

Hao Peng

CONTACT

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Kowloon Tong, Hong Kong

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RESEARCH INTERESTS

Computational Social Science, Social Networks, Science of Innovation, Natural Language Processing, Large Language Models, AI, Complex Systems, Network Science, Social Media, Diversity, Leadership, Gender, Ethnicity

EMPLOYMENT

Assistant Professor
City University of Hong Kong

- Department of Data Science
- College of Computing

July 2024 - Present
Hong Kong, SAR

Postdoctoral Fellow
Northwestern University

- Kellogg School of Management (KSM)
- Northwestern Institute on Complex Systems (NICO)

May 2022 - June 2024
Evanston, IL, USA

Research Intern
University of Southern California

- Information Sciences Institute (ISI)

May 2019 - July 2019
Los Angeles, USA

Research Intern
University of Pennsylvania

- The Positive Psychology Center
- World Well-Being Project (WWBP)

May 2016 - Aug. 2016
Philadelphia, USA

EDUCATION

Ph.D. in Information Science
University of Michigan, School of Information

Sep. 2017 - May 2022
Ann Arbor, MI, USA

M.S. in Data Science
Indiana University, School of Informatics

Sep. 2015 - May 2017
Bloomington, IN, USA

B.S. in Information Management
Sun Yat-Sen University, School of Information Management

Sep. 2011 - June 2015
Guangzhou, China

AWARDS / GRANTS

Grants

- City University of Hong Kong Startup Grant, HKD 900,000 (2024-2026)

Awards

- Emerging Award, The Complex Systems Society, London, 2024
- Best Paper Honorable Mention, NetSci, Québec City, 2024

- Best Paper Award (\$1,000), ASIS&T, Salt Lake, 2021
- Second Prize (\$750), John Hunter Plotting Contest, SciPy, Austin, 2019
- Microsoft Azure Research Award, 2016

Other Awards

- OPA Conference Travel Grant, Northwestern University, 2024
- 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
- First Prize in the Provincial Physics Competition, Hubei, China, 2010
- Third Prize in the National Physics Olympiad Contest, China, 2010

PUBLICATIONS

* denotes equal contribution. † denotes corresponding author.

Journal Papers

1. Use of Promotional Language in Grant Applications and Grant Success
H.S. Qiu, H. Peng, H.B. Fosse, T.K. Woodruff, B. Uzzi†
JAMA Network Open 7(12), e2448696 (2024)
2. Promotional Language and the Adoption of Innovative Ideas in Science
H. Peng*, H.S. Qiu*, H.B. Fosse, B. Uzzi†
Proceedings of the National Academy of Sciences 121, e2320066121 (2024)
3. Author Mentions in Science News Reveal Widespread Disparities Across Name-inferred Ethnicities
H. Peng†, M. Teplitskiy, D. Jurgens†
Quantitative Science Studies 1-23 (2024)
4. Is Novel Research Worth Doing? Evidence From Peer Review at 49 Journals
M. Teplitskiy†, H. Peng, A. Blasco, K.R. Lakhani
Proceedings of the National Academy of Sciences 119, e2118046119 (2022)
5. Dynamics of Cross-Platform Attention to Retracted Papers
H. Peng, D.M. Romero†, E.Á. Horvát†
Proceedings of the National Academy of Sciences 119, e2119086119 (2022)
6. Neural Embed. of Scholarly Periodicals Reveal Complex Disc. Organizations
H. Peng, Q. Ke, C. Budak, D.M. Romero, Y.Y. Ahn†
Science Advances 7, eabb9004 (2021)
7. Network Modularity Controls the Speed of Information Diffusion
H. Peng, A. Nematzadeh, D.M. Romero, E. Ferrara†
Physical Review E 112, 052316 (2020)
8. 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)

9. Sentiment Analysis of Web Reviews Using Comparative Sentence Extraction
H. Peng, J. Xu[†], Z. Xiao
Data Analysis and Knowledge Discovery 265 (2015)

Conference Papers

10. 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)
11. 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)
12. Performance Dynamics and Success in Online Games
A. Sapienza, H. Peng, E. Ferrara
IEEE International Conference on Data Mining Workshop (2017)

Pre-prints

13. Acceptance in Top Biology Journals Shows Large Ethnic Disparities
H. Peng, K.R. Lakhani, M. Teplitskiy
SocArXiv (2021) [[Link](#)]

TEACHING

- City University of Hong Kong, Department of Data Science
- SDSC 5002 - Exploratory Data Analysis and Visualization Sem A 2024/25
- Northwestern University, School of Communication
- MSLCE - Culture & Art Analytics (lecturer for Ágnes Horvát) Spring 2023
- University of Michigan, School of Information
- SI 106 - Programs, Information and People (TA for Paul Resnick) Winter 2019
 - SI 330 - Data Manipulation (TA for Matthew Kay) Fall 2018

SELECTED TALKS

- Invited Talks
(Talks in 2023/24 were scheduled virtually due to family circumstances)
1. The 3rd Computational Social Science Conference, CUHK Jan 2025
- Does Promotional Language Communicate Merits of Novel Ideas in Science?
 2. Southern University of Science and Technology, Shenzhen Jan 2025
- Promotional Language and the Adoption of Innovative Ideas in Science
 3. School of Information Management, Sun Yat-Sen University Nov 2024
- Promotional Language Facilitates Idea Adoption in Science
 4. School of Data Science (Zoom), City University of Hong Kong Mar 2024
- Necessity and Strategy for Facilitating Idea Adoption in Science
 5. Wednesdays@NICO, Northwestern University Jan 2024
- Necessity and Strategy for Facilitating Idea Adoption in Science

6. Graduate School of Management (Zoom), UC Davis Jan 2024
- Necessity and Strategy for Facilitating Idea Adoption in Science
7. HKU Business School (Zoom), The University of Hong Kong Dec 2023
- Necessity and Strategy for Facilitating Idea Adoption in Science
8. Harvard Business School (Zoom), Harvard University Oct 2023
- Does Promotional Language Communicate the Merits of Innovative Science?
9. Mendoza College of Business (Zoom), University of Notre Dame Oct 2023
- Does Promotional Language Communicate the Merits of Innovative Science?

Conference Presentation / Participation

1. ICWSM, Copenhagen June 2025
2. ICSSI, Copenhagen Business School, Denmark June 2025
- The Power of "We" in Science Funding and Academic Publishing
3. The ACM Web Conference (WWW), Sydney May 2025
4. International Conference on Information Systems (ICIS), Bangkok Dec 2024
5. National Bureau of Economic Research (NBER), Boston July 2024
- Promotional Language and the Adoption of Innovative Ideas in Science
6. IC2S2, UChicago July 2022
- Gender Differences in Scholarly Self-Promotion on Twitter
7. ICSSI, National Academy of Sciences, Washington, DC June 2022
- Dynamics of Cross-Platform Attention to Retracted Papers
- The Gender Gap in Scholarly Self-Promotion on Twitter
8. IC2S2, ETH Zurich, Switzerland July 2021
- Analyzing Online Attention to Retracted Papers
9. IC2S2, MIT July 2020
- Network Modularity Controls the Speed of Information Diffusion
- Neural Embeddings of Periodicals Reveal Complex Disciplinary Organizations
- Say My Name: Author Mentions in Science News Reveal Ethnic Bias
10. WWW, San Francisco May 2019
- Event-Driven Analysis of Crowd Dynamics in BLM Online Social Movement
11. IC2S2, Northwestern University July 2018
- Event-Driven Modeling of Crowd Dynamics in Online Social Movements
12. NetSci, Indianapolis June 2017
- A Quantitative Model for Revealing Disciplinary Organizations in Science

Seminar Talks

- Computational Social Science Lab Mini-Conference, CUHK April 2025
- Linguistic Strategies for Facilitating Idea Adoption in Science
- Science of Science for the Future, Swarna Pattern Oct 2024
- Job Market Brain Dump, Kellogg, Northwestern University May 2024
- DS/CSS Seminar, University of Michigan Oct. 2019
- IAR Seminar, University of Michigan April 2019

SERVICES

City University of Hong Kong, Department of Data Science

- PhD Admission Committee Member, 2024-2026
- MSDS Programme Committee Member, 2024-2026
- Programme Committee of MS in Artificial Intelligence for Science, 2025-27

Journal Reviewer

- PNAS, Science Advances, Nature Human Behaviour, Nature Communications, Scientific Reports
- Information Processing & Management, Transactions on the Web, Science Communication, PLOS One, Scientometrics, Journal of the Association for Information Science and Technology, Sage Open

Program Committee Member / Reviewer

- The ACM Web Conference: 2019, 2020
- The ACM International Conference on Web Search and Data Mining: 2019, 2020
- The ACM Conference on Human Factors in Computing Systems: 2022, 2024
- The ACM Conference on Computer-Supported Cooperative Work: 2020, 2023
- The International AAI Conference on Web and Social Media: 2020-2024
- International Conference on Computational Social Science: 2022-2025
- Academy of Management Conference: 2024
- Conference on Complex Systems: 2024, 2025
- European Conference on Artificial Intelligence: 2025

Professional Memberships

- Academy of Management (AOM)
- The Complex Systems Society (CSS)
- The Network Science Society (NetSci)
- Association for Information Systems (AIS)
- International Communication Association (ICA)
- Association for Computational Linguistics (ACL)
- Association for Information Science & Technology (ASIS&T)

MEDIA COVERAGE Selected News Stories

1. Aug 2024, Science News
 - The power of words: how promotional language drives scientific innovation
2. April 2024, NPR
 - Which scientists get mentioned in the news? Mostly ones with Anglo names, says study
3. April 2024, LSE Impact Blog
 - Researchers with minority ethnic names are written out of US science journalism
4. April 2024, Fast Company
 - Researchers with African and East Asian names are less likely to be mentioned in U.S. media

5. April 2024, The Conversation, Yahoo! News, Phys.org
 - US media coverage of new science less likely to mention researchers with African and East Asian names
6. Mar 2024, Science Magazine
 - Scientists with East Asian and African names get short shrift in news coverage
7. Dec 2022, Michigan News
 - Journal editors, reviewers don't show bias against novelty
8. July 2022, The Washington Post
 - Retractions aren't a panacea for bad research
9. July 2022, Le Monde (French)
 - En science aussi les fausses informations circulent mieux que les bonnes
 - (In science too, false information circulates better than good information)
10. July 2022, Deutschlandfunk (German National Radio)
 - Warum fehlerhafte Studien oft die meiste Aufmerksamkeit bekommen
 - (Why flawed studies often get the most attention)
11. June 2022, Northwestern Now
 - Flawed research not retracted fast enough to prevent spread of misinformation
12. June 2022, Retraction Watch, Inside Higher Ed
 - Retractions: A Missed Opportunity?
13. June 2022, Academica Group
 - Article retractions take too long to influence public discourse
14. June 2022, Michigan News, Phys.org
 - Flawed research not retracted fast enough to prevent spread of misinformation, study finds
15. Oct 2021, Entrepreneur, Scientific American, Yahoo! News
 - Facebook Whistleblower Testified That Company's Algorithms Are Dangerous
16. Oct 2021, Big Think
 - Here's exactly how social media algorithms can manipulate you
17. Sep 2021, MSN, Salon
 - How "engagement" makes you vulnerable to manipulation and misinformation on social media
18. Sep 2021, The Conversation, Newsbreak, Phys.org
 - Facebook's algorithms fueled massive foreign propaganda campaigns during the 2020 election
19. Dec 2020, Scientific American
 - Information Overload Helps Fake News Spread, and Social Media Knows It
20. Sep 2020, New Scientist
 - US science news biased against people with names of non-British origin