Ryan J. Gallagher

NETWORK SCIENCE ‖ COMMUNICATION ‖ SOCIAL MEDIA ‖ COMPUTATIONAL SOCIAL SCIENCE ‖ TEXT AS DATA

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Education ────────────────────────────

Northeastern University   *Boston, MA*

PH.D. NETWORK SCIENCE   *Sep. 2017 – May 2022 (Expected)*

Committee: Brooke Foucault Welles, David Lazer, David Smith, Sandra González-Bailón

University of Vermont   *Burlington, VT*

M.S. MATHEMATICS, *Outstanding Masters Thesis Honorable Mention*   *Aug. 2015 – May 2017*

Advisors: Christopher M. Danforth, Peter Sheridan Dodds

Graduate Certificate: Complex Systems

University of Connecticut   *Storrs, CT*

B.A. MATHEMATICS, *Summa Cum Laude*   *Aug. 2011 – May 2015*

Minor: Statistics

Professional Appointments ──────────────────

Research Assistant   *Boston, MA*

NETWORK SCIENCE INSTITUTE, NORTHEASTERN UNIVERSITY   *Aug. 2017 – PRESENT*

Graduate Student Affiliate   *Remote*

CENTER FOR INFORMATION, TECHNOLOGY, AND PUBLIC LIFE, UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL   *Aug. 2021 – PRESENT*

Core Data Science Intern   *Menlo Park, CA*

CORE DATA SCIENCE, FACEBOOK   *Sep. 2019 – Nov. 2019*

Visiting Research Assistant   *Los Angeles, CA*

INFORMATION SCIENCES INSTITUTE, UNIVERSITY OF SOUTHERN CALIFORNIA   *Jun. 2016/2017 – Aug. 2016/2017*

Research Assistant   *Burlington, VT*

VERMONT COMPLEX SYSTEMS CENTER, UNIVERSITY OF VERMONT   *Aug. 2015 – Aug. 2017*

Publications ───────────────────────────

PREPRINTS AND WORKING PAPERS

Say Their Names: Resurgence in Collective Attention Toward Black Victims of Fatal Police Violence Following the Death of George Floyd

HENRY WU, **RYAN J. GALLAGHER**, THAYER ALSHAABI, JANE L. ADAMS, JOSH R. MINOT, MICHAEL V. ARNOLD, BROOKE FOUCAULT WELLES, RANDALL HARP, PETER SHERIDAN DODDS, CHRISTOPHER M. DANFORTH. (2021). *arXiv preprint* IN SUBMISSION TO *Big Data & Society*.

Charting Network Maps of Discursive Terrains: How to Triangulate Information Pollution and Fractured Ecologies Online

RYAN J. GALLAGHER AND BROOKE FOUCAULT WELLES. (2021). *Working paper*.

The Core-Periphery Structure of Online Amplification

RYAN J. GALLAGHER AND BROOKE FOUCAULT WELLES. (2021). *Working paper*.

PEER-REVIEWED ARTICLES

Sustained Online Amplification of COVID-19 Elites in the United States

RYAN J. GALLAGHER, LARISSA DOROSHENKO, SARAH SHUGARS, DAVID LAZER, BROOKE FOUCAULT WELLES. (2020). *Social Media + Society*, 7(2).

Pandemics, Protests, and Publics: Demographic Activity and Engagement on Twitter in 2020

SARAH SHUGARS, ADINA GITOMER, STEFAN MCCABE, **RYAN J. GALLAGHER**, KENNETH JOSEPH, NIR GRINBERG, LARISSA DOROSHENKO, BROOKE FOUCAULT WELLES, DAVID LAZER. (2021). *Journal of Quantitative Description: Digital Media*, 1.

A Clarified Typology of Core-Periphery Structure in Networks

Ryan J. Gallagher, Jean-Gabriel Young, Brooke Foucault Welles. (2021). *Science Advances*, 7:eabc9800.

Generalized Word Shift Graphs: A Method for Visualizing and Explaining Pairwise Comparisons Between Texts

Ryan J. Gallagher, Morgan R. Frank, Lewis Mitchell, Aaron J. Schwartz, Andrew J. Reagan, Christopher M. Danforth, Peter Sheridan Dodds. (2021). *EPJ Data Science*, 10(4).

Who Says What with Whom: Using Bi-Spectral Clustering to Organize and Analyze Social Media Protest Networks

Kenneth Joseph, Ryan J. Gallagher, Brooke Foucault Welles. (2020). *Computational Communication Research*, 2(2):153-174.

Reclaiming Stigmatized Narratives: The Networked Disclosure Landscape of #MeToo

Ryan J. Gallagher, Elizabeth Stowell, Andrea G. Parker, Brooke Foucault Welles. (2019). *Proceedings of the ACM: Human-Computer Interaction (PACM: HCI)*, 3(CSCW). Best Paper Honorable Mention Award and frank Prize in Public Interest Communications finalist.

Divergent Discourse Between Protests and Counter-Protests: #BlackLivesMatter and #AllLivesMatter

Ryan J. Gallagher, Andrew J. Reagan, Christopher M. Danforth, Peter Sheridan Dodds. (2018). *PLOS One*, 13(4):e0195644.

Anchored Correlation Explanation: Topic Modeling with Minimal Domain Knowledge

Ryan J. Gallagher, Kyle Reing, David Kale, Greg Ver Steeg. (2017). *Transactions of the Association for Computational Linguistics (TACL)*. 5:529–542.

Non-Peer-Reviewed Reports

COVID-19 Fake News on Twitter

David Lazer, Damain J. Ruck, Alexi Quintana, Sarah Shugars, Kenneth Joseph, Nir Grinberg, Ryan J. Gallagher, Luke Horgan, Adina Gitomer, Aleszu Bajak, Matthew A. Baum, Katherine Ognyanova, Hong Quo, William R. Hobbs, Stefan McCabe, Jon Green. (2020). *The State of the Nation: A 50-State COVID-19 Survey* by the COVID-19 Consortium for Understanding the Public's Policy Preferences Across States.

Research Funding

Measuring Affective Dynamics in Polarized Publics and Counterpublics	*$1,580*
Co-PI, Northeastern University Lab for Text, Maps, and Networks Seedling Grant	*Nov. 2019*

Presentations

Invited Talks

The Network Structure of Online Amplification	*Online*
Network Structure Satellite Symposium: The Causes and Effects of Social Phenomena, Networks 2021	*Jun. 2021*
Word Shift Graphs: A General Method for Visualizing and Explaining Pairwise Comparisons Between Texts	*Online*
Data Stories 2021, Central European University	*May 2021*
The Network Structure of Online Amplification	*Online*
Michigan Interactive and Social Computing group, School of Information, University of Michigan	*Feb. 2021*
The Network Structure of Online Amplification	*Online*
Computer Science Seminar Series, Computer Science Department, Union College	*Feb. 2021*
Word Shift Graphs: A General Method for Visualizing and Explaining Pairwise Comparisons Between Texts	*Online*
Story Time, Computational Story Lab, University of Vermont	*Jul. 2020*
The Topic Topology of "Slacktivist" Networks	*Indianapolis, IN*
Information, Self-Organizing Dynamics and Synchronization on Networks Satellite Symposium, NetSci 2017	*Jun. 2017*

Panels

Creating Open Source Software as Part of an Academic Career	*Online*
Summer Institute in Computational Social Science (SICSS) Festival	*Jun. 2020*

Contributed Talks

Charting Network Maps of Discursive Terrains: How to Triangulate Information Pollution and Fractured Ecologies Online	*Online*
Networks 2021 (Joint NetSci and Sunbelt Conference)	*Jul. 2021*
Reclaiming Stigmatized Narratives: The Networked Disclosure Landscape of #MeToo	*Online*
International Conference on Computational Social Science (IC2S2) 2020, MIT	*Jul. 2020*
Diversity of Core-Periphery Structure in Real Networks	*Online*
Third Northeast Regional Conference on Complex Systems (NERCCS) 2020	*Apr. 2020*
Core-Periphery Decomposition of Online Social Protest Networks	*Montreal, QC*
Sunbelt 2019	*Jun. 2019*
The Networked Disclosure Landscape of #MeToo	*Burlington, VT*
NetSci 2019, University of Vermont	*May 2019*
Mischaracterization of Core-Periphery Structure in Complex Networks	*Burlington, VT*
NetSci 2019, University of Vermont	*May 2019*
Core-Periphery Decomposition of Networked Publics and Counterpublics	*Washington D.C.*
69th Annual International Communication Association (ICA) Conference	*May 2019*
Word Shift: A General Method for Visualizing and Explaining Pairwise Comparisons Between Texts	*Seattle, WA*
Text as Data 2018, University of Washington	*Sep. 2018*
Anchored Correlation Explanation: Topic Modeling with Minimal Domain Knowledge	*New Orleans, LA*
North American Chapter of the Association for Computational Linguistics (NAACL) 2018	*Jun. 2018*
Anchored Correlation Explanation: Topic Modeling with Minimal Domain Knowledge	*Princeton, NJ*
Text as Data 2017, Princeton University	*Oct. 2017*

Honors & Awards

Honors
2021	**Graduate Student Affiliate**, Center for Information, Technology, and Public Life (CITAP)	*Chapel Hill, NC*
2018	**Invited Participant**, Complex Networks Winter Workshop (CNWW)	*Québec City, QC*
2018	**Invited Participant**, Summer Institute in Computational Social Science (SICSS), Duke University	*Durham, NC*
2015	**Honorary Inductee**, Pi Mu Epsilon Mathematics Honor Society, University of Connecticut	*Storrs, CT*

Awards
2021	**frank Prize in Public Interest Communications**, Center for Public Interest Communications	*Gainesville, FL*
2019	**Best Paper Honorable Mention**, CSCW 2019, Association for Computing Machinery (ACM)	*Austin, TX*
2017	**Outstanding Masters Thesis Honorable Mention**, University of Vermont	*Burlington, VT*
2015	**Outstanding Presentation Award**, Mathematical Association of America, Joint Math Meeting 2015	*San Antonio, TX*

Scholarships
2017	**Nam Sang Kil Scholarship in Mathematics**, Department of Mathematics, University of Vermont	*Burlington, VT*
2014	**Bernard Sippin '52 Scholarship**, Department of Mathematics, University of Connecticut	*Storrs, CT*
2014	**Orange Scholarship**, The Homer Fund, Home Depot	*Storrs, CT*

Professional Service

Conferences, Institutes, and Workshops

Founder and Co-Organizer	*Online*
Networked Justice satellite symposium, Networks 2021	*Dec. 2020 – Jul. 2021*
Co-Organizer	*Boston, MA*
Summer Institute in Computational Social Science (SICSS) 2019 Partner Site	*Jun. 2018 – Dec. 2019*
Co-Chair	*Burlington, VT*
Satellites, Schools, and Posters, NetSci 2019	*Jun. 2018 – May 2019*
Co-Organizer	*Boston, MA*
Women's, Gender, and Sexuality Studies (WGSS) Symposium 2019: Women and Resilience	*Jun. 2018 – Mar. 2019*

Co-Organizer   *Boston, MA*
<small>Caucus for Women in Network Science (WiNS), Complenet 2018</small>   *Jan. 2018 – Mar. 2018*

Departmental Service

President   *Boston, MA*
<small>Network Science Graduate Student Association, Northeastern University</small>   *May 2019 – May 2021*

Graduate Student Representative   *Boston, MA*
<small>Admissions Committee, Network Science PhD Program, Northeastern University</small>   *Jan. 2020 – Apr. 2020*

Vice President   *Boston, MA*
<small>Network Science Graduate Student Association, Northeastern University</small>   *May 2018 – May 2019*

Organizer   *Boston, MA*
<small>Network Science Institute Journal Club, Northeastern University</small>   *Jan. 2018 – Dec. 2018*

Open Source Software

Core Developer   *Boston, MA*
<small>Word Shifterator: Python, Github.com/ryanjgallagher/shifterator</small>   *May 2018 – PRESENT*

Core Developer   *Los Angeles, CA*
<small>Anchored CorEx Topic Model: Python, Github.com/gregversteeg/corex_topic</small>   *Jun. 2017 – PRESENT*

Professional Organizations

NetSci	**Network Science Society**	*2017 – PRESENT*
ICA	**International Communication Association**	*2018 – PRESENT*
AoIR	**Association of Internet Researchers**	*2020 – PRESENT*
ACM	**Association for Computing Machinery**	*2020 – PRESENT*

Journal Peer Review

New Media & Society	Social Media + Society	The International Journal of Press/Politics
Nature Communications	Transactions of CHI	American Sociological Review
Mobilization	Journal of Complex Networks	SIGNS: Journal of Women in Culture and Society
PLOS One	Socius	

Conference Peer Review

International Communication Association (ICA)	International AAAI Conf. on Web and Social Media (ICWSM)
ACM Conf. on Human Factors in Computing Systems (CHI)	ACM Conf. on Computer-Supported Cooperative Work (CSCW)
ACM Web Science Conference (WebSci)	

Teaching

Instruction

Summer Institute in Computational Social Science Boston Partner Site   *Cambridge, MA*
<small>Massachusetts Institute of Technology</small>   *Jun. 2018*
Summer 2019

Fundamentals of Calculus I   *Burlington, VT*
<small>Department of Mathematics and Statistics, University of Vermont</small>   *Aug. 2016 – Dec. 2016*
Fall 2016 (Instructor of record)

Applications of Finite Math   *Burlington, VT*
<small>Department of Mathematics and Statistics, University of Vermont</small>   *Aug. 2015 – May 2015*
Fall 2015, Spring 2016 (Instructor of record)

Guest Lectures

Mesoscale Network Structures of Online Activism *Online*

MACHINE LEARNING AND SOCIETY, UNIVERSITY AT BUFFALO *Apr. 2021*

Class of Kenneth Joseph, Spring 2021

Comparing Text as Data with Word Shift Graphs *Online*

PRINCIPLES OF COMPLEX SYSTEMS VOL. 2, UNIVERSITY OF VERMONT *Apr. 2021*

Class of Peter Dodds, Spring 2021

Mesoscale Network Structures of Online Activism *Online*

COMMUNICATION AND SOCIAL NETWORKS, PURDUE UNIVERSITY *Mar. 2021*

Class of Jeremy Foote, Spring 2021

Text as Data and Sentiment Analysis *Online*

TURNING DATA INTO INSIGHT AND STORIES, PURDUE UNIVERSITY *Mar. 2021*

Class of Jeremy Foote, Spring 2021

Text as Data and Sentiment Analysis *Online*

QUANTITATIVE TEXT ANALYSIS, UNIVERSITY COLLEGE DUBLIN *Mar. 2021*

Class of Martijn Schoonvelde, Spring 2021

Text as Data and Computational Grounded Theory *Online*

INTRODUCTION TO QUALITATIVE METHODS, SCIENCES PO PARIS *Mar. 2021*

Class of Jen Schradie, Spring 2021

Mesoscale Network Structure and Stochastic Block Models *Online*

STRUCTURE AND DYNAMICS OF COMPLEX NETWORKS, CENTRAL EUROPEAN UNIVERSITY *Jan. 2021*

Class of Federico Battiston, Spring 2021

Mesoscale Network Structure and Stochastic Block Models *Online*

NETWORK SCIENCE & ANALYSIS, UNIVERSITY OF PITTSBURGH *Oct. 2020*

Class of Morgan Frank, Fall 2020

Research Ethics and Network Science *Online*

NETWORK SCIENCE INSTITUTE GRADUATE STUDENT BOOTCAMP 2019, NORTHEASTERN UNIVERSITY *Aug. 2020*

Organized by the Network Science Institute GSA, Fall 2020

TEACHING ASSISTANCE

Social Networks *Boston, MA*

COMMUNICATION STUDIES DEPARTMENT, NORTHEASTERN UNIVERSITY *Jan. 2020 – May 2020*

Class of Brooke Foucault Welles, Spring 2020

Principles of Complex Systems *Burlington, VT*

DEPARTMENT OF MATHEMATICS AND STATISTICS, UNIVERSITY OF VERMONT *Aug. 2016 – Dec. 2016*

Class of Peter Dodds, Fall 2016