# Dakota S. Murray

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# **Current Position**

Research Assistant

School of Informatics, Computing, and Engineering, Indiana University Bloomington

# Areas of Specialization

Science of Science • Computational Social Science • Data Science

# Education

2016-present PH.D. in Informatics

Track in Computing, Culture, and Society; Minor in Statistics

School of Informatics, Computing, and Engineering, Indiana University Bloomington

advisors: Dr. Cassidy R. Sugimoto and Dr. Yong-Yeol Ahn

B.S. in Computer Science

Department of Computer Science, Appalachian State University

advisor: Dr. Mitch Parry

# Appointments and Employment

2019-present Research Assistant

Dr. Yong-Yeol Ahn, Science Genome Project

School of Informatics, Computing, and Engineering, Indiana University

2018-2019 Associate Instructor

School of Informatics, Computing, and Engineering, Indiana University

2017 (Summer) Visiting Scholar

Center for Science and Technology Studies, Leiden University

2016-2018 Research Assistant

Dr. Cassidy Sugimoto, Scholarly Communication Lab

School of Informatics, Computing, and Engineering, Indiana University

2013-2016 Research Assistant and Web Developer

Department of Computer Science, Appalachian State University

# **Publications**

2018

JOURNAL ARTICLES AND INDEXED CONFERENCE PROCEEDINGS

- Murray, D., Yoon, J., Kojaku, S., Costas, R., Jung, W., Milojević, S., & Ahn, Y. (in submission).
   Unsupervised embedding of trajectories captures the latent structure of mobility.
- Murray, D., Boothby, C., Zhao, H., Minik, V., Bérubé, N., Larivière, V., & Sugimoto, C. R. (2020). Exploring the personal and professional factors associated with student evaluations of tenure-track faculty. PLOS ONE, 15(6), e0233515. https://doi.org/10.1371/journal.pone.0233515
- Boothby, C., **Murray, D.**, Sugimoto, C. R., Waggy, A. P., & Tsou, A. (2020). Credibility of Scientific Information on Social Media: Variation by Platform and Presence of Formal Credibility Cues [Preprint]. SocArXiv. https://doi.org/10.31235/osf.io/4dhcz
- Brown, J., **Murray, D.**, Furlong, K., Coco, E., & Dablander, F. (2020). A Breeding Pool of Ideas: Analyzing Interdisciplinary Collaborations at the Complex Systems Summer School [Preprint]. SocArXiv. https://doi.org/10.31235/osf.io/e3z4v
- Robinson-Garcia, N., Sugimoto, C. R., **Murray**, **D.**, Yegros-Yegros, A., Larivière, V., & Costas, R. (2019). The many faces of mobility: Using bibliometric data to measure the movement of scientists. Journal of Informetrics, 13(1), 50–63.
- Bu, Y., **Murray, D. S.**, Xu, J., Ding, Y., Ai, P., Shen, J., & Yang, F. (2018). Analyzing scientific collaboration with "giants" based on the milestones of career. Proceedings of the Association for Information Science and Technology, 55(1), 29–38.
- Murray, D., Siler, K., Larivière, V., Chan, W. M., Collings, A. M., Raymond, J., & Sugimoto, C. R. (2019). Author-Reviewer Homophily in Peer Review. BioRxiv, 400515. https://doi.org/10.1101/400515
- Murray, D., Siler, K., Lariviére, V., Collings, A. M., Raymond, J., Sugimoto, R., (under revision). Gender and international diversity improves equity in peer review. PLOS Bio.
  - Robinson-Garcia, N., Sugimoto, C. R., **Murray, D.**, Yegros-Yegros, A., Larivière, V., & Costas, R. (2018). Scientific mobility indicators in practice: International mobility profiles at the country level. El Profesional de La Información, 27(3), 511.
- Bu, Y., Ding, Y., Liang, X., & Murray, D. S. (2018). Understanding persistent scientific collaboration. Journal of the Association for Information Science and Technology, 69(3), 438–448.
- Bu, Y., **Murray**, **D. S.**, Ding, Y., Huang, Y., & Zhao, Y. (2018). Measuring the stability of scientific collaboration. Scientometrics, 114(2), 463–479.
- Chinchilla-Rodríguez, Z., Miao, L., **Murray, D.**, Robinson-García, N., Costas, R., & Sugimoto, C. R. (2018). A Global Comparison of Scientific Mobility and Collaboration According to National Scientific Capacities. Frontiers in Research Metrics and Analytics, 3.

- Sugimoto, C. R., Robinson-Garcia, N., **Murray, D. S.**, Yegros-Yegros, A., Costas, R., & Larivière, V. (2017). Scientists have most impact when they're free to move. Nature, 550(7674), 29–31.
- Das, S., Goard, J., & Murray, D. (2017), How Celebrities Feed Tweeples with Personal and Promotional Tweets: Celebrity Twitter Use and Audience Engagement. In Proceedings of the 8th International Conference on Social Media and Society (pp. 30:1–30:5). New York, NY, USA: ACM.

### OTHER PUBLICATIONS

2017

- Sugimoto C, Allen L, Jeroen B et al. Rethinking Impact Factors: New Pathways in Journal Metrics. F1000Research 2019, 8:671 (document).
- Cassidy R. Sugimoto, **Dakota S. Murray**, and Vincent Larivière (April 26, 2018), "Open citations to open science", *ISSI Blog*.
  - Rodrigo Costas, Alfredo Yegros, Vincent Larivière, Cassidy Sugimoto, Nicolas Robinson-Garcia, **Dakota S. Murray** (October 5, 2017), "The global scientific brain: Policy implications of barriers to scientific mobility", *CWTS Blog*.

## Conference Works and Talks

#### Refereed conference works

- Murray, D., Larivière, V., Sugimoto C. R., (2019). Context matters: how the usage and semantics of hedging terms differs between sections of scientific papers. ISSI2019. Rome, Italy.
- Murray, D., Lamers, W., Boyack K., Larivière, V., Sugimoto C. R., van Eck, N., Waltman L., (2019). Measuring disagreement in science. ISSI2019. Rome, Italy.
- Miao, L., **Murray, D**., Larivière, V., Sugimoto, C., Jung, W-S., & Yeol, Y-Y., (2019). The disciplinary structure of nation's scientific production. NetSci2019. Burlington, Vermont, USA.
- Murray, D., Zhou, H., Minik, V., Larivière, V., & Sugimoto, C. R., (2017). Are Great Researchers Terrible Teachers? How research and teaching performance relate at U.S. universities. ISSI2017. Wuhan, China
- Robinson-Garcia, N., Sugimoto, C.R., **Murray, D.**, Yegros-Yegros, A., Larivière, V., & Costas, R. (2017). Unveiling the multiple faces of mobility: Towards a taxonomy of scientific mobility types based on bibliometric data. STI2017. Paris, France.
- Chinchilla-Rodriguez, Z., Miao, L., **Murray, D.**, Robinson-Garcia, N., Costas, R., & Sugimoto, C.R. (2017). A large-scale comparison of the position of countries in international collaboration and mobility according to their scientific capacities. STI2017. Paris, France.
- Murray, D., Sugimoto, C.R., & Lariviere, V. (2017). A balanced portfolio? The relationship between gender and funding for US academic professors. STI2017. Paris, France.
- Miao, L., **Murray, D.**, Chinchilla-Rodriguez, Z., Lariviere, V., & Sugimoto, C.R. (2017). Glass boundaries: Differences in interdisciplinarity between men and women. STI2017. Paris, France.

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- Zaida Chinchilla-Rodríguez, presented by **Dakota Murray** , (2018) Moving on up: the relationship between international mobility and global leadership. 4S, Sydney, Australia
- Cassidy Sugimoto, **Dakota Murray**, & Vincent Larivière, Open panel, *The Global Scientific Brain:*International Mobility of the Scientific Workforce, 4S Sydney, Sydney, Australia

### INVITED TALKS

- **Murray, D.**, Lamers, W., Eck, N., Boyack, K., Larivière, V., Waltman, L., Sugimoto, C.R. (2020). Measuring disagreement in science. CWTS Colloquium. Leiden University, Netherlands.
- Murray, D. Embeddings capture the multiscale structure of scientific mobility (2020). Data Science Student Consortium. University of Michigan, Ann Arbor, USA.

#### **POSTERS**

2020

2020

- Murray, D., Yoon, J., Kojaku, S., Costas, R., Jung, W., Milojević, S., & Ahn, Y. (2020). Unsupervised embedding of trajectories captures the latent structure of mobility. NetSci 2020. Rome, Italy.
- Murray, D., Yoon, J., Kojaku, S., Costas, R., Jung, W., Milojević, S., & Ahn, Y. (2020). Unsupervised embedding of trajectories captures the latent structure of mobility. IC2S2 2020. Boston, USA.
- Murray, D., Cabanac, G., Larivière, V., & Sugimoto, C.R. (2020). Honoring our dead: text mining a century of academic obituaries in The Lancet. IC2S2 2020. Boston, USA.
  - Miao, L., **Murray, D.**, Larivière, V., Sugimoto, C.R., Jung, W & Ahn, Y. (2020). The scientific development of nations. IC2S2 2020. Boston, USA.

### Workshops and Schools

- 2019 Complex Networks Winter Workshop, Quebec City, Canada
- Invited Scholar, MIDAS Data Science Symposium, Ann Arbor, Michigan
- Santa Fe Institute's Summer School in Complex Systems, Santa Fe, New Mexico
- Lorentz Center Workshop Rethinking Impact Factors: New Pathways in Journal Metrics, Leiden, Netherlands.

# Grants, honors, and awards

### GRANTS AND OTHER FUNDING

- GISA Departmental Travel Award, School of Informatics, Computing, and Engineering \$950
  Integrated Doctoral Education with Application to Scholarly Communication (IDEASc) fellowship,
  Institute of Museum and Library Services
- 2017 Cross-track collaboration travel grant, School of Informatics, Computing, and Engineering \$500

### ACADEMIC AWARDS

2016

Graduated B.S. Summa Cum Laude and with departmental honors

Chancellor's List (GPA > 3.85), Appalachian State University

2012, 2013 NSF Academy of Science Scholarship at Appalachian State University

# Teaching

Indiana University Bloomington

Fall 2018-Spring Associate Instructor, Informatics Capstone I & II: Design and Development of an Information Sys-

Appalachian State University

2015-2016 Computer Science Tutor, Appalachian State University

Lab Assistant, Computer Science I and II

**GUEST LECTURES** 

Fall 2019 Introduction to bibliometric indicators in your career. Article writing for graduate students. Indiana

University Bloomington.

Fall 2019 Excel workshop for beginners. *Understanding Social Data*. Indiana University Bloomington.

Fall 2019 Introduction to Machine Learning. Sociology: Understanding Social Data. Indiana University Bloom-

ington.

Fall 2019 A gentle overview of academic conferences. Informatics: Intro to informatics. Indiana University

Bloomington.

Spring 2018 Invited presenter and discussion leader. *Informatics: intro to informatics.* Indiana University Bloom-

ington.

## Service

### Reviewing

2017

2016

(Year of first review): Quantitative Science Studies (2020); Frontiers in Research Analytics and Metrics (2020); Advances in complex systems (2020); International Journal of Information Management (2019); Scientometrics (2019); PLoS Computational Biology (2019); PLoS One (2017); Journal of Informetrics (2017); Journal of the Association for Information Science & Technology (2017)

Indiana University Bloomington

Representative, Graduate and Professional Student Government, Indiana University Bloomington

Publicity Chair, Graduate Informatics Student Association, Indiana University Bloomington

Social Chair, Graduate Informatics Student Association, Indiana University Bloomington

Professional organizations

2018 - present Member, Society for the Social Studies of Science

2017 - present Member, International Society for Scientometrics and Informetrics

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