

Ryan J. Gallagher

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

177 Huntington Ave., Boston, MA 02115

✉ ryanjgallag@gmail.com | 🏠 ryanjgallagher.github.io | 📧 ryanjgallagher | 📺 ryanjgallag | 🐦 ryanjgallag

Education

Northeastern University

Boston, MA

PH.D. NETWORK SCIENCE

Sep. 2017 – May 2022 (Expected)

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

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

Experience

Research Assistant

Boston, MA

NETWORK SCIENCE INSTITUTE, NORTHEASTERN UNIVERSITY

Aug. 2017 – 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

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 ADAMS, JOSH MINOT, MICHAEL ARNOLD, BROOKE FOUCAULT WELLES, RANDALL HARP, PETER SHERIDAN DODDS, CHRISTOPHER M. DANFORTH. (2021). *arXiv preprint*.

PEER-REVIEWED ARTICLES

Sustained Amplification of COVID-19 Elites in the United States

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

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). FORTHCOMING IN *Journal of Quantitative Description: Digital Media*.

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 SHREIDAN 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

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

SUNBELT 2019

Montreal, QC

Jun. 2019

The Networked Disclosure Landscape of #MeToo

NETSCI 2019, UNIVERSITY OF VERMONT

Burlington, VT

May 2019

Mischaracterization of Core-Periphery Structure in Complex Networks

NETSCI 2019, UNIVERSITY OF VERMONT

Burlington, VT

May 2019

Core-Periphery Decomposition of Networked Publics and Counterpublics

69TH ANNUAL INTERNATIONAL COMMUNICATION ASSOCIATION (ICA) CONFERENCE

Washington D.C.

May 2019

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

TEXT AS DATA 2018, UNIVERSITY OF WASHINGTON

Seattle, WA

Sep. 2018

Anchored Correlation Explanation: Topic Modeling with Minimal Domain Knowledge

NORTH AMERICAN CHAPTER OF THE ASSOCIATION FOR COMPUTATIONAL LINGUISTICS (NAACL) 2018

New Orleans, LA

Jun. 2018

Anchored Correlation Explanation: Topic Modeling with Minimal Domain Knowledge

TEXT AS DATA 2017, PRINCETON UNIVERSITY

Princeton, NJ

Oct. 2017

Honors & Awards

HONORS

- | | | |
|------|--|-----------------|
| 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

NETWORKED JUSTICE SATELLITE SYMPOSIUM, NETWORKS 2021

Online

Dec. 2020 – PRESENT

Co-Organizer

SUMMER INSTITUTE IN COMPUTATIONAL SOCIAL SCIENCE (SICSS) 2019 PARTNER SITE

Boston, MA

Jun. 2018 – Dec. 2019

Co-Chair

SATELLITES, SCHOOLS, AND POSTERS, NETSCI 2019

Burlington, VT

Jun. 2018 – May 2019

Co-Organizer

WOMEN'S, GENDER, AND SEXUALITY STUDIES (WGSS) SYMPOSIUM 2019: WOMEN AND RESILIENCE

Boston, MA

Jun. 2018 – Mar. 2019

Co-Organizer

CAUCUS FOR WOMEN IN NETWORK SCIENCE (WiNS), COMPLENET 2018

Boston, MA

Jan. 2018 – Mar. 2018

DEPARTMENTAL SERVICE

President

NETWORK SCIENCE GRADUATE STUDENT ASSOCIATION, NORTHEASTERN UNIVERSITY

Boston, MA

May 2019 – PRESENT

Graduate Student Representative

ADMISSIONS COMMITTEE, NETWORK SCIENCE PHD PROGRAM, NORTHEASTERN UNIVERSITY

Boston, MA

Jan. 2020 – Apr. 2020

Vice President

NETWORK SCIENCE GRADUATE STUDENT ASSOCIATION, NORTHEASTERN UNIVERSITY

Organizer

NETWORK SCIENCE INSTITUTE JOURNAL CLUB, NORTHEASTERN UNIVERSITY

Boston, MA

May 2018 – May 2019

Boston, MA

Jan. 2018 – Dec. 2018

OPEN SOURCE SOFTWARE

Core Developer

WORD SHIFTERATOR: PYTHON, GITHUB.COM/RYANJGALLAGHER/SHIFTERATOR

Boston, MA

May 2018 – PRESENT

Core Developer

ANCHORED COREX TOPIC MODEL: PYTHON, GITHUB.COM/GREGVERSTEEG/COREX_TOPIC

Los Angeles, CA

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

MASSACHUSETTS INSTITUTE OF TECHNOLOGY

Jun. 2018

Summer 2019

Fundamentals of Calculus I

Burlington, VT

DEPARTMENT OF MATHEMATICS AND STATISTICS, UNIVERSITY OF VERMONT

Aug. 2016 – Dec. 2016

Fall 2016

Applications of Finite Math

Burlington, VT

DEPARTMENT OF MATHEMATICS AND STATISTICS, UNIVERSITY OF VERMONT

Aug. 2015 – May 2015

Fall 2015, Spring 2016

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

TURNING DATA INTO INSIGHT AND STORIES, PURDUE UNIVERSITY

Class of Jeremy Foote, Spring 2021

Online

Mar. 2021

Text as Data and Sentiment Analysis

QUANTITATIVE TEXT ANALYSIS, UNIVERSITY COLLEGE DUBLIN

Class of Martijn Schoonvelde, Spring 2021

Online

Mar. 2021

Text as Data and Computational Grounded Theory

INTRODUCTION TO QUALITATIVE METHODS, SCIENCES PO PARIS

Class of Jen Schradie, Spring 2021

Online

Mar. 2021

Mesoscale Network Structure and Stochastic Block Models

STRUCTURE AND DYNAMICS OF COMPLEX NETWORKS, CENTRAL EUROPEAN UNIVERSITY

Class of Federico Battiston, Spring 2021

Online

Jan. 2021

Mesoscale Network Structure and Stochastic Block Models

NETWORK SCIENCE & ANALYSIS, UNIVERSITY OF PITTSBURGH

Class of Morgan Frank, Fall 2020

Online

Oct. 2020

Research Ethics and Network Science

NETWORK SCIENCE INSTITUTE GRADUATE STUDENT BOOTCAMP 2019, NORTHEASTERN UNIVERSITY

Organized by the Network Science Institute GSA, Fall 2020

Online

Aug. 2020

TEACHING ASSISTANCE

Social Networks

COMMUNICATION STUDIES DEPARTMENT, NORTHEASTERN UNIVERSITY

Class of Brooke Foucault Welles, Spring 2020

Boston, MA

Jan. 2020 – May 2020

Principles of Complex Systems

DEPARTMENT OF MATHEMATICS AND STATISTICS, UNIVERSITY OF VERMONT

Class of Peter Dodds, Fall 2016

Burlington, VT

Aug. 2016 – Dec. 2016