbia College)**, New York, NY  
BA in Political Science, Honors Candidate, Dean's List

## Experience

- 2021 – present **Virginia Tech**, Department of Computer Science, Blacksburg, VA  
Assistant Professor of Computer Science
- Director of [Society + AI and Language \(SAIL\) Research Lab](#)
  - Faculty Affiliate, Center for Human-Computer Interaction
  - Faculty Affiliate, Sanghani Center for Artificial Intelligence and Data Analytics
  - Faculty Affiliate, Virginia Tech Center for Autism Research
  - Faculty Champion, Virginia Tech Center for Autism and NeuroDiversity Opportunities
- 2020 – 2021 **Stanford University**, Department of Computer Science, Palo Alto, CA  
NLP Postdoctoral Researcher
- 2017 Meta (Facebook), Menlo Park, CA  
Quantitative UX Research Intern
- 2016 NORC at the University of Chicago, Chicago, IL  
PhD Data Scientist Intern
- 2016 University of California, Irvine, Irvine CA  
Graduate Research Assistant
- 2013 – 2015 PricewaterhouseCoopers, Seoul, South Korea  
Associate Consultant
- 2011 – 2012 Opera Solutions, New York, NY  
Management Consultant

## Funding

- 2023 Designing AI as a Mental Health Resource for Autistic Adults: Enhancing Therapeutic Approaches with Multimodal Interactions. Role: PI; \$40,000, World Health Consortium.
- 2023 Integrating Neurodivergence into the STEM Workforce. 2023, Role: Co-PI; \$75,000, Oak Ridge Associated Universities.
- 2023 EmotionAlze - Empathy-Driven Interactive Human-AI System for Countering Negative-Self Talk for Autistic Individuals. Role: PI; \$25,000, Center for Human-Computer Interaction, Virginia Tech.
- 2021 Predicting Online Groupthink Rhetoric in COVID-19 Health Mandate Discourse. Role: PI; \$15,000, Center for Peace Studies and Violence Prevention, Virginia Tech.
- 2020 Kling Endowed Memorial Fellowship; \$2000, University of California, Irvine.
- 2019 Doctoral Consortium Fellowship; \$1565, ACM Conference on Computer Supported Cooperative Work & Social Computing (CSCW).
- 2018 Roberta Ellen Lamb Memorial Fellowship; \$10,000, University of California, Irvine.
- 2015 Graduate Dean's Recruitment Fellowship; \$5,000, University of California, Irvine.

## Publications

### Journals and Conference Papers

- [P13] Xiaohan Ding, Buse Carik, Uma Gunturi, Valerie Reyna, **Eugenia H. Rho**. *Leveraging Prompt-Based Large Language Models: Predicting Pandemic Health Decisions and Outcomes Through Social Media Language*. ACM Conference on Human Factors in Computing Systems (CHI), 2024.
- [P12] M. Lee, K. I. Gero, J. J. Y. Chung, S. B. Shum, V. Raheja, H. Shen, S. Venugopalan, T. Wambsganss, D. Zhou, E. A. Alghamdi, T. August, A. Bhat, M. Z. Choksi, S. Dutta, J. L. C. Guo, N. Hoque, Y. Kim, S. Knight, S. P. Neshaei, A. Shibani, D. Shrivastava, L. Shroff, A. Sergeyuk, J. Stark, S. Sterman, S. Wang, A. Bosselut, D. Buschek, J. C. Chang, S. Chen, M. Kreminski, J. Park, R. Pea, **E. H. Rho**, Z. Shen, P. Siangliulue. *A Design Space for Intelligent and Interactive Writing Assistants*. ACM Conference on Human Factors in Computing Systems (CHI), 2024.
- [P11] Marx B Wang, Md Momen Bhuiyan, **Eugenia H. Rho**, Kurt Luther, Sang Won Lee. *Why Did You Post That GIF? Understanding the Relationship between User Identity and Self-Expression through GIFs on Social Media*. ACM Conference on Computer Supported Cooperative Work & Social Computing (CSCW), 2024.
- [P10] Uma Gunturi, Anisha Kumar, **Eugenia H. Rho**. *Understanding the Linguistic Signature of Acts and Recalls of Online Racial Microaggressions through Interpretable NLP*. ACM Conference on Computer Supported Cooperative Work & Social Computing (CSCW), 2024.
- [P9] **Eugenia H. Rho**, Maggie Harrington, Yuyang Zhong, Reid Pryzant, Nicholas P. Camp, Dan Jurafsky, Jennifer L. Eberhardt. *Escalated Police Stops of Black Men Are*

*Linguistically and Psychologically Distinct in Their Earliest Moments*. Proceedings of the National Academy of Sciences (PNAS), 2023.

- [P8] Xiaohan Ding, Mike Horning, **Eugenia H. Rho**. *Same Words, Different Meanings: Interpretable Predictions of Polarization Trends in Broadcast Media Language and Granger Causal Effects on Online Public Discourse*. AAAI Conference on Web and Social Media (ICWSM), 2023.
- [P7] Yao Li, **Eugenia H. Rho**, and Alfred Kobsa. *Cultural Differences in the Effects of Contextual Factors and Privacy Concerns on Users' Privacy Decision on Social Networking Sites*. Journal of Behavior and Information Technology, 2020.
- [P6] **Eugenia H. Rho** and Melissa Mazmanian. *Political Hashtags and the Lost Art of Democratic Discourse*. ACM Conference on Human Factors in Computing Systems (CHI), 2020. **Best Paper Honorable Mention**
- [P5] **Eugenia H. Rho** and Melissa Mazmanian. *Hashtag Burnout? An Experimental Study Investigating How Political Hashtags Shape Reactions to News Content*. ACM Conference on Computer Supported Cooperative Work & Social Computing (CSCW), 2019.
- [P4] Ted Grover, Elvan Bayraktaroglu, Gloria Mark, and **Eugenia Ha Rim Rho**. *Moral and Affective Differences in U.S. Immigration Policy Debate on Twitter*. Journal of Computer Supported Cooperative Work Vol 28, Issue:3-4 (June 2019), p. 317-355.
- [P3] **Eugenia H. Rho**, Gloria Mark, and Melissa Mazmanian. *Fostering Civil Discourse Online: Linguistic Behavior in Comments of #MeToo Articles Across Political Perspectives*. ACM Conference on Computer Supported Cooperative Work & Social Computing (CSCW), 2018.
- [P2] **Eugenia H. Rho**, Alfred Kobsa, Carolyn Nguyen. *Differences in Online Privacy & Security Attitudes Based on Economic Living Standards: A Global Study of 24 Countries*. Proceedings of the European Conference on Information Systems (ECIS), 2018.
- [P1] **Eugenia H. Rho**, Oliver L. Haimson, Nazanin Andalibi, Melissa Mazmanian, and Gillian R. Hayes. *Class Confessions: Restorative Properties in Online Experiences of Socioeconomic Stigma*. ACM Conference on Human Factors in Computing Systems (CHI), 2017.

## Workshop Papers

- [W6] Uma Gunturi, Xiaohan Ding, **Eugenia H. Rho**. *ToxVis: Enabling Interpretability of Implicit vs. Explicit Toxicity Detection Models with Interactive Visualization*. ACM Conference on Human Factors in Computing Systems (CHI), 2023.

- [W5] Rohan Leekha, **Eugenia H. Rho**. *Real Memes In-The-Wild: Explainable Classification of Hateful vs. Non-Hateful Memes*. ACM Conference on Human Factors in Computing Systems (CHI), 2023.
- [W4] **Eugenia H. Rho**. *Quality of Democratic Discourse in the Age of Political Hashtags and Social Media News Consumption*. ACM Conference on Computer Supported Cooperative Work & Social Computing (CSCW), 2020.
- [W3] Krithika Jagannath, **Eugenia H. Rho**. *Intelligent Agents in Everyday Settings: Leveraging a Multi-Methods Approach*. ACM Conference on Human Factors in Computing Systems (CHI), 2018.
- [W2] Yao Li, **Eugenia H. Rho**. *Contextual Impact on SNS Users' Privacy Decisions: A Cross-Cultural Study*. ACM Conference on Human Factors in Computing Systems (CHI), 2018.
- [W1] **Eugenia H. Rho**. *Privacy Norms in the Context of Connected & Self-Driving Cars*. ACM Conference on Computer-Supported Cooperative Work and Social Computing (CSCW) 2017.

### Invited Talks and Guest Lectures

- 2024 VTL x Speaker Series, Linguistics Seminar, Virginia Tech, February 2024
- 2023 Words Matter: How Language Choices Predict Societal Trends and Outcomes in Media, Health and Policing, Johns Hopkins Center for Language and Speech Processing (CLSP) Seminar, Johns Hopkins CS NLP Group, November 2023 ([link](#))
- 2023 Supporting Mental Health in Neurodiverse Communities: Enhancing Large Language Model Accessibility through Multimodal Human-AI Interactions, Institute for Creativity, Arts, & Technology (ICAT) Playdate, Virginia Tech, October 2023 ([link](#))
- 2023 Artificial Intelligence @Internet Archive: Research in the Age of Artificial Intelligence, Internet Archive, October 2023
- 2021 Influence of Officer Speech in Traffic Stop Outcomes for Black Drivers. Center for Human-Computer Interaction, Department of Computer Science, Virginia Tech (Host: Mike Horning)
- 2021 Design of Online Environments and the Quality of Democratic Discourse At-Scale. Department of Computer Science, Stanford University, Human-Computer Interaction Lecture: People, Computers & Design Seminar (Host: Michael Bernstein) ([link](#))
- 2020 Department of Computer Science, Virginia Tech
- 2020 Human Centered Design & Engineering, University of Washington
- 2020 School of Information, George Mason University
- 2019 Understanding Consequences of Brevity in Online Communication Through a Controlled Experiment with Social Media Users. Invited guest lecture for Critical Writing on Information Technology (INF 131), Irvine, CA.

- 2017 Usability of Interactive Systems. Invited Guest lecture for Human Computer Interaction (INF 131), Irvine, CA.
- 2017 Motivations and Barriers in Using Facebook Live Across Closed Mental Health Support Groups on Facebook. Invited talk for KAIST Interaction (KIX) Lab, Korea Advanced Institute of Science and Technology, Daejeon, South Korea.

### **Selected Press and Interviews**

- Nov 2023 [AI—the Good, the Bad, and the Scary](#), Virginia Tech Engineering News
- Aug 2023 [Two Networks, Two Realities, One Big Problem](#), Virginia Tech News
- Jun 2023 [New Study: Officers' First Communication with Black Drivers Can Determine Traffic Stop Outcome](#), NPR Atlanta
- Jun 2023 [CNN Tonight: Interview with Eugenia Rho on Police Escalation](#), CNN
- Jun 2023 [A Study Found a Racial Bias During Police Traffic Stops and Police Orders](#), KCBS Radio
- Jun 2023 [Study: Officer's First 45 Words in Traffic Stop Could Predict Outcome](#), Scripps News
- May 2023 [For Black Drivers, a Police Officer's First 45 Words Are a Sign of What's to Come](#), NPR Radio
- Dec 2019 Political Hashtags Make People Less Likely to Believe the News, Radio New Zealand
- Dec 2019 Hashtag Fatigue: How #Metoo Turns People off From the News, Newsweek Japan
- Nov 2019 How Political Hashtags Make Discussion More Partisan, KCBS Radio
- Nov 2019 Hashtag Haven: Why People Distrust Social Media Clickbait, Yahoo Finance
- Nov 2019 Political Hashtags Like #Metoo and #Blacklivesmatter Make People Less Likely to Believe the News, The Conversation
- Nov 2019 Political Hashtags Like #Metoo and #Blacklivesmatter Make Some People Doubt the Stories They're Attached To, Nieman Journalism Lab, Harvard University

### **Teaching Experience**

#### **Instructor, Virginia Tech, Department of Computer Science**

- Spring 2024 CS 3724 Introduction to Human-Computer Interaction
- Fall 2023 CS 5914 Human AI Interaction Powered by Large Language Models
- Spring 2023 CS 6724 Human AI Interaction
- Spring 2022 CS 5984 Computational Social Science

#### **Teaching Assistant, University of California, Irvine, Department of Informatics**

- Summer 2020 INF 288 Master of Human-Computer Interaction & Design Capstone Project

- Fall 2019 INF 281 User Needs Analysis (38 students)
- Summer 2019 ICS 139 Critical Writing on Information Technology (41 students)
- Spring 2018 ICS 5 Global Disruption & Information Technology (249 students)
- Spring 2017 ICS 166 Game Design (30 students)
- Winter 2017 INF 131 Human Computer Interaction (197 students)  
Led a 1-hour weekly discussion seminar with 80 students
- Fall 2016 INF 131 Human Computer Interaction (119 students)  
Led two 1-hour weekly discussion seminars with 60 students in each section

## **Service**

### **Academic Service**

- 2023 Search Committee, Virginia Tech Computer Science
- 2022 Search Committee, Virginia Tech Computer Science
- 2021 Graduate Admissions Committee, Virginia Tech Computer Science

### **Grant Review**

- 2022 - 2024 NSF Panel

### **Program Committee**

- 2022- 2024 ACM Conference on Computer Supported Cooperative Work (CSCW)
- 2020 ACM Conference on Human Factors in Computing Systems (CHI) Late Breaking Work

### **Paper Reviewer**

- 2016 –2023 ACM Conference on Computer Supported Cooperative Work (CSCW)
- 2017– 2023 ACM Conference on Human Factors in Computing Systems (CHI)
- 2021 AAAI Conference on Web and Social Media (ICWSM)
- 2021 Proceedings of the European Conference on Information Systems (ECIS)
- 2018 ACM Designing Interactive Systems Conference (DIS)

### **Student Volunteer**

- 2018 ACM Conference on Human Factors in Computing Systems (CHI)
- 2017 ACM Conference on Computer Supported Cooperative Work (CSCW)

### **Member**

- 2015 – Present ACM Special Interest Group on Computer-Human Interaction

2020 – Present Association for Computational Linguistics

## Advising and Mentorship

- 2021 Faculty Panelist for ACM Computer-Human Interaction Mentoring (CHIMe) Symposium Workshop
- 2021 Faculty Research Talk, Graduate Student Orientation, Virginia Tech
- 2016 – Present Women in Information & Computer Sciences (WICS) at UC Irvine
- 2016 –2017 “Explore ICS Program” – a 5-month mentorship program for introducing female undergraduate/undeclared students to Information & Computer Science (ICS) majors as part of a campus-wide effort to increase women and underrepresented minorities in the ICS field
- 2017 Panelist, Internship Experience with Tech Industries, UCI Informatics
- 2017 Graduate Student Panelist, Orientation for Incoming PhD Students at UCI Informatics
- 2016 Treasurer, Informatics Graduate Student Association (IGSA)

## Student Advising

### 2021 – Present **Graduate Advisees at Virginia Tech**

Xiaohan Ding (Ph.D., Computer Science)  
Kaiké Ping (Ph.D., Computer Science)  
Buse Carik (Ph.D., Computer Science)  
Lance Wilhelm (Ph.D., Computer Science)  
Xiaozheng Wang (Ph.D., Computer Science)  
Taufiq Daryanto (Ph.D., Computer Science)

Sophia Stil (M.S., Computer Science)

Anisha Kumar (M.S., Computer Science)

Uma Gunturi (M.S., Computer Science), Torgersen Research Excellence Award Finalist, *currently at IBM Research*

Rohan Leekha (M.S., Computer Science), *currently at MIT Lincoln Laboratory*

Samridhi Roshan (B.S., Computer Science)

Eunice Hong (B.S., Computer Science)

### 2021 – Present **Thesis Committee**

Swanand Vaishampayan (Ph.D., Computer Science)

Sukrit Venkatagiri (Ph.D., Computer Science)

Bill Ingram (Ph.D., Computer Science)

Aman Ahuja (Ph.D., Computer Science)

Satvik Chekuri (Ph.D., Computer Science)

Anirban Mukhopadhyay Ph.D., Computer Science)

Marx Wang (M.S., Computer Science)

Muskan Gupta (M.S., Computer Science)

Lucas Franke (M.S., Computer Science)

Hulya Dogan (M.S., Computer Science)