

Matthew R. DeVerna

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Indiana University Bloomington
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EDUCATION PhD, Informatics, Indiana University Bloomington In progress
Advisor: Dr. Filippo Menczer
Focus: Complex Networks & Systems
Minor: Computer Science
MA, Psychology, New York University 2020
Advisors: Drs. John Jost and Joshua Tucker
BS Marketing, Saint Joseph's University 2012

HONORS & AWARDS Contributor, Mozilla Foundation's **AI Intersections Database** 2024
Selected for the University of Michigan's **Future Leaders Summit** 2024
Institute for Humane Studies Fellowship (\$5,000) 2023
Civic Health Project: LLM Applications for Civic Health (\$5,000) 2023
Cognizant Trust and Safety Scholarship (\$10,000) 2023
Informatics Luddy Outstanding Service Award (\$500) 2023
Cited in the **2023 Economic Report of the President** [J3] 2023
MISDOOM: Best Student Extended Abstract [J1] 2022
Aspen Institute **Information Disorder Prize Competition**: Semi-finalist (\$5,000) 2022
Twitter Student Ambassador (pre-Musk) 2022
Knight Fellow at the **Observatory on Social Media** 2020–current
Invited Contestant, Annual Threesis Academic Challenge (NYU) 2020

PUBLICATIONS **Journal Articles**

GOOGLE SCHOLAR

- J1. **DeVerna, Matthew R.**, Aiyappa, R., Pacheco, D., Bryden, J. & Menczer, F. Identifying and characterizing superspreaders of low-credibility content on Twitter. *PLOS ONE*. <https://doi.org/10.48550/arXiv.2207.09524> (2024).
- J2. Pierri, F., **DeVerna, Matthew R.**, Yang, K.-C., Axelrod, D., Bryden, J. & Menczer, F. One Year of COVID-19 Vaccine Misinformation on Twitter: Longitudinal Study. *J Med Internet Res* **25**. <https://doi.org/10.2196/42227> (2023).
- J3. Pierri, F., Perry, B. L., **DeVerna, Matthew R.**, Yang, K.-C., Flammini, A., Menczer, F. & Bryden, J. Online misinformation is linked to early COVID-19 vaccination hesitancy and refusal. *Scientific Reports* **12**. <https://doi.org/10.1038/s41598-022-10070-w> (2022).
 - Included in *Scientific Reports* **Top 100 downloaded papers** (2022)
 - Cited in the **Economic Report of the President** (2023).

- J4. **DeVerna, Matthew R.**, Guess, A. M., Berinsky, A. J., Tucker, J. A. & Jost, J. T. Rumors in Retweet: Ideological asymmetry in the failure to correct misinformation. *Personality and Social Psychology Bulletin*. <https://doi.org/10.1177/01461672221114222> (2021).

Peer-reviewed Conference Proceedings

- C1. Aiyappa[†], R., **DeVerna[†]**, M. R., Pote[†], M., Truong[†], B. T., Zhao[†], W., Axelrod, D., Pesianzadeh, A., Kachwala, Z., Kim, M., Seckin, O. C., Kim, M., Gandhi, S., Manikonda, A., Pierri, F., Menczer, F. & Yang, K.-C. *A multi-platform collection of social media posts about the 2022 U.S. midterm elections* in *Proceedings of the International AAAI Conference on Web and Social Media* Preprint arXiv.2301.06287 (2023). <https://arxiv.org/abs/2301.06287>.
- C2. **DeVerna, Matthew R.**, Pierri, F., Truong, B. T., Bollenbacher, J., Axelrod, D., Loynes, N., Torres-Lugo, C., Yang, K.-C., Menczer, F. & Bryden, J. *CoVaxxy: A Collection of English-Language Twitter Posts About COVID-19 Vaccines* in *Proceedings of the International AAAI Conference on Web and Social Media* **15** (2021), 1–10. <https://doi.org/10.1609/icwsm.v15i1.18122>.

Circulated Manuscripts

- R1. **DeVerna, Matthew R.**, Pierri, F., Ahn, Y.-Y., Fortunato, S., Flammini, A. & Menczer, F. *Modeling the amplification of epidemic spread by misinformed populations* ArXiv[Preprint]. 2024. <https://arxiv.org/abs/2402.11351v1>.
- R2. **DeVerna, Matthew R.**, Yan, H. Y., Yang, K.-C. & Menczer, F. *Fact-checking information generated by a large language model can decrease news discernment* ArXiv[Preprint]. 2023. <https://doi.org/10.48550/arXiv.2207.09524>.

† → Equal contribution

TOOLS

Observatory on Social Media (OSoMe)

- **Top FIBers**: tracks and reports on the top superspreaders of low-credibility information on Twitter and Facebook each month
- **Midterm 2022 dashboard**: dashboard for US 2022 midterm elections Twitter discussion
- **osometweet**: Python package to work with Twitter’s V2 API ([PyPi](#) | [GitHub](#))
- **CoVaxxy**: dashboard for visualizing the relationship between COVID-19 vaccine adoption and online (mis)information

Other

- **py_misinfo_exposure**: Python package for calculating a Twitter user’s misinformation-exposure score ([PyPi](#) | [GitHub](#))

PRESENTATIONS Talks

- Artificial intelligence is ineffective and potentially harmful for fact checking [R2] *Politics and Computational Social Science Conf. (Los Angeles, CA, USA)*¹ Aug. 2023
- Misinformed populations can amplify the spread of disease *EDMO Scientific Conference on Disinformation (Amsterdam, Netherlands)*² Nov. 2023

¹Presented by coauthor Kai-Cheng Yang

²Presented by coauthor Francesco Pierri

- Social media cascade reconstruction to find misinformation amplifiers
NetSci (Vienna, Austria) Jul. 2023
- Identification and characterization of misinformation superspreaders on social media [J1]
Truth and Trust Online Conference (Virtual) Oct. 2022
MISDOOM Conference: Best Student Extended Abstract (Virtual) Oct. 2022
Networks: Joint Sunbelt and Netsci Conference (Virtual) Jun. 2021

Posters

- Fact-checking information generated by a large language model can decrease news discernment [R2]
Future Leaders Summit (Invited) @ University of Michigan (Ann Arbor, MI, USA) Apr. 2024
Conference on Digital Experimentation @ MIT (Boston, MA, USA) Nov. 2023
- Social media cascade reconstruction to find misinformation amplifiers
International Conference on Computational Social Science (Copenhagen, Denmark) Jul. 2023

Tutorials and Demonstrations

- MisAmplifiers: Uncovering hidden amplifiers of misinformation
Former Dom. Rep. President Leonel Fernández visit (Bloomington, IN, USA) Apr. 2022
Networks: Joint Sunbelt and Netsci Conference (Virtual) Jun. 2021
- CoVaxxy: Linking COVID-19 vaccine adoption and online (mis)information [J3, C2]
Invited speaker: Learning Informatics Lab, University of Minnesota (Virtual) Mar. 2022
Knight Research Network Tool Demonstration Day (Virtual) Oct. 2021
International AAAI Conference on Web and Social Media (Virtual) Jul. 2021
Invited speaker: Vaccine Misinformation, ACHA CoVAC Initiative (Virtual) Jun. 2021
- **osometweet**: A Python package for working with Twitter’s V2 API
Twitter’s Official Twitch Channel (Virtual) Nov. 2022

Note: Presentations given by coauthors are included only if Matt led the associated project.

RESEARCH AFFILIATIONS

Networks and Agents Networks (NaN), Bloomington, Indiana
with Dr. Filippo Menczer

Center for Social Media and Politics (CSMaP), New York City, New York
Masters thesis [J4] with Dr. Joshua Tucker

Social Justice Lab, New York City, New York
Masters thesis [J4] with Dr. John Jost

WORKING EXPERIENCE

Observatory on Social Media (OSoMe), Bloomington, Indiana
Research Assistant, *Superspreaders project w. Dr. Filippo Menczer* 2020–current
Research Assistant, *CoVaxxy project w. Dr. Filippo Menczer* 2020

Princeton University, Princeton, New Jersey
Research Assistant, *Under Dr. Andrew Guess* Summer 2020

Wavemaker, New York City
Managing Media Strategist, *Altice, North America* Summer 2018

MEC Global, New York City
Senior Media Planner and Managing Media Strategist, *Chevron, Global* 2013–2015
Associate Media Planner and Senior Media Planner, *Citibank, Global* 2012–2013

TEACHING EXPERIENCE

Indiana University, IN, USA
Guest lecturer, *Social Media Theory and Practice (MSCH-B 360)* Spring 2024

Assistant Instructor, Network Science (INFO-I 606)	Spring 2024
Guest lecturer, Social Media Manipulation 101 (INFO-T 100)	Fall 2022
Guest lecturer, Computer and Information Ethics (INFO-I 453)	Fall 2021

ADVISING **Undergraduate students**
 Ashley Ziegler (IU, Undergraduate Research Opportunity in Computing) Spring 2023

SERVICE **Guest Editor**
 EPJ Data Science: Special Issue on Computational Approaches for Cyber Social Threats (2023);

Journal Reviewer
 Human Communications Research (2023); PLOS One (2023); Journal of Medical and Internet Research (2023); Journal of Medical and Internet Research: Formative Research (2022); Media and Communication (2022); Online Social Networks and Media (2022); Journal of Medical and Internet Research: Infodemiology (2021);

Speaker Series Organizer
 OSoMe *Awesome Speakers* (Spring 2023–Spring 2024);

Workshop Organizer
 International Workshop on Cyber Social Threats (CySoc) — ICWSM (2024), The Web Conference (2023), ICWSM (2022);

Conference Reviewer
 International Conference on Computational Social Science (IC2S2) (2024); The Web Conference (2024); International Conference on Web and Social Media (2021–2024);

Workshop Reviewer
 Social Media Sway @ ASONAM (2024); MEDIATE @ ICWSM (2023);

Invited Speaker
 Misinformation in Science and Society (MISS), YouTube channel 2022
 Superheroes of Science, Podcast 2022

Student Government Representative
 Informatics (Ph.D.), Indiana University 2020

IN THE PRESS **Selected Media Coverage**

- Identifying and characterizing superspreaders of low-credibility content on Twitter [J1]
ABC (Australian Broadcast Corporation; May 2024); IFL Science (May 2024);
- Top FIBers [J1]
Just Security (Mar 2024); IMAGINE IU Magazine (Nov 2023); Indiana WISH-TV (June 2023); The Times of India (June 2023);
- One Year of COVID-19 Vaccine Misinformation on Twitter [J2]
AP News (October 2023); Indiana Newsdesk (March 2023);
- CoVaxxy [C2]
New York Times Magazine (May 2022); Axios (May 2021); AP News (Dec. 2021);
- Online misinformation is linked to early COVID-19 vaccination hesitancy and refusal [J3]
il Post (Nov. 2023; Italian); Slate Magazine (Apr. 2022); Time (May 2022); Tech Policy Press (Apr. 2022);

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