Przemyslaw A. Grabowicz

Homepage, Google Scholar, LinkedIn, Blog

Research Assistant Professor of Computer Science
Manning College of Information and Computer Sciences
University of Massachusetts Amherst (UMass Amherst)

Languages: Polish (native), English (fluent), Spanish (very good), German (basic)

Areas of expertise

Responsible AI • Computational social science • Social media • Data science • Causality

Employment history

2019–present — Research Assistant Professor of Computer Science, Manning College of Information and Computer Sciences, University of Massachusetts Amherst, USA
Head of Socially Intelligent Media and Systems (SIMS) lab
Chair of the EQUATE initiative

2013–2018 — Postdoctoral Fellow at the Max Planck Institute for Software Systems, Saarbrücken, Germany
Mentor: Dr. Krishna P. Gummadi

2008–2013 — Research Assistant at the Institute for Cross-Disciplinary Physics and Complex Systems, Palma de Mallorca, Spain

2012 — Research Intern at Yahoo! Research, Barcelona, Spain (6.5 months)

2011 — Research Intern at Indiana University School of Informatics and Computing, Bloomington, USA (4 months)

2010 — Research Intern at Universidad Carlos III, Madrid, Spain (3.5 months)

Education

Jan. 2014 — PhD in Interdisciplinary Physics, University of Balearic Islands, Spain
Grade: Cum Laude
Thesis title: Complex networks approach to modeling online social systems: The emergence of computational social science
Advisors: Dr. José Ramasco and Dr. Víctor Martinez Eguíluz

July 2008 — MSc in Engineering in Applied Physics, Warsaw University of Technology, Poland
Grade: Cum Laude
Thesis title: Phase transitions in exponential random graph models
Advisor: Dr. Agata Fronczak

Professional training

May 2016 — Machine Learning Summer School (MLSS), Cadiz, Spain.
Admission via a competitive selection process

Research funding

2024–2026 — Arnold O. Beckman Research Award from The Campus Research Board of the University of Illinois Urbana-Champaign ($30k)
An Experimental Study of the Effects of Exposure to Biased Polls on Social Media

PI: JungHwan Yang, co-PI (informal): P.A. Grabowicz

2024–2026 NSF SaTC: CORE: Small ($0.4M)

Identifying the Demographic Representativeness of Social Media Polls

PI: P.A. Grabowicz, co-PIs: JungHwan Yang, Filippo Menczer, Brendan O'Connor

2023–2024 Interdisciplinary Research Grant from UMass Amherst (∼ $100K equivalent)

Analyzing cross-country bias in news coverage of international conflicts and disasters

PI: P.A. Grabowicz, co-PIs: Paul Musgrave, Brendan O'Connor, Ethan Zuckerman

2023–2024 Interdisciplinary Research Grant from UMass Amherst (∼ $100K equivalent)

Political misinformation and disinformation through social media biases

PI: P.A. Grabowicz, co-PIs: Monideepa Tarafgar, Jennifer Lundquist, Anthony Paik, Mattia Samory, JungHwan Yang

2020–2023 DARPA's SAIL-ON program ($1.9M)

Continuous Iterative Modeling and Repair in Response to Novelty

PI: David Jensen, senior personnel: P.A. Grabowicz

2020–2022 Volkswagen Foundation: International Research in Computational Social Sciences (€120K)

Agendas and Frames in a Global Pandemic: Evolution of Cross-country Media Coverage

PI: P.A. Grabowicz, Scott Hale, David Jurgens, Fabian Flöck (Scott Hale and me led the project)

2017–2022 Volkswagen Foundation: International Research in Computational Social Sciences (€850K)

Current Affairs 2.0: Agenda Setting in the European Union

PI: P.A. Grabowicz, Scott Hale, David Jurgens, Fabian Flöck (I led the project with Scott Hale)

2009–2013 CSIC JAE Predoc fellowship (∼ €100K)

Applications of complex networks in collective systems studies

PI: P.A. Grabowicz

Awards and prizes

2019 Best paper with poster presentation award, The Web Conference (WWW)

Demographic Inference and Representative Population Estimates from Multilingual Social Media Data

2013 WICI Data Challenge main prize, University of Waterloo ($10K)

Fast Visualization of Relevant Portions of Large Dynamic Networks

2004–2008 Mieczyslaw Krol scholarship, Warsaw University of Technology (30K PLN)

2004–2008 Scholarship for outstanding student performance, Warsaw University of Technology (30K PLN)

Publications

Note 1: To every publication I co-authored I contributed at minimum multiple pages of text and formulas or a significant self-contained piece of code and the results of its execution.

Note 2: I did not publish in 2018 due to parental leave following the birth of my first child, combined with overseeing the reconstruction of my partially disabled sister's residence. Following the tragic loss of our parents, I have taken on the responsibility of caring for my sister.

Legend:
* – most important publications,
† – equal contribution,
short – short paper, typically 5 pages double column.

Peer-reviewed publications in computer science proceedings

2024 * (15) Xi Chen, S. Hale, D. Jurgens, M. Samory, E. Zuckerman, P.A. Grabowicz, *Global News Synchrony and Diversity During the Start of the COVID-19 Pandemic*, The Web Conference

(WebConf), link

Importance: The first study explaining global news synchrony and diversity of 124 countries. We introduce a computational methodology for analyzing millions of news articles that combines a transformer model (a deep learning architecture) with network science and information theory techniques. I aim to use and further develop this methodology to study global news synchrony and biases in news coverage across long time periods of years.

2023 (14) P.A. Grabowicz†, N. Perello†, K. Takatsu, *Learning from Discriminatory Training Data*, AAAI/ACM Conference on Artificial Intelligence, Ethics, and Society (AIES), 2023, link

2022 * (13) P.A. Grabowicz, N. Perello, A. Mishra, *Marrying Fairness and Explainability in Supervised Learning*, ACM Conference on Fairness, Accountability, and Transparency (ACM FAccT), 2022, arxiv

Importance: The manuscript introduces an accountability framework that uses AI explainability techniques, including a novel causal measure of input influence, to ensure fairness in AI systems in accordance with legal provisions. The publication led to a series of blog posts and a proposal for an AI accountability policy.

2022 (12) Xi Chen, A. Zeynali, C.Q. Camargo, F. Flöck, D. Gaffey, P.A. Grabowicz, S. Hale, D. Jurgens, and M. Samory, *SemEval-2022 Task 8: Multilingual news article similarity*, The Annual Conference of the North American Chapter of the Association for Computational Linguistics (NAACL), codalab link

2021 short (11) A. Mishra, N. Perello, P.A. Grabowicz, *Towards Fair and Explainable Supervised Learning*, International Conference on Machine Learning (ICML), Workshop on Socially Responsible Machine Learning, 2021, pdf

2021 * (10) T. E. Boult, P.A. Grabowicz, D. S. Prijatelj, R. Stern, L. Holder, J. Alspector, M. Jafarzadeh, T. Ahmad, A. R. Dhamija, C. Li, S. Cruz, A. Shrivastava, C. Vondrick, W. J. Scheirer, *Towards a Unifying Framework for Formal Theories of Novelty*, The AAAI Conference on Artificial Intelligence (AAAI), arxiv

Importance: The first formal framework for open-world learning. I envision applying open-world learning techniques to identify news events and emerging societal issues based on data streams from social media and news media.

2019 * (9) Z. Wang, S. Hale, D. Ifeoluwa Adelani, P.A. Grabowicz, T. Hartman, F. Flöck and D. Jurgens, *Demographic Inference and Representative Population Estimates from Multilingual Social Media Data*, The Web Conference (WebConf), arxiv

Importance: The work develops and applies a demographic classifier and poststratification methods. I developed the poststratification part of this paper (3.5 pages). I apply and develop the proposed methods to mine public opinion from tens of thousands of political polls. My lab pioneers methods for collections of biased polls with demographic crosstabs.

2017 (8) J. Proskurnia, P.A. Grabowicz, R. Kobayashi, C. Castillo, P. Cudre-Mauroux, K. Aberer, *Predicting the Success of Online Petitions Leveraging Multidimensional Time-Series*, The World Wide Web Conference (WWW), pdf

2016 (7) P.A. Grabowicz, N. Ganguly, K. Gummadi, *Distinguishing between Topical and Non-topical Information Diffusion Mechanisms in Social Media*, The International AAAI Conference on Web and Social Media (ICWSM), link

2016 short (6) P.A. Grabowicz, M. Babaei, J.Kulshrestha, K. Gummadi, I.Weber, *The Road to Popularity: the Dilution of Growing Audience on Twitter*, The International AAAI Conference on Web and Social Media (ICWSM), link

2016 (5) M. Babaei†, P.A. Grabowicz†, I. Valera, K.P. Gummadi, M. Gomez-Rodriguez, *On the Efficiency of the Information Networks in Social Media*, The ACM International Conference on Web Search and Data Mining (WSDM), pdf

2015 short (4) P.A. Grabowicz, N. Ganguly, K.P. Gummadi, *Microscopic Description and Prediction of Information Diffusion in Social Media: Quantifying the Impact of Topical Interests*, The World Wide Web Conference (WWW) Companion, pdf

2015 (3) M. Babaei, P.A. Grabowicz, I. Valera, M. Gomez-Rodriguez, *On the Users' Efficiency in the Twitter Information Network*, The International AAAI Conference on Web and Social Media (ICWSM), pdf

2013 (2) L. Chiarandini†, P.A. Grabowicz†, M. Trevisiol, A. Jaimes, *Leveraging Browsing Patterns for Topic Discovery and Photostream Recommendation*, The International AAAI Conference on Web and Social Media (ICWSM), pdf

2013 (1) P.A. Grabowicz, L.M. Aiello, V.M. Eguiluz, A. Jaimes, *Distinguishing Topical and Social Groups Based on Common Identity and Bond Theory*, The ACM International Conference on Web Search and Data Mining (WSDM), pdf

Journals[1]

2024 * short (12) C. Bagchi, F. Menczer, J. Lundquist, M. Tarafdar, A. Paik, and P.A. Grabowicz, *Social media algorithms can curb misinformation, but do they?*, Science (eLetter), pdf

Importance: This Science eLetter puts in question a conclusion of a prior publication in Science suggesting that Facebook's news feed algorithm is much better at curbing misinformation than a reverse chronological news feed. The implications of our eLetter were discussed in this editorial and article in Science, and in news articles in WSJ and FAZ.

2024 * (11) S. Scarano, V. Vasudevan, M. Samory, K. Yang, J. Yang, P. Grabowicz, *Election Polls on Social Media: Prevalence, Biases, and Voter Fraud Beliefs*, The International AAAI Conference on Web and Social Media (ICWSM), arxiv

Importance: The first study of social media polls. More than 100,000 biased polls related to the 2020 U.S. presidential election were published on Twitter. Our results suggest that polls were used for campaigning and astroturfing. Thousands of such polls explicitly questioned traditional polls and spread election fraud beliefs. In future, we will study whether biased political polls on X reinforce voter fraud beliefs and mine public opinion using AI-supported poststratification techniques.

2024 (10) C. Bagchi, E. Malmi, P.A. Grabowicz, *Effects of Research Paper Promotion via ArXiv and X*, The International AAAI Conference on Web and Social Media (ICWSM), arxiv

2024 (9) S. Scarano, V. Vasudevan, M. Samory, J. Yang, P. Grabowicz, *Analyzing Support for U.S. Presidential Candidates in Social Polls*, Journal of Quantitative Description: Digital Media (JQD:DM, joint with ICWSM), pdf

2024 (8) Xi Chen, M. Samory, S. Hale, D. Jurgens, P. Grabowicz, *A Multilingual Similarity Dataset for News Article Frame*, The International AAAI Conference on Web and Social Media (ICWSM), pdf

[1] In 2019, ICWSM became a journal with a full revise and resubmit (R&R) process and rolling submissions.

2020 (7) D.I. Adelani, R. Kobayashi, I. Weber, P.A. Grabowicz, *Estimating community feedback effect on topic choice in social media with predictive modeling*, EPJ Data Science, 9, 25 link

2016 (6) C.A. Davis, G.L. Ciampaglia, L.M. Aiello, K. Chung, M.D. Conover, E. Ferrara, A. Flammini, G. Fox, X. Gao, B. Goncalves, P.A. Grabowicz, K. Hong, P. Hui, S. McCaulay, K. McKelvey, M.R. Meiss, S. Patil, C. Peli Kankanamalage, V. Pentchev, J. Qiu, J. Ratkiewicz, A. Rudnick, B. Serrette, P. Shiralkar, O. Varol, L. Weng, T. Wu, AJ Younge, F. Menczer, *OSoMe: The IUNI observatory on social media*, PeerJ Computer Science 2:e87 link

2014 (5) P.A. Grabowicz, J.J. Ramasco, B. Goncalves, V.M. Eguiluz, *Entangling mobility and interactions in social media*, PLoS ONE 9(3): e92196, link

2014 (4) P.A. Grabowicz, L.M. Aiello, F. Menczer, *Fast filtering and animation of large dynamic networks*, EPJ Data Science, 3(1), 27, link

2014 (3) D. Martin-Borregon, L.M. Aiello, P.A. Grabowicz, A. Jaimes, R. Baeza-Yates, *Characterization of online groups along space, time, and social dimensions*, EPJ Data Science, 3(1), 8, 2014, link

2012 (2) P.A. Grabowicz, J.J. Ramasco, E. Moro, J.M. Pujol, V.M. Eguiluz, *Social Features of Online Networks: The Strength of Intermediary Ties in Online Social Media*, PLoS ONE 7(1): e29358, link

2012 (1) P.A. Grabowicz, V.M. Eguiluz, *Heterogeneity shapes groups growth in social online communities*, EPL 97 28002, link

Books and edited volumes

2023 (2) P.A. Grabowicz, C. Pereyda, K. Clary, R. Stern, T.E. Boult, D.D. Jensen, L. B. Holder, Chapter *Novelty in 2D CartPole Domain* in the edited volume *A Unifying Framework for Formal Theories of Novelty*, Springer

2012 (1) P.A. Grabowicz, J.J. Ramasco, V.M. Eguiluz, Chapter *Dynamics in online social networks* in the edited volume *Time-Varying Networks*, Springer, link

Public policy white papers and position papers

2023 short (3) N. Perello, P.A. Grabowicz, *Fair machine learning post affirmative action*, ACM SIGCAS Computers and Society (an invited commentary, to appear)

2023 (2) P.A. Grabowicz, N. Perello, Y. Zick, *Towards an AI Accountability Policy*, Comment on FR Doc # 2023-07776 Posted by the National Telecommunications and Information Administration, planned submission to ACM Conference on Fairness, Accountability, and Transparency (ACM FAccT) or AAAI/ACM Conference on AI, Ethics, and Society, pdf

2017 (1) P.A. Grabowicz, *Open-source Web 2.0 System for the European Open Science Cloud* , Letter to the High Level Expert Group (HLEG) of the European Open Science Cloud (EOSC), link

Peer-reviewed extended abstracts in computational social science

2024 (13) C. Bagchi, E. Malmi, P.A. Grabowicz, *Effects of Research Paper Promotion via ArXiv and X*, International Conference on Computational Social Science (IC2S2)

2024 (12) S. Scarano, V. Vasudevan, M. Samory, K. Yang, J. Yang, P. Grabowicz, *Election Polls on Social Media: Prevalence, Biases, and Voter Fraud Beliefs*, International Conference on Computational Social Science (IC2S2)

2024 (11) Xi Chen, S. Hale, D. Jurgens, M. Samory, E. Zuckerman, P.A. Grabowicz, *Global News Synchrony and Diversity During the Start of the COVID-19 Pandemic* International Conference on Computational Social Science (IC2S2)

2024 (10) S. Scarano, V. Vasudevan, M. Samory, J. Yang, P. Grabowicz, *Can Social polls be an accurate source of public opinion?: Correcting Biases of Twitter polls using post-stratification methods*, Midwest Political Science Association Annual Conference (MPSA)

2021 (9) D. Adelani, R. Kobayashi, I. Weber and P.A. Grabowicz, *Estimating Community Feedback Effect on Topic Choice in Social Media*, International Conference on Computational Social Science (IC2S2)

2021 (8) P.A. Grabowicz and N. Perello, *Resilience of Supervised Learning Algorithms to Discriminatory Poisoning of Training Data*, International Conference on Computational Social Science (IC2S2)

2018 (7) Z. Wang, S. Hale, D. Ifeoluwa Adelani, P.A. Grabowicz, T. Hartman, F. Flöck and D. Jurgens, *Agendas on Social Media: Inferring Policy Attention from Non-representative Data*, International Conference on Computational Social Science (IC2S2)

2017 (6) J. Park, M. Babaei, P.A. Grabowicz, K. Gummadi and Sue Moon, *An Analysis of Sponsored Content on Twitter*, International Conference on Computational Social Science (IC2S2)

2017 (5) J. Proskurnia, P.A. Grabowicz, R. Kobayashi, C. Castillo, P. Cudre-Mauroux and K. Aberer, *Predicting the Success of Online Petitions Leveraging Multidimensional Time-Series*, International Conference on Computational Social Science (IC2S2)

2016 (4) P.A. Grabowicz, M. Babaei, J. Kulshrestha, K. Gummadi and I. Weber, *The Road to Popularity: the Dilution of Growing Audience on Twitter*, International Conference on Computational Social Science (IC2S2)

2016 (3) P.A. Grabowicz, F. Romero Ferrero, T. Lins, F. Benevenuto, G. Polavieja and Krishna Gummadi, *An Experimental Study of Opinion Influenceability*, International Conference on Computational Social Science (IC2S2)

2015 (2) P.A. Grabowicz, N. Ganguly and K. Gummadi, *Microscopic description of information diffusion*, International Conference on Computational Social Science (IC2S2)

2015 (1) P.A. Grabowicz, F. Romero Ferrero, T. Lins, G. Polavieja, F. Benevenuto and K. Gummadi, *An experimental study of social opinion manipulation*, International Conference on Computational Social Science (IC2S2)

In preparation

2024 (4) N. Perello, P.A. Grabowicz, Y. Zick, *Discrimination Induced by Algorithmic Recourse Constraints*, submission to AIES

2024 (3) P.A. Grabowicz, H. Snehi, N. Perello, Y. Zick, E. Zuckerman *Towards an AI Accountability Policy*

2024 (2) C. Pereyda, L. Holder, J. Renz, S. Mohan, T.E. Boult, P. Grabowicz, W. Piotrowski, C. Xue, K. Clary, *Evaluating Adaptability Through Novel Domain Shifts*, submission to the International Conference on Autonomous Agents and Multiagent Systems (AAMAS)

2024 (1) P.A. Grabowicz, E.J. Kildebeck, R.J. Steininger, D.V. Olivenca, David J. Musliner, K. Clary, C.I. Pereyda, T.E. Boult, L. Holder, D.D. Jensen, *Adaptation and Resilience to Basic Novelty Categories in Open-World Learning*

Preprints

2020 (2) P.A. Grabowicz, F. Romero-Ferrero, T. Lins, F. Benevenuto, K.P. Gummadi, G.G. de Polavieja, *Bayesian Social Influence in the Online Realm*, link

2008 (1) D. Stauffer, P.A. Grabowicz, J. A. Hołyst, *Opinion Dynamics with Hopfield Neural Networks*, link

Peer-reviewed industry and demo papers

2012 (2) P.A. Grabowicz, L. Chiarandini, M. Trevisiol, A. Jaimes, *Browsing and Recommendation of Photostreams*, Yahoo! TechPulse 2012

2012 (1) P.A. Grabowicz, L.M. Aiello, V.M. Eguiluz, A. Jaimes, *Distinguishing Topical and Social Groups Based on Common Identity and Bond Theory*, Yahoo! TechPulse 2012

Teaching and advising

Courses taught

2022, 2023 Graduate course on Responsible Artificial Intelligence

Responsibilities: lectures, assignments, quizzes, final projects

Topics: model generalization, dataset shifts, open-world learning, fairness, explainability, transparency causality.

Textbooks: multiple sources, including my own research

Learning Management Systems: Piazza, Moodle, Gradescope, Echo360, Zoom

2021 Graduate seminar on Equitable and Explainable Artificial Intelligence

Responsibilities: introductory lectures and overall organization

Topics: fairness, legal systems, causality, and explainability in machine learning.

Textbook: https://fairmlbook.org.

Learning Management Systems: Piazza, Zoom

2019 Graduate seminar on Equitable Algorithms and Systems

Responsibilities: introductory lectures and overall organization

Topics: fairness, transparency, and explainability in machine learning

Learning Management Systems: Piazza

2016 Graduate course on Social Media Analysis

Responsibilities: lectures, tutorials, assignments, final exam

Topics: statistical classification, tf-idf, sentiment analysis, dimensionality reduction, mixture models, topic models

Textbook: https://web.stanford.edu/ jurafsky/slp3.

Student evaluation: 1.2/5 (less is better)

Teaching interests

- (Responsible) Artificial Intelligence
- Machine Learning
- Data Science
- Data Mining
- Computational Social Science
- Network Science
- Causality
- Natural Language Processing
- Information Retrieval (introductory level)

PhD advisees

2023-now Chhandak Bagchi
2023-now Andrew Yuan
2023-now Justin Clarke, co-advised with David Jensen
2020-now Nicholas Perello, co-advised with Yair Zick
2019-now Xi Chen
2017-2018 David Ifeoluwa Adelani – now an Assistant Professor at McGill School of Computer Science and a Core Academic Member at MILA

MS advisees

2024-now Jash Mitesh Dalal
2024-now Vishal Kalakonnavar
2024-now Mayank Bumb
2023-now Vijayalakshmi Vasudevan
2021-2024 Stephen Scarano – graduated recently
2020-2021 Aarshee Mishra – now a Software Engineer at Apple

Other past advisees (advised in the past for less than a year)

- Kenta Takatsu – now a PhD student at Carnegie Mellon University, USA
- Ali Zeynali – now a PhD student at UMass Amherst, USA
- Kaleigh Clary – now a PhD student at UMass Amherst, USA
- Mahmoudreza Babaei – now a postdoc at the Max Planck Institute for Human Development
- Julia Proskurnia – now a Software Engineer at Google, Zurich, Switzerland
- Luca Chiarandini – now a Software Engineer at Google, California, U.S.A.
- Jaimie Yejean Park – now Data Scientist at Samsung, South Korea
- Francisco Romero-Ferrero – now Data Scientist at Veriff, Spain
- Eric Malmi – now Research Scientist at Google Research, Zurich, Switzerland
- Komal Agrawal – now a Software Engineer at Facebook, Zurich, Switzerland
- Theo Silva Lins – now a Professor at UFOP, Brazil
- Ritvik Shrivastava – now ML Engineer at Cisco, California, U.S.A.

Broader impact and outreach

Online software systems

2018 Multimodal, multiattribute, multilingual (M3) demographic inference (demo)

2013 The back end of a photo recommender system for Flickr (white paper)

2011 The back end and front end allowing users of Truthy to create on-demand visualizations of memes spreading in Twitter (source code)

Outreach

2024 Voices of Data Science

Opening talk.

2022 Tech in the News

We developed and organized a series of faculty talks about technology targeting smart non-specialists.

Press releases

2024 Our eLetter in Science received wide media coverage from Science, WSJ, Haaretz, and other media outlets!

2024 Coverage by various media outlets, including Tech Policy Press, El País, Fox network, and Phys.org of our research on election polls on social media. The full list of news coverage is at socialpolls.org.

2023 BusinessWest, *AI Promises To Impact The Workforce In Unexpected Ways*, link.

2023 EQUATE blog, *Towards an AI Accountability Policy*, link.

2023 UMass Amherst, *Bridging Ethics and Technology in a Fast-changing World*, link.

2022 EQUATE blog, *How to train models that do not propagate discrimination?*, link.

2011-now Hundreds of news articles related to *the IUNI Observatory on Social Media* in multiple news outlets (e.g., ABC News, CNBC, CNN, NYT, WSJ, WaPo, Wired), link.

2013 El Mundo, *El oráculo de los bytes*, link.

2011 El Mundo, *Los entresijos de Twitter*, link.

Internal professional service

Committee chair

2022-now EQUATE initiative (Equity, Accountability, Trust, and Explainability) at UMass Amherst

Responsibilities: organization of relevant events, blog, website, and outreach (including to the U.S. federal administration)

Committee member

- Faculty Hiring Committee for Tenure Track Assistant Professor in Data Science, Associate Director for Data Science Center, and multiple Opportunity Hires
- Graduate Portfolio Committee (x2)
- Graduate Admissions Committee (x2)
- Student Events

External professional service

Area chair of conferences

2021 The European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases (ECML-PKDD)

2020 The European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases (ECML-PKDD)

Senior program committee of conferences

2023 The Web and Society track of The Web Conference (Web Conf'23)

Reviewer for journals

Note: I pledged not to review for Elsevier journals by signing the Cost of Knowledge open letter.

- Nature Human Behaviour
- Journal of the Royal Society Interface
- Journal of Artificial Intelligence Research (JAIR)
- Social Network Analysis and Mining (SNAM)
- PLoS ONE
- Scientific Reports
- Network Science
- Europhysics Letters (EPL)
- Journal of Statistical Mechanics: Theory and Experiment (JSTAT)
- Entropy
- Advances in Complex Systems (ACS)
- Transactions on the Web (TWEB)
- Transactions on Knowledge and Data Engineering (TKDE)
- Applied Network Science (APNS)
- Information Systems Management
- Future Internet

Program committee of conferences

2015-2024 The International Conference on Computational Social Science (IC2S2)
2017-2021 The Web and Society track of The Web Conference (WebConf, former WWW)
2017-2021 The International Conference on Complex Networks and their Applications (Complex Networks)
2018-2021 The International AAAI Conference on Web and Social Media (ICWSM)
2016-2020 The International ACM Conference on Web Science (WebSci)
2017-2019 The European Symposium on Societal Challenges in Computational Social Science (EuroCSS)
2017 The International School and Conference on Network Science (NetSci)
2015 The IEEE/ACM International Conference on Advances in Social Networks Analysis and Mining (ASONAM)
2014-2017 The International Conference on Social Informatics (SocInfo)

External reviewer for conferences

2016 5th International World Wide Web Conference (WWW), Montreal, Canada
2016 ACM SIGKDD Conference on Knowledge Discovery and Data Mining, San Francisco, USA (SIGKDD)

Program committee of workshops

2016 Workshop on Computational Approaches to Social Modeling (ChASM), Bellevue, USA
2015-2016 Computational Social Science Winter Symposium, Cologne, Germany
2015-2016 Workshop on Social News On the Web (SNOW)

Local organizer

2008 International Conference on Economics Science with Heterogeneous Interacting Agents, Warsaw, Poland.

Talks

Invited talks

2023 Responsible AI in the Natural Sciences, Carnegie Mellon University — talk, panel, summary slides.
2023 Computational Diversity Science Meeting, UMass Amherst.
2022 Tech in the News, UMass Amherst.
2022 31st International Joint Conference on Artificial Intelligence and the 25th European Conference

on Artificial Intelligence (IJCAI-ECAI 2022), Workshop of Angry Birds AI Competition (AIBIRDS), Vienna.

2021 30th International Joint Conference on Artificial Intelligence (IJCAI-21), Workshop of Angry Birds AI Competition (AIBIRDS), Montreal.

Contributed talks

2023 Artificial Intelligence, Ethics, and Society (AIES), Montreal, Canada; speaker Nicholas Perello.
2023 Computational Diversity Science Meeting, UMass Amherst, USA.
2022 FAccT, Seoul, South Korea; speaker Nicholas Perello.
2022 International Conference on Computational Social Science (IC2S2), Chicago, USA; speaker Xi Chen.
2022 Tech in the News, UMass Amherst, USA.
2021 Two talks at International Conference on Computational Social Science (IC2S2), virtual; speakers: me and David Adelani.
2019 Data Science Tea, UMass Amherst, USA.
2017 International Conference on Computational Social Science (IC2S2), Cologne, Germany.
2017 International World Wide Web Conference (WWW), Perth, Australia; speaker Julia Proskurnia.
2016 Computational Social Science Winter Symposium, Cologne, Germany.
2016 The International AAAI Conference on Web and Social Media, Cologne, Germany.
2015 Computational Social Science Winter Symposium, Cologne, Germany.
2015 International Conference on Computational Social Science (IC2S2), Helsinki, Finland.
2015 International World Wide Web Conference (WWW), Florence, Italy.
2013 Data Visualization and Analysis Symposium, Waterloo, Canada.
2013 The European Conferences on Complex Systems (ECCS), Barcelona, Spain.
2013 The International School and Conference on Network Science (NetSci), Copenhagen, Denmark.
2013 XXXIII Sunbelt Social Networks Conference of the INSNA, Hamburg, Germany.
2013 The ACM International Conference on Web Search and Data Mining (WSDM), Rome, Italy.
2010 ESF-COST Conference on Future Internet and Society: A Complex Systems Perspective, Acquafredda di Maratea, Italy.
2010 SOE sessions of DPG Spring Meeting, Regensburg, Germany.
2009 PATRES project workshop, Paris, France.

Computing and programming skills

- General-purpose languages: *C/C++, Python*
- Computing environments: *R, Mathematica, Matlab*
- Statistical analysis: *scipy, numpy, pandas, statsmodels*
- Fairness, explainability, causal inference: *aif360, fairlearn, tmle, SHAP*
- Machine learning and NLP: *scikit-learn, spaCy, NLTK, dlib, MALLET, Stanford TMT*
- Network analysis: *SNAP, igraph*
- Distributed computing: *Hadoop, Pig Latin*
- Plotting tools: *matplotlib, gnuplot, Grace*
- Shell scripting: *bash, awk, sed, jq, vi, tmux, screen, etc.*
- Relational detabases: *MySQL, PostgreSQL*
- Working environments/Operating systems: *Linux, Mac OS, Windows, Cygwin*