

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, *Outstanding Graduate Student Award in Research*

Sep. 2017–Aug. 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

Engineering Intern

Boston, MA

DATA SCIENCE - APPLIED SCIENCES, TWITTER

May 2022–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

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* UNDER REVISION AT *Big Data & Society*.

PEER-REVIEWED ARTICLES

(Mis)alignment Between Stances Expressed in Social Media Data and Public Opinion Surveys

KENNETH JOSEPH, SARAH SHUGARS, RYAN J. GALLAGHER, JON GREEN, ALEXI QUINTANA MATHÉ, DAVID LAZER. (2021). IN PROCEEDINGS OF *The 2021 Conference on Empirical Methods in Natural Language Processing (EMNLP)*.

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

RYAN J. GALLAGHER, LARISSA DOROSHENKO, SARAH SHUGARS, DAVID LAZER, BROOKE FOUCAULT WELLES. (2021). *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

Co-PI, NORTHEASTERN UNIVERSITY LAB FOR TEXT, MAPS, AND NETWORKS SEEDLING GRANT

\$1,580

Nov. 2019

Presentations

INVITED TALKS

The Network Structure of Online Amplification

NETWORK STRUCTURE SATELLITE SYMPOSIUM: THE CAUSES AND EFFECTS OF SOCIAL PHENOMENA, NETWORKS 2021

Online

Jun. 2021

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

DATA STORIES 2021, CENTRAL EUROPEAN UNIVERSITY

Online

May 2021

The Network Structure of Online Amplification

MICHIGAN INTERACTIVE AND SOCIAL COMPUTING GROUP, SCHOOL OF INFORMATION, UNIVERSITY OF MICHIGAN

Online

Feb. 2021

The Network Structure of Online Amplification

COMPUTER SCIENCE SEMINAR SERIES, COMPUTER SCIENCE DEPARTMENT, UNION COLLEGE

Online

Feb. 2021

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

STORY TIME, COMPUTATIONAL STORY LAB, UNIVERSITY OF VERMONT

Online

Jul. 2020

The Topic Topology of “Slacktivist” Networks

INFORMATION, SELF-ORGANIZING DYNAMICS AND SYNCHRONIZATION ON NETWORKS SATELLITE SYMPOSIUM, NETSCI 2017

Indianapolis, IN

Jun. 2017

PANELS

Emerging Digital Data Tools

THE DIGITAL DATA CONFERENCE (D2C)

Online

Apr. 2022

Creating Open Source Software as Part of an Academic Career

SUMMER INSTITUTE IN COMPUTATIONAL SOCIAL SCIENCE (SICSS) FESTIVAL

Online

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

2022 **Twitter Developer Insider**, Twitter

San Francisco, CA

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

2022 **Outstanding Graduate Student Award in Research**, Northeastern University

Boston, MA

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

OPEN SOURCE SOFTWARE

Core Developer

Boston, MA

FOCALEVENTS: PYTHON, GITHUB.COM/RYANJGALLAGHER/FOCALEVENTS

Aug. 2021–PRESENT

Core Developer

Boston, MA

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

May 2018–PRESENT

Core Developer

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

Los Angeles, CA

Jun. 2017–PRESENT

CONFERENCES, INSTITUTES, AND WORKSHOPS

Founder and Co-Organizer

NETWORKED JUSTICE SATELLITE SYMPOSIUM, NETWORKS 2021

Online

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

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

Jan. 2018–Mar. 2018

DEPARTMENTAL SERVICE

President

Boston, MA

NETWORK SCIENCE GRADUATE STUDENT ASSOCIATION, NORTHEASTERN UNIVERSITY

May 2019–PRESENT

Graduate Student Representative

Boston, MA

ADMISSIONS COMMITTEE, NETWORK SCIENCE PHD PROGRAM, NORTHEASTERN UNIVERSITY

Jan. 2020–Apr. 2020

Vice President

Boston, MA

NETWORK SCIENCE GRADUATE STUDENT ASSOCIATION, NORTHEASTERN UNIVERSITY

May 2018–May 2019

Organizer

Boston, MA

NETWORK SCIENCE INSTITUTE JOURNAL CLUB, NORTHEASTERN UNIVERSITY

Jan. 2018–Dec. 2018

PROFESSIONAL ORGANIZATIONS

| | |
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| NetSci | Network Science Society |
| ICA | International Communication Association |
| AoIR | Association of Internet Researchers |
| ACM | Association for Computing Machinery |

2017–PRESENT

2018–PRESENT

2020–PRESENT

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

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|---|--|
| 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

Data Science for the Social Sciences

Boston, MA

COLLEGE OF SOCIAL SCIENCES AND HUMANITIES, NORTHEASTERN UNIVERSITY

Sep. 2021–Dec. 2021

Fall 2021 (Instructor of record)

Summer Institute in Computational Social Science Boston Partner Site

Cambridge, MA

MASSACHUSETTS INSTITUTE OF TECHNOLOGY

Jun. 2018

Summer 2019

Fundamentals of Calculus I

DEPARTMENT OF MATHEMATICS AND STATISTICS, UNIVERSITY OF VERMONT
Fall 2016 (Instructor of record)

Burlington, VT
Aug. 2016–Dec. 2016

Applications of Finite Math

DEPARTMENT OF MATHEMATICS AND STATISTICS, UNIVERSITY OF VERMONT
Fall 2015, Spring 2016 (Instructor of record)

Burlington, VT
Aug. 2015–May 2015

GUEST LECTURES

Mesoscale Network Structures of Online Activism

MACHINE LEARNING AND SOCIETY, UNIVERSITY AT BUFFALO
Class of Kenneth Joseph, Spring 2021

Online
Apr. 2021

Comparing Text as Data with Word Shift Graphs

PRINCIPLES OF COMPLEX SYSTEMS VOL. 2, UNIVERSITY OF VERMONT
Class of Peter Dodds, Spring 2021

Online
Apr. 2021

Mesoscale Network Structures of Online Activism

COMMUNICATION AND SOCIAL NETWORKS, PURDUE UNIVERSITY
Class of Jeremy Foote, Spring 2021

Online
Mar. 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