Hao Peng

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RESEARCH INTERESTS	Innovation, Leadership, Communication, Gender, Ethnicity, Social Networks

EMPLOYMENT

Postdoctoral Fellow — *May 2022 - Present*
Northwestern University — *Evanston, IL, USA*
- Northwestern Institute on Complex Systems (*NICO*)
- Kellogg School of Management
- Host: Brian Uzzi

Summer Research Intern — *May 2017/19 - July 2017/19*
University of Southern California — *Los Angeles, USA*
- Information Sciences Institute (*ISI*)
- Host: Emilio Ferrara

Summer Research Intern — *May 2016 - Aug. 2016*
University of Pennsylvania — *Philadelphia, USA*
- The World Well-Being Project (*WWBP*)
- Host: Lyle Ungar, M. Abdul-Mageed

EDUCATION

Ph.D. in Information Science — *Sep. 2017 - May 2022*
University of Michigan, School of Information — *Ann Arbor, MI, USA*
- Advisor: Daniel M. Romero

M.S. in Data Science — *Sep. 2015 - May 2017*
Indiana University, School of Informatics — *Bloomington, IN, USA*
- Advisors: Yong-Yeol Ahn, Filippo Menczer

B.S. in Information Management — *Sep. 2011 - June 2015*
Sun Yat-Sen University, iSchool — *Guangzhou, China*

Summer Visiting Scholar — *Jun 2012 - Aug 2012*
National Chengchi University, Business School — *Taipei City*

PUBLICATIONS

Journal Papers

1. Is Novel Research Worth Doing? Evidence From Peer Review at 49 Journals
   M. Teplitskiy, **H. Peng**, A. Blasco, K.R. Lakhani
   PNAS 119, e2118046119 (2022)

2. Dynamics of Cross-Platform Attention to Retracted Papers
   H. Peng, D.M. Romero, E.Á. Horvát
   PNAS 119, e2119086119 (2022)

3. Neural Embeddings of Scholarly Periodicals Reveal Complex Disciplinary Organizations

H. Peng, Q. Ke, C. Budak, D.M. Romero, Y.Y. Ahn
Science Advances 7, eabb9004 (2021)

4. Network Modularity Controls the Speed of Information Diffusion
H. Peng, A. Nematzadeh, D.M. Romero, E. Ferrara
Physical Review E 112, 052316 (2020)

5. Social Influence and Unfollowing Accelerate the Emergence of Echo Chambers
K. Sasahara, W. Chen, **H. Peng**, G.L. Ciampaglia, A. Flammini, F. Menczer
Journal of Computational Social Science (2020)

6. Sentiment Analysis of Web Reviews Based on Comparative Sentence Extraction
H. Peng, J. Xu, Z. Xiao
Data Analysis and Knowledge Discovery (2016)

Conference Papers

7. Event-Driven Analysis of Crowd Dynamics in the *BLM* Online Social Movement
H. Peng, C. Budak, D.M. Romero
The ACM International World Wide Web Conference (2019)

8. Recognizing Pathogenic Empathy in Social Media
M. Abdul-Mageed, A. Buffone, **H. Peng**, S. Giorgi, J. Eichstaedt, L. Ungar
The International AAAI Conference on Web and Social Media (2017)

9. Performance Dynamics and Success in Online Games
A. Sapienza, **H. Peng**, E. Ferrara
IEEE International Conference on Data Mining Workshop (2017)

Preprints

10. The Gender Gap in Scholarly Self-Promotion on Social Media
H. Peng, M. Teplitskiy, D.M. Romero, E.Á. Horvát
(In Review)

11. Author Mentions in Science News Reveal Widespread Disparities Across Name-inferred Ethnicities
H. Peng, M. Teplitskiy, D. Jurgens
(In Review)

12. Acceptance in Two Major Life Sciences Journals Shows Large Disparities Across Name-inferred Ethnicities
H. Peng, K.R. Lakhani, M. Teplitskiy
(In Review)

TEACHING	**Northwestern University**

- CAA - Culture & Art Analytics (Guest lecture for Ágnes Horvát)   Spring 2023

University of Michigan
- SI 106 - Programs, Information and People (TA for Paul Resnick)   Winter 2019
- SI 330 - Data Manipulation (TA for Matthew Kay)   Fall 2018

AWARDS AND FELLOWSHIPS	**Awards**

- Best Paper Award ($1,000), *ASIS&T*, SIGMET, 2021
- Second Prize ($750), John Hunter Excellence in Plotting Contest, *SciPy*, 2019
- Microsoft Azure Research Award, 2016

Fellowships
- UMich Rackham Travel Award, 2019
- UMSI PhD Travel Grant, 2018, 2019
- Travel Scholarship, *IC2S2*, 2018
- Indiana University Data Science Program Fellowship, 2015
- Academic Excellence Scholarship of Sun Yat-Sen University, 2011

Other Awards
- First Prize in the Regional Physics Competition, Hubei, China, 2010
- Third Prize in the National Physics Olympiad Contest, China, 2010

MEDIA COVERAGE

Selected News Reports
1. Dec 2022, *Michigan News*
   - Journal editors, reviewers don't show bias against novelty

2. July 2022, *Washington Post*
   - Retractions aren't a panacea for bad research

3. June 2022, *Northwestern Now*
   - Flawed research not retracted fast enough to prevent spread of misinformation

4. June 2022, *Inside Higher Ed*, *Retraction Watch*
   - Retractions: A Missed Opportunity?

5. June 2022, *Academica Group*
   - Article retractions take too long to influence public discourse

6. June 2022, *Michigan News*, *Phys.org*, *Mirage News*
   - Flawed research not retracted fast enough to prevent spread of misinformation, study finds

7. Oct. 2021, *Yahoo! News*, *Scientific American*, *The Conversation*, *Entrepreneur*
   - Facebook Whistleblower Testified That Company's Algorithms Are Dangerous

8. Oct. 2021, *Big Think*
   - Here's exactly how social media algorithms can manipulate you

9. Sep. 2021, *MSN*, *Salon*, *Tech Xplore*
   - How "engagement" makes you vulnerable to manipulation and misinformation on social media

10. Sep. 2021, *The Conversation*, *Yahoo!*, *Phys.org*, *Newsbreak*, *Arizona Daily Star*
    - Facebook's algorithms fueled massive foreign propaganda campaigns during the 2020 election

11. Dec 2020, *Scientific American*
    - Information Overload Helps Fake News Spread, and Social Media Knows It

12. Sep. 2020, *New Scientist*
    - US science news biased against people with names of non-British origin

SELECTED TALKS

Conference Presentations
1. *IC2S2*, UChicago   July 2022
   - Gender Differences in Scholarly Self-Promotion on Twitter

2. *ICSSI*, National Academy of Sciences, Washington, DC   June 2022
   - Dynamics of Cross-Platform Attention to Retracted Papers

3. *ICSSI*, National Academy of Sciences, Washington, DC   June 2022
   - The Gender Gap in Scholarly Self-Promotion on Twitter

4. *IC2S2*, ETH Zurich, Switzerland   July 2021
   - Analyzing Online Attention to Retracted Papers

5. *IC2S2*, MIT   July 2020
   - Network Modularity Controls the Speed of Information Diffusion

6. *IC2S2*, MIT   July 2020
   - Neural Embeddings of Scholarly Periodicals Reveal Complex Disciplinary Organizations

7. *IC2S2*, MIT   July 2020
   - Say My Name, Say My Name: Author Mentions in Science Reporting Reveal Wide-Spread Ethnic Bias

8. *WWW*, San Francisco   May 2019
   - Event-Driven Analysis of Crowd Dynamics in the Black Lives Matter Online Social Movement

9. *IC2S2*, Northwestern University   July 2018
   - Event-Driven Modeling of Crowd Dynamics in online social movements

10. *NetSci*, Indianapolis   June 2017
    - A quantitative framework for revealing disciplinary organizations of science

SERVICE

Journal Reviewer
- *Science Advances*, *Nature Human Behaviour*, *PLOS One*
- *Transactions on the Web*
- *Scientometrics*, *Sage Open*

Conference Reviewer, PC Member
- *WWW*: 2019, 2020
- *WSDM*: 2019, 2020
- *ICWSM*: 2020, 2021, 2022, 2023, 2024
- *CHI*: 2022
- *CSCW*: 2020, 2023
- *IC2S2*: 2022, 2023

REFERENCES

- Brian Uzzi
  Richard L. Thomas Distinguished Professor of Leadership
  Northwestern University, Kellogg School of Management
  uzzi@kellogg.northwestern.edu

- Daniel M. Romero
  Associate Professor, Information & Computer Science and Complex Systems
  University of Michigan
  drom@umich.edu

- Emőke-Ágnes Horvát
  Associate Professor, Communication and Computer Science
  Northwestern University
  a-horvat@northwestern.edu

- Yong-Yeol Ahn
  Associate Professor, Informatics, Computing, and Engineering
  Indiana University Bloomington
  yyahn@iu.edu

- Emilio Ferrara
  Professor, Computer Science and Communication
  University of Southern California
  emiliofe@usc.edu