

# Tanushree (Tanu) Mitra

Assistant Professor  
Information School  
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## RESEARCH INTERESTS

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My research combines computational techniques and social science principles to study complex social processes underlying human behavior in large-scale online social systems. My current research focus is on understanding and designing defenses against information disorders in online social platforms.

**Topics:** *Social Computing, Computational Social Science, Misinformation & Deception, Social Media Content Analysis, Data Mining, Credibility Perceptions, Online Communities, Quantitative & Qualitative Data Analysis.*

## EDUCATION

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GEORGIA INSTITUTE OF TECHNOLOGY, Atlanta, GA USA

**Ph.D. in Computer Science**

Aug 2011 – Aug 2017

Thesis Topic: *Understanding Social Media Credibility*

Committee: Eric Gilbert (advisor), Amy Bruckman, James W Pennebaker (UT Austin), Scott Counts (Microsoft Research)

TEXAS A&M UNIVERSITY, College Station, TX USA

**M.S. Computer Science**

Aug 2009 – July 2011

Masters Thesis: *Cooperative Minimalistic Approach to Robotic Aggression*

## EMPLOYMENT

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FALL 2020 ONWARDS	<b>University of Washington</b> , Seattle, WA Assistant Professor, Information School Member, Center for Informed Public
2017 – SUMMER 2020	<b>Virginia Polytechnic Institute &amp; State University (Virginia Tech)</b> Assistant Professor, Department of Computer Science Member, Discovery Analytics Center (DAC) Member, Center for Human-Computer Interaction (CHCI) Member, Center for Peace Studies and Violence Prevention (CPSVP)
SUMMER 2016	<b>Research Intern, IBM Research</b> , Cambridge, MA USA
SUMMER 2015	<b>Research Intern, Microsoft Research</b> , Redmond, WA USA
SUMMER 2013	<b>Research Intern, IBM Research</b> , Cambridge, MA USA
SUMMER 2010	<b>Software Engineering Intern, Schlumberger Ltd.</b> , Houston, TX USA
SUMMER 2005	<b>Research Intern, Center for Development of Advanced Computing</b> , India
2005 – 2009	<b>Software Engineer, Alcoa Inc.</b> , Pittsburgh, PA USA

## AWARDS AND RECOGNITION

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### RESEARCH AWARDS

- 2020 Outstanding New Assistant Professor Award, Virginia Tech College of Engineering
- 2018 ICTAS Junior Faculty Award
- 2016 IBM Ph.D. Fellowship Recipient
- 2016 Selected to attend the Consortium for the Science of Socio-Technical Systems (CSST), NSF funded workshop for promising junior investigators
- 2015 ICWSM Student Travel Grant (\$350)
- 2015 Foley Scholar Recipient, GVM center's highest award for student excellence in research contributions to computing
- 2015 CHI Conference Best Paper Honorable Mention (Top 5% of submission)
- 2014 ACL Travel Award for LTCSS workshop (\$600)
- 2014 Georgia Tech Research & Innovation Conference (GTRIC) Fellowship winner
- 2013 Georgia Tech Research & Innovation Conference (GTRIC) Fellowship winner
- 2012 Winner SAIC: Awarded by Science Applications International Corporation
- 2009-2010 Royce E. Wisenbaker '39 Graduate Fellowship, Texas A&M University
- 2002 1st position for academic performance in undergraduate studies.

### EXTERNAL GRANTS (TOTAL: \$712,411; PERSONAL SHARE: \$585,130)

- 2020 (PI) Minerva Research Initiative: Understanding Chinese influence operations through the lens of social movement theory, 2020 - 2022, Total: \$399,200. Personal Share: \$245,366. *with Co-PI: Gwyneth Sutherlin (National Defense University).*
- 2019 (PI) Charles Koch Foundation: Promoting Tolerance and Civility in Online Discourse Through Re-designing Button Labels, 2020 - 2021, Total: \$156,042. Personal Share: \$135,923. *with Co-PI: Tedesco (Virginia Tech).*
- 2019 (PI) National Science Foundation (NSF #1915755) EAGER: SaTC: Early-Stage Interdisciplinary Collaboration: Designing Trustworthy and Transparent Information Platforms (2019 - 2021), REU Supplements: \$16,000 (2019). *with Co-PI: Horning (Virginia Tech), Total: \$299,966. Personal share: \$200,804.*
- 2019 (Sole PI) Facebook & SSRC's Social Media and Democracy Research Grants: Characterizing Mainstream and Nonmainstream Online News Sources in Social Media, 2019 - 2020, Total: \$49,572. Personal share: \$49,572.
- 2018 (Sole PI) National Science Foundation (NSF #1755547) CRII: CHS: Empirical and Design Investigations to Combat Misleading Online News in Social Media, awarded \$174,831, 2019 - 2020, REU Supplements: \$16,000 (2019).

### INTERNAL GRANTS (TOTAL: \$160,915; PERSONAL SHARE: \$131,915)

- 2019 (Co-PI) Virginia Tech Institute for Society, Culture and Environment Award. *Source-Frame Congruence in US National Security Public Information Campaigns.* Total: \$30,000. Personal Share: \$8,000.
- 2019 (Sole PI) Virginia Tech Center for Peace Studies and Violence Prevention Peace Building and Violence Prevention Program Award. *Investigating Hate-group Communications in Online Social Spaces.* Total: \$24,915. Personal Share: \$24,915.
- 2018 (PI) Virginia Tech ICTAS Junior Faculty Award. *The Language of Online Extremism: Computational Models for Discovery and Analysis of Framing around Extremists' Narratives.* Total: \$80,000. (12/72 = 16.7% acceptance rate).

- 2018 (PI) Virginia Tech ICTAS Data & Decisions grant. *Empirical and Design Investigation to Address Misleading Online News in Social Media*. Total: \$10,000.
- 2018 (PI) Virginia Tech CHCI ICAT SEAD Mini-grant. *The Language of Online Extremism: Computational Models for Discovery and Analysis of Framing around Extremists' Narratives*. Total: \$3,000.
- 2018 (PI) Virginia Tech CHCI ICAT SEAD Mini-grant. *FeedReflect: Designing socio-technical interventions to nudge users towards reflective news reading*. Total: \$3,000.
- 2018 (Co-PI) Virginia Tech ICTAS Data & Decisions grant. *Immersive Space to Think (IST): Combining Virtual Reality and Analytics for Improved Sensemaking*. Total: \$10,000.

## PUBLICATIONS

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Note: \* indicates a student or postdoc advised by Tanushree Mitra.

- 2020 Brian Keith Norambuena\* and **Tanushree Mitra**. "Narrative Maps: An Algorithmic Approach to Represent and Extract Information Narratives" In *PACMHCI. 4, Computer-Supported Cooperative Work (CSCW 2020)*.
- 2020 Shruti Phadke\*, Mattia Samory and **Tanushree Mitra**. "What Makes People Join Conspiracy Communities?: Role of Social Factors in Conspiracy Engagement" In *PACMHCI. 4, Computer-Supported Cooperative Work (CSCW 2020)*.
- 2020 Md Momen Bhuiyan\*, Connie Moon Sehat, and **Tanushree Mitra**. "Investigating Differences in Crowdsourced News Credibility Assessment: Raters, Tasks, and Expert Criteria" In *PACMHCI. 4, Computer-Supported Cooperative Work (CSCW 2020)*.
- 2020 James Hawdon, Shyam Ranganathan, Shane Bookhultz and **Tanushree Mitra**. "Social Media Use, Political Polarization, and Social Capital: Is Social Media Tearing the US Apart?" In *International Conference on Human-Computer Interaction*.
- 2020 Eslam Hussein\*, Prerna Juneja\* and **Tanushree Mitra**. "Measuring Misinformation in Video Search Platforms: An Audit Study on YouTube." In *Proc. ACM Human Computer Interaction 4, CSCW1, Article 48*.
- 2020 Mattia Samory\*, Vartan Kesiz Abnoui\* and **Tanushree Mitra**. "Characterizing the Social Media News Sphere through User Co-Sharing Practices." In *Proc. ICWSM 2020: 14th International AAAI Conference on Web and Social Media*. [16.9% acceptance].
- 2020 Shruti Phadke\* and **Tanushree Mitra**. "Many Faced Hate: A Cross Platform Study of Content Framing and Information Sharing by Online Hate Groups." In *Proc. CHI 2020: ACM Conference on Human Factors in Computing Systems*. [24.3% acceptance].
- 2020 Prerna Juneja\*, Deepika Ramasubramanian\* and **Tanushree Mitra**. "Through the Looking Glass: Study of Transparency in Reddit's Moderation Practices." In *Proc. GROUP 2020: ACM Conference on Supporting Group Work*. [31% acceptance].
- 2019 Mattia Samory\* and **Tanushree Mitra**. "SENPAI: Supporting Exploratory Text Analysis through Semantic & Syntactic Pattern Inspection." In *Proc. ICWSM 2019: 13th International AAAI Conference on Web and Social Media*. [17% acceptance].
- 2018 Mattia Samory\* and **Tanushree Mitra**. "The Government Spies Using Our Webcams: The Language of Conspiracy Theories in Online Discussions." In *Proc. CSCW 2018: Proceedings on Computer-Supported Cooperative Work and Social Computing*. [26.1% acceptance].
- 2018 Momen Bhuiyan\*, Kexin Zhang\*, Kelsey Vick, Michael Horning and **Tanushree Mitra**. "FeedReflect: A toolkit for engaging users in active reflection on Twitter" – *Extended Abstract of CSCW 2018*.
- 2018 Shruti Phadke\*, Jonathan Lloyd, James Hawdon and **Tanushree Mitra**. "Framing Hate with Hate Frames: Designing the Codebook." – *Extended Abstract of CSCW 2018*.

- 2018 Mattia Samory\* and **Tanushree Mitra**. “Conspiracies Online: User discussions in a Conspiracy Community Following Dramatic Events.” In *Proc. ICWSM 2018: 12th International AAAI Conference on Web and Social Media*. [16% acceptance].
- 2018 **Tanushree Mitra**, Graham Wright\* and Eric Gilbert. “Credibility and the Dynamics of Collective Attention” In *Proc. CSCW 2018: Proceedings of the ACM on Human-Computer Interaction*. [26.1% acceptance].
- 2018 **Tanushree Mitra**, Michael Muller, Sadat Shami, Abbas Golestani and Mikhil Masli. “Spread of Employee Engagement in a Large Organizational Network: A Longitudinal Analysis” In *Proc. CSCW 2018: Proceedings of the ACM on Human-Computer Interaction*. [26.1% acceptance].
- 2018 Michael Muller, **Tanushree Mitra**, and Werner Geyer. Growth in Social Network Connectedness among Different Roles in Organizational Crowdfunding – In *Proc. GROUP 2018: ACM Conference on Supporting Group Work Group 2018*. [28% acceptance].
- 2017 **Tanushree Mitra**, Graham Wright\* and Eric Gilbert. “A Parsimonious Language Model of Social Media Credibility Across Disparate Events” In *Proc. CSCW 2017: 20th ACM Conference on Computer-Supported Cooperative Work and Social Computing*. [34% acceptance].
- 2016 **Tanushree Mitra**, Scott Counts and James W. Pennebaker. “Understanding Anti-Vaccination Attitudes in Social Media.” In *Proc. ICWSM 2016: 10th International AAAI Conference on Weblogs and Social Media*. [16% acceptance].
- 2016 Stevie Chancellor, **Tanushree Mitra**, and Munmun De Choudhury. “Recovery amid pro-anorexia: Analysis of recovery in social media.” In *Proc. CHI 2016: 33rd Annual ACM Conference on Human Factors in Computing Systems*. [23% acceptance].
- 2015 **Tanushree Mitra**, and Eric Gilbert. “CREDBANK: A Large-scale Social Media Corpus With Associated Credibility Annotations.” In *Proc. ICWSM 2015: Ninth International AAAI Conference on Web and Social Media* [31% acceptance].
- 2015 **Tanushree Mitra**, C.J. Hutto, and Eric Gilbert. “Comparing Person-and Process-centric Strategies for Obtaining Quality Data on Amazon Mechanical Turk.” In *Proceedings of the 33rd Annual ACM Conference on Human Factors in Computing Systems*. **Best Paper Honorable Mention (Top 5%)** – CHI 2015.
- 2014 Soni Sandeep, **Tanushree Mitra**, Eric Gilbert and, Jacob Eisenstein. “Modeling Factuality Judgments in Social Media Text.” In *Proceedings of the Association for Computational Linguistics – ACL 2014*.
- 2014 **Tanushree Mitra**, and Eric Gilbert. “The language that gets people to give: Phrases that predict success on Kickstarter.” In *Proc. CSCW 2014: 17th ACM conference on Computer Supported Cooperative Work and social computing*. [27% acceptance].
- 2012 **Tanushree Mitra**, and Eric Gilbert. “Have You Heard?: How Gossip Flows Through Workplace Email.” In *Proc. ICWSM 2012: Sixth International AAAI Conference on Weblogs and Social Media* [20% acceptance].
- 2012 **Tanushree Mitra**, and Dylan A. Shell. “Cost, Precision, and Task Structure in Aggression-Based Arbitration for Minimalist Robot Cooperation.” In *Proceedings of the International Conference on Simulation of Adaptive Behavior*. – SAB 2012

## INVITED PRESENTATIONS

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- FEB 2020 Panel on Influence Campaigns & Future Technologies, National Academy of Sciences, Washington DC
- NOV 2019 The Future of Speech Online, Center for Democracy & Technology, Washington DC
- JULY 2019 Combating Misinformation Convening, Google, Mountain View, CA

JULY 2019	ISAT/DARPA Cognitive Defense: Detecting and Defending Against Influence Operations Workshop
JUN 2019	IARPA CASE Panel: Innovations in Credibility of Information, Washington DC
MAR 2019	Emerging Trends in Social Media, NATO StratCom Centre Of Excellence, Riga, Latvia
OCT 2018	Urban Dynamics Institute Seminar Series, Oak Ridge National Lab (ORNL), TN
JULY 2018	ISAT/DARPA Cognitive Defense: Designing for Defense Workshop
JULY 2018	Combating Misinformation Convening, Google, Mountain View, CA
APR 2017	Dept. of Computer Science & Engineering, University of Minnesota, Minneapolis, MN
MAR 2017	School of Information Studies, Syracuse University, NY
FEB 2017	Dept. of Computer Science, Virginia Tech, Blacksburg, VA
FEB 2017	School of Informatics and Computing, Indiana University, Indianapolis, IN
FEB 2017	College of Information Studies, University of Maryland, College Park, MD
FEB 2017	Dept. of Computer Science, University of Maryland, College Park, MD
JAN 2017	Dept. of Communication Studies, Northwestern University, Evanston, IL
MAR 2016	Foley Scholars Brown Bag, GVU Center at Georgia Tech, Atlanta, GA

## TEACHING EXPERIENCE

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Note: ✖: Developed new course at Virginia Tech.

### Instructor, Virginia Tech, Blacksburg, VA

- CS 3654 : Intro to Data Analytics & Visualization (Undergrad, 90 students) Spring 2020
- CS 4984 ✖ : Data Science & Analytics Capstone (Undergraduate, 25 students) Spring 2019
- CS 5984 ✖: Social Computing (Graduate course, 25 students) Fall 2018
- CS 6724 ✖ : Computational Social Science (Graduate Seminar, 18 students) Spring 2018
- CS 4984 ✖ : Social Computing Capstone (Undergraduate, 18 students) Fall 2017

### Teaching Assistant, Georgia Institute of Technology, Atlanta, GA

- CS 4001: Computing, Society and Professionalism Summer 2017
- CS 4472: Design of Online Communities Spring 2016
- CS 8903: Social Computing Fall 2012

## MENTORING & ADVISING

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### Visiting PostDoctoral Scholar, Virginia Tech Fall 2017 - Fall 2018.

- Mattia Samory – Ph.D., University of Padova, Fall 2017 - Fall 2018.  
*First Position as research scientist in GESIS - Leibniz Institute for the Social Sciences, Germany.*

### Current Ph.D. Students, Virginia Tech

- MD Momen Bhuiyan – Ph.D. CS Fall 2017 –
- Shruti Phadke – Ph.D. CS Fall 2018 –
- Purna Juneja – Ph.D. CS Fall 2018 –
- Brian Felipe Keith – Ph.D. CS Fall 2019 –

### Current Masters Students, Virginia Tech

- Deepika Ramasubramanian – M.S. CS Spring 2019 – Summer 2020
- Vartan Kesis Abnoui – M.S. CS Fall 2018 –

### Masters Students Supervised, Virginia Tech

- Ashish Baghudana – M.S. CS Fall 2017

- Shruti Phadke – M.S. ECE Fall 2017  
*First Position as a Ph.D. student at Virginia Tech.*

### Graduate Thesis Committees, Virginia Tech

- Lindah Kotut – Ph.D. Computer Science Spring 2021
- Sharmin Afrose – Ph.D. Computer Science
- Sukrit Venkatagiri – Ph.D. Computer Science Spring 2022
- Whitney Hayes – Ph.D. Sociology Spring 2023
- Ziqian Alice Song – Ph.D. Computer Science Summer 2020
- Viral Pasad – M.S. Computer Science (*Graduated*) Summer 2020
- Patrick Sullivan – M.S. Computer Science (*Graduated*) Fall 2019
- Siddharth Krishnan – Ph.D. Computer Science (*Graduated*) Fall 2018
- Meghendra Singh – M.S. Computer Science (*Graduated*) Fall 2018

### Undergraduate Research Assistants

- Stephen Tan – B.S. C.S. Spring 2019 – Present
- Henry Wang – B.S. C.S. (NSF-REU Fellowship) Fall 2019, Spring 2020
- Danielle Ababa – B.S. Communications (NSF-REU Fellowship) Fall 2019, Spring 2020
- Jonathan Alexander – B.S. C.S. Fall 2019, Spring 2020
- Ankita Khera – B.S. C.S. Fall 2019
- Liz Dao – B.S. C.S. Fall 2019
- Liling Yuan – B.S. C.S. Fall 2019
- Barrett Lattimer – B.S. C.S. Fall 2018
- Margaret Stump – B.S. C.S. Spring 2018
- Andy Du Zhang – B.S. C.S. Spring 2018
- Hithesh Peddamekala – B.S. C.S. Spring 2018
- Matthew Bernas – B.S. C.S. Spring 2018
- Kexin Zhang – B.S. IsYE (GaTech) Fall 2016

### Previously Mentored Students

- Shruthi K. Hiremath – M.S. C.S. (GaTech): *Masters Research Project* Fall 2016
- Sanjana Shankar – M.S. C.S. (GaTech): *Masters Thesis Project* Spring 2016 to Present
- Graham Wright – B.S. C.S. (GaTech): *Credibility Project* Summer 2015 to Present
- Akanksha – M.S. C.S. (GaTech): *Masters Thesis Project* Fall 2015
- Amish Goyal – M.S. C.S. (GaTech): *Topic Modeling in Twitter* Fall 2013
- Mohammad Asgharneya – M.S. C.S. (GaTech): *Detecting Stock Market Liars* Fall 2012
- Karthik Uppuluri – B.S. C.S. (GaTech): *Comparing Tweets & Queries* Summer 2012
- Sarena Chism – Undergraduate Research Scholar, Texas A&M Louis Stokes Alliance for Minority Participation (LSAMP) program Fall 2009 - Spring 2010

### PROFESSIONAL ACTIVITIES

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TUTORIAL CO-CHAIR	ICWSM 2020
WORKSHOP CO-CHAIR	CSCW 2019
SENIOR PROGRAM COMMITTEE	ICWSM 2018 & 2016
PROGRAM COMMITTEE	CSCW 2020, 2018, CHI-LBW 2018, WWW 2018, 2015, ICWSM 2014, 2015
REVIEWER	CHI 2014-2017, CSCW 2013-2016, WSDM 2014, WWW 2016

**SELECTED PRESS COVERAGE**

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- Ellis, Emma Grey. *Here's One Way to Reform an Internet Conspiracy Theorist*. [Wired](#) (2018)
- June, Laura. *Twitter Study Finds Facts Don't Matter to Anti-Vaxxers*. [NYMag](#) (2016)
- Hodson, Hal. *Hoax spotter finds a quarter of everything on Twitter is false*. [New Scientist](#) (2015)
- Hooton, Christopher. *25% of everything on Twitter is false*. [The Independent](#) (2015)
- Abbruzzese, Jason. *The Key to Kickstarter Success*. [Mashable](#) (2014)
- McFarland, Matt. *Step 1 to receiving money on Kickstarter: Give back*. [Washington Post](#) (2014)
- Bercovici, Jeff. *To Get Funded On Kickstarter* [Forbes](#) (2014)
- Bradford, Harry. *Office Gossip Found In Nearly 15% Of Enron's Emails* [Huffington Post](#) (2012)
- Mielach, David. *Why Office Gossip Isn't a Bad Thing After All* [Yahoo News](#) (2012)