

# Siqi Wu

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## RESEARCH SUMMARY

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I aim to derive principles for responsible social systems, with my core expertise in large-scale quantitative analysis and collaboration with experts in social science, communication, and political science. I work towards my goal through a variety of methods – from curating unique social media datasets, to modeling collective user behavior, to building algorithmic audits for identifying negative platform effects, to designing and testing new HCI systems.

## PROFESSIONAL EXPERIENCE

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**Research Fellow | University of Michigan.** <sup>^</sup> Ann Arbor, MI, USA **2020.09 – present**

<sup>^</sup> First 20 months working remotely as a research consultant due to pandemic and visa.

- Center for Social Media Responsibility. Adviser: Paul Resnick

Projects include (1) measuring cross-partisan discussions on YouTube; (2) characterizing concept difference and (3) quantifying the impacts of annotator demographics in labeling hate, offensive, and toxic social media content; (4) calibrating prevalence estimation methods for online problematic speech; (5) designing effective training procedure for crowdsourced labeling; (6) auditing polarized recommendations in YouTube recommender system.

**Research Fellow | Australian National University.** Canberra, ACT, Australia **2020.09 – 2021.03**

- Computational Media Lab. Adviser: Lexing Xie

Projects include (1) measuring collective human attention across different social platforms; (2) picturing global media consumption during COVID-19.

**Software Engineer | MicroStrategy, Inc.** Hangzhou, Zhejiang, China **2015.09 – 2016.05**

- Big Data Engine team. Built Apache Spark alike engine to process massive data.

**Software Developer Intern | Baidu, Inc.** Beijing, China **2014.12 – 2015.02**

- Baidu Maps team. Developed a tool to collect realtime traffic status.

## EDUCATION

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**Australian National University.** Canberra, ACT, Australia **2016.06 – 2020.09**

- PhD in Computer Science. Advisers: Lexing Xie and Marian-Andrei RizoIU

- Thesis: Measuring collective attention in online content: Sampling, engagement, and network effects

**University of Melbourne.** Melbourne, VIC, Australia **2013.07 – 2015.07**

- Master of Information Technology. Adviser: Richard Sinnott

- Thesis: An architecture for big data processing and visualisation of traffic data

**Tianjin University.** Tianjin, China **2008.09 – 2012.06**

- Bachelor of Electronics Engineering. Adviser: Yugong Wu

## AWARDS

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- AAAI ICWSM 2022 Best SPC member

- AAAI ICWSM 2021 Best Paper Finalist

- ACM CSCW 2019 Best Paper Honorable Mention

- Google PhD Fellowship 2018

## PUBLICATIONS

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\* Equal authorship

10. Whose advantage? Measuring attention dynamics across YouTube and Twitter on controversial topics  
Lee\*, **Wu\***, Ertugrul\*, Lin, and Xie. *ICWSM '22*. Full paper
9. Cross-partisan discussions on YouTube: Conservatives talk to liberals but liberals don't talk to conservatives  
**Wu** and Resnick. *ICWSM '21*. Full paper, **best paper finalist**
8. AttentionFlow: Visualising influence in networks of time series  
Shin\*, Tran\*, **Wu\***, Mathews, Wang, Lyall, and Xie. *WSDM '21*. Demo paper
7. Unsupervised cyberbullying detection via time-informed Gaussian mixture model  
Cheng, Shu, **Wu**, Silva, Hall, and Liu. *CIKM '20*. Full paper
6. Variation across scales: Measurement fidelity under Twitter data sampling  
**Wu**, RizoIU, and Xie. *ICWSM '20*. Full paper
5. Estimating attention flow in online video networks  
**Wu**, RizoIU, and Xie. *CSCW '19*. Full paper, **best paper honorable mention**
4. How is attention allocated? Data-driven studies of popularity and engagement in online videos  
**Wu**. *WSDM '19*. Doctoral consortium
3. Beyond views: Measuring and predicting engagement in online videos  
**Wu**, RizoIU, and Xie. *ICWSM '18*. Full paper
2. Will this video go viral? Explaining and predicting the popularity of YouTube videos  
Kong, RizoIU, **Wu**, and Xie. *WWW '18*. Demo paper
1. SMASH: A cloud-based architecture for big data processing and visualization of traffic data  
**Wu**, Morandini, Sinnott. *DSDIS '15*. Full paper

## TEACHING

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- Teaching assistant in ANU graduate course COMP6490 Document analysis ('17, '18)
- Teaching assistant in ANU undergraduate course COMP1030 Art of computing ('17)

## STUDENTS

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- Cai Yang (ANU undergrad)
- Alexander Liu (UMich PhD)
- Zain Padamsee (Bowdoin College undergrad)

## COMMUNITY SERVICE

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- ICWSM '22 Student Volunteer and Scholarship Chair
- Senior program committee: ICWSM ('22, '23)
- Program committee/Reviewer: ICWSM ('17, '18, '21), CSCW ('19-'22), WebSci ('22), ICIS ('22), ASONAM ('21), EPJ Data Science ('21), WWW ('19, '20), ACM TOIS ('20), AAAI ('19)

## MISC.

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- Organizing: co-organized the Computational Media Lab winter workshop '19
- Running: 16 100+km events, 50+ (ultra) marathons finisher, 2:57 marathon