Yuanxi (Rosa) Fu

Curriculum Vitae

University of Illinois Urbana-Champaign
School of Information Sciences
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RESEARCH AREAS

- Reasoning as data: representation and computational methods
- Information quality in scholarly communications
- AI-assisted information modeling and database design

EDUCATION

University of Illinois at Urbana-Champaign, School of Information Sciences
Ph.D. Information Sciences — expected May 2027
Dissertation: Unreliability propagation: conceptual foundations for justified action

M.S. Bioinformatics — 2021

University of Illinois at Urbana-Champaign, Department of Chemistry
Ph.D. Chemistry — 2015
Dissertation: High pressure surface enhanced Raman scattering spectroscopy

Nanjing University, School of Chemistry and Chemical Engineering, China
B.S. Chemistry — 2008
Thesis: Computational study of adsorption induced spin polarization of pentacene on metal surfaces

SELECTED AWARDS AND HONORS

Eugene Garfield Doctoral Dissertation Fellowship, Beta Phi Mu International Honor Society — 2025
Journal of the Association for Information Science and Technology (JASIST) top reviewers — 2021

IMMIGRATION STATUS

U.S. permanent resident

PUBLICATIONS (student mentees underlined, †senior author)

Peer-reviewed journal papers

J6 **Fu, Y.**, Clarke, C. V., Moer, M. V., & Schneider, J. (2024). Exploring evidence selection with the inclusion network. *Quantitative Science Studies*, 5(1), 219–245. https://doi.org/10.1162/qss_a_00287

J5 Schneider, J., Woods, N. D., Proescholdt, R., & **the RISRS Team**. (2022). Reducing the inadvertent spread of retracted science: recommendations from the RISRS report. *Research Integrity and Peer Review*, 7(1), 6. https://doi.org/10.1186/s41073-022-00125-x

J4 **Fu, Y.**, & Dlott, D. D. (2015). Single molecules under high pressure. *The Journal of Physical Chemistry C*, 119(11), 6373–6381. https://doi.org/10.1021/jp512858u

J3 Brown, K. E., **Fu, Y.**, Shaw, W. L., & Dlott, D. D. (2012). Time-resolved emission of dye probes in a shock-compressed polymer. *Journal of Applied Physics*, 112(10), 103508. https://doi.org/10.1063/1.4765687

J2 **Fu, Y.,** Friedman, E. A., Brown, K. E., & Dlott, D. D. (2011). Vibrational spectroscopy of nitroaromatic self-assembled monolayers under extreme conditions. *Chemical Physics Letters*, 501(4), 369–374. https://doi.org/10.1016/j.cplett.2010.12.013

J1 Chen, W., Li, H., Huang, H., **Fu, Y.**, Zhang, H. L., Ma, J., & Wee, A. T. S. (2008). Two-dimensional pentacene:3,4,9,10-perylenetetracarboxylic dianhydride supramolecular chiral networks on Ag(111). *Journal of the American Chemical Society*, 130(37), 12285–12289. https://doi.org/10.1021/ja801577z

Peer-Reviewed Conference Full papers

C2 Zheng, H.*, **Fu, Y**.*, Sarol, M. J., Sarraf, I., & Schneider, J. (2024). Addressing unreliability propagation in scientific digital libraries. *Proceedings of the 24th ACM/IEEE Joint Conference on Digital Libraries*, 1–11. https://doi.org/10.1145/3677389.3702526 (* equal contribution first author)

C1 **Fu, Y.**, & Schneider, J. (2020). Towards knowledge maintenance in scientific digital libraries with the keystone framework. *Proceedings of the ACM/IEEE Joint Conference on Digital Libraries in 2020*, 217–226. https://doi.org/10.1145/3383583.3398514

Peer-Reviewed Conference Short Papers

CS4 **Fu, Y.**, & Schneider, J. (2025). Engineering the reproducible literature review section for scholarly publications and grant applications. *Proceedings of the AAAI Symposium Series*, 5(1), 360–364. https://doi.org/10.1609/aaaiss.v5i1.35612

CS3 **Fu, Y.**, Yuan, J., & Schneider, J. (2021). Using citation bias to guide better sampling of scientific literature. *Proceedings of the 18th International Conference on Scientometrics & Informetrics*, 419–424. http://jodischneider.com/pubs/issi2021.pdf

CS2 Hsiao, T.K.*, **Fu, Y.***, & Schneider, J. (2020). Visualizing evidence-based disagreement over time: The landscape of a public health controversy 2002–2014. *Proceedings of the Association for Information Science and Technology*, 57(1), e315. https://doi.org/10.1002/pra2.315 (* equal contribution first author)

CS1 **Fu, Y.**, Christensen, J. M., & Dlott, D. D. (2014). Molecular adsorbates under high pressure: A study using surface-enhanced Raman scattering spectroscopy. *Journal of Physics: Conference Series*, 500(12), 122004. https://doi.org/10.1088/1742-6596/500/12/122004

Peer-Reviewed Workshop Papers

W4 Stade, C., Schneider, J., & **Fu, Y.**†(2025). From evidence to insights: GraphRAG as a dynamic knowledge layer for the collaboration for environmental evidence's database of evidence reviews. *Proceedings of the 3rd International Workshop on Knowledge Graphs for Sustainability (KG4S 2025)*, 4002, 39–45. https://ceur-ws.org/Vol-4002/short6.pdf

W3 Stade, C., Schneider, J., **Fu, Y**. † (November 13, 2024). Making sense of the environmental science landscape: An exploration of the CEEDER database. METSTI 2024: Workshop on Informetric, Scientometric and Scientific and Technical Information Research, online. https://doi.org/10.5281/zenodo.13895517

W2 **Fu, Y.**, & Schneider, J. (2024). An argumentation interface to facilitate human-machine collaboration in scientific research: A preliminary exploration. *Proceedings of the 24th Workshop on Computational Models of Natural Argument*. The 24th Workshop on Computational Models of Natural Argument (CMNA'24), Hagen, Germany. https://ceur-ws.org/Vol-3769/paper4.pdf

W1 **Fu, Y.**, Schneider, J., & Blake, C. (2021). Finding keystone citations for constructing validity chains among research papers. *Companion Proceedings of the Web Conference 2021*, 451–455. (Sci-K 2021) https://doi.org/10.1145/3442442.3451368

DATASETS

D5 **Fu, Y.** (2025). Dataset for studying transitive closure in citations. University of Illinois Urbana-Champaign Data Bank. https://doi.org/10.13012/B2IDB-3971668_V1

D4 Zheng, H., **Fu, Y.**, Vandel, E., & Schneider, J. (2024). Dataset of 286 publications citing the 2014 Willoughby-Jansma-Hoye protocol. University of Illinois Urbana-Champaign Data Bank. https://doi.org/10.13012/B2IDB-4610831_V3 (dataset annotation guideline: https://hdl.handle.net/2142/123380)

D3 Clarke, C., Lischwe Mueller, N., Joshi, M. B., **Fu, Y.**, & Schneider, J. (2023). The inclusion network of 27 review articles published between 2013-2018 investigating the relationship between physical activity and depressive symptoms. University of Illinois Urbana-Champaign Data Bank. https://doi.org/10.13012/B2IDB-4614455_V4

D2 **Fu, Y.**, Hsiao, T.-K., Joshi, M. B., & Lischwe Mueller, N. (2023). The salt controversy systematic review reports and primary study reports network dataset. University of Illinois Urbana-Champaign Data Bank. https://doi.org/10.13012/B2IDB-6128763_V3

D1 **Fu, Y.,** & Schneider, J. (2021). Dataset for fifty ways to tag your pubtypes: multi-tagger, a set of probabilistic publication type and study design taggers to support biomedical indexing and evidence-based medicine. University of Illinois at Urbana-Champaign Data Bank. https://doi.org/10.13012/B2IDB-4635945_V1

SELECTED PRESENTATIONS (student mentees underlined, †senior author)

P6 **Fu, Y.**, Renear, A. (accepted). Towards a conceptual foundation for curating scientific reasoning as data [Poster presentation]. 21st International Digital Curation Conference (IDCC27), Lisbon, Portugal.

P5 Stade, C., Schneider, J., **Fu, Y.** † (April 30, 2026). Biased QA: How reranking shapes controversial topics [Poster presentation]. May Day Tea at iSchool, University of Wisconsin–Madison. https://hdl.handle.net/1793/97613

P4 **Fu, Y.** and Schneider, J. (April 16, 2024). Preparing a knowledge infrastructure for the AI scientist [Poster presentation]. BioIT World Conference and Expo, April 15-17, 2024, Boston, USA. https://hdl.handle.net/2142/123190

P3 Sarraf, I., **Fu, Y.**, Schneider, J. (October 27, 2023). Text mining scholarly publications using APIs [Poster presentation]. METSTI 2023: Workshop on Informetric, Scientometric and Scientific and Technical Information Research, London, UK. https://doi.org/10.5281/zenodo.10581542

P2 Haque, T., Lam, T., Rahman, M., González-Cruz, K., **Fu, Y.**, Schneider, J., Annotating data to train machine learning models to classify citations in biomedical papers [Poster Presentation]. 2022 American Physician Scientists Association Northeast Regional Conference. In *International Journal of Medical Students, 10* (Suppl 1), S34. https://doi.org/10.5195/ijms.2022.1359

P1 Wan, Z., **Fu, Y.**, Schneider, J. Using citation redistribution to estimate unbiased expected citation count from a biased citation network. [Poster Presentation]. The iSchool Research Showcase, University of Illinois at Urbana-Champaign, October 27, 2021. http://hdl.handle.net/2142/112794

TEACHING EXPERIENCE

Co-instructor: developing course modules and homework assignments, teaching class sessions, managing Canvas site

University of Illinois Urbana-Champaign, iSchool

- Concepts of Machine Learning (55 students) 2025 Spring
- Ethics and Policy for Data Science (66 students) 2024 Spring

Teaching Assistant: grading, office hours, leading lab/discussion sessions, managing Canvas site

University of Illinois Urbana-Champaign, iSchool

- Data Management, Curation & Reproducibility (81 students) 2026 Fall

– Theory and Practice of Data Cleaning (Coursera; 404 students) 2026 Summer

Volunteering

Certified instructor, the Carpentries: online teaching of programming and data science skills 2020–current
Organizer and instructor, Explainable AI study group 2022–2023

SERVICE

Organizing committee, workshops

– Networks in Science of Science workshop at NetSci 2024–current
– 1st workshop on Digital Infrastructures for Scholarly Content Objects at JCDL 2021

Program Committee, conferences

– ACM/IEEE Joint Conference on Digital Libraries (JCDL) 2026
– International Conference on Artificial Intelligence in Medicine (AIME) 2024

Reviewer, journals

– *Journal of the Association for Information Science and Technology (JASIST)* 2021, 2026
– *Informal Logic* 2026
– *Quantitative Science Studies* 2024
– *Scientometrics* 2024
– *Journal of Academic Ethics* 2023, 2025
– *Journal of the American Medical Informatics Association (JAMIA) Open* 2023
– *Knowledge Organization* 2021

Reviewer, conference

– The Annual Meeting of the Association for Information Science and Technology (ASIS&T) 2026

Program Committee, workshops

– International Workshop on Scientific Knowledge (Sci-K) 2025–current
– International Workshop on Computational Models of Natural Argument (CMNA) 2023–current

Reviewer, workshop

– AI for Accelerated Materials Discovery (AI4Mat) Workshop 2024–current

Service to the University of Illinois Urbana-Champaign iSchool

– Organizer, Center for Informatics Research in Science and Scholarship speaker series 2024–2026
– The AI Disruption 2026 Spring
– Generative AI and the Future of Research 2025 Spring, Fall
– Study Science Scientifically: State of the Art and Prospects for Science of Science 2024 Fall
– Student representative, Diversity Committee AY2023
– Student representative, MS Information Management/Bioinformatics sub-committee AY2019

STUDENT MENTORING (University of Illinois iSchool, unless otherwise noted)

PhD student

- Christoph Stade, UW-Madison iSchool — 2025 Summer–current

Master's students

- Yu-Chen Tung — 2026 Fall
- Prathamesh Patil — 2022 Fall
- Saahil Hiranandani — 2021 Spring
- Kartikey Dubey — 2021 Fall
- Zhonghe Wan — 2021 Fall–2022 Spring

Undergraduate students

- Steven Wu — 2026 Fall
- Yoyo Lin — 2026 Fall
- Andrew Xie — 2023 Fall
- Tongtong Gu — 2023 Fall
- Ishita Sarraf, Grinnell College (Distributed REU at Illinois) — 2023 Summer
- Deyuan (Doreen) Yang, DePauw University (Distributed REU at Illinois) — 2023 Summer
- Tasnia Haque, Cornell University (VRSP remote mentoring program) — 2021 Summer
- Tiffany Lam, Cornell University (VRSP remote mentoring program) — 2021 Summer
- Muhammad Rahman, University of Washington, Seattle (VRSP remote mentoring program) — 2021 Summer
- Karla González-Cruz, University of Puerto Rico, Cayey (VRSP remote mentoring program) — 2021 Summer
- Jasmin Yuan — 2021 Spring

PROFESSIONAL EXPERIENCE

Beijing Sirithink Technology, China — Aug 2015–May 2019

Director of research and analysis, June 2016–May 2019

- Set the direction and ran the operations of a remote team of 20+ consultants, most of them PhD and master's students in STEM fields, who served the information needs of entrepreneurs, inventors, and investors in industries including pharmaceuticals, chemicals, oil & gas, energy, and agriculture.
- Led the team's work for a pharmaceutical client (2017–2019): oversaw 300+ technical reports on new medical devices and drugs, met regularly with the client's R&D team in Beijing, and attended medical conferences.

Science writer, part-time, Aug 2015–May 2016

- Wrote news articles about emerging technology startups for the company's website, which led to the offer to lead its research team full time.

Center for Soft and Living Matter

Ulsan National Institute of Science and Technology (UNIST), South Korea — May 2015–May 2016

Research fellow, May 2015–May 2016

- Developed microscopy protocols for studying polymer dynamics in crowded environments.