

Ryan J. Gallagher

NETWORK SCIENCE PH.D. CANDIDATE STUDYING ONLINE POLITICAL COMMUNICATION
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Education

Northeastern University

PH.D. NETWORK SCIENCE

Advisor: Prof. Brooke Foucault Welles

Boston, MA

Sep. 2017 – May 2022 (Expected)

University of Vermont

M.S. MATHEMATICS, *Outstanding Masters Thesis Honorable Mention*

Advisors: Prof. Christopher M. Danforth, Prof. Peter Sheridan Dodds

Graduate Certificate: Complex Systems

Burlington, VT

Aug. 2015 – May 2017

University of Connecticut

B.A. MATHEMATICS, *Summa Cum Laude*

Minor: Statistics

Storrs, CT

Aug. 2011 – May 2015

Experience

Research Assistant

NETWORK SCIENCE INSTITUTE, NORTHEASTERN UNIVERSITY

Boston, MA

Aug. 2017 – PRESENT

Core Data Science Intern

CORE DATA SCIENCE, FACEBOOK

Menlo Park, CA

Sep. 2019 – Nov. 2019

Visiting Research Assistant

INFORMATION SCIENCES INSTITUTE, UNIVERSITY OF SOUTHERN CALIFORNIA

Los Angeles, CA

Jun. 2016/2017 – Aug. 2016/2017

Research Assistant

VERMONT COMPLEX SYSTEMS CENTER, UNIVERSITY OF VERMONT

Burlington, VT

Aug. 2015 – Aug. 2017

Publications

PREPRINTS

Sustained Amplification of COVID-19 Elites in the United States

RYAN J. GALLAGHER, LARISSA DOROSHENKO, SARAH SHUGARS, DAVID LAZER, BROOKE FOUCAULT WELLES. (2020). *arXiv preprint: 2009.07255*. IN SUBMISSION TO *Social Media + Society*.

PEER-REVIEWED ARTICLES

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.

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

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: 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

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

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	Washington, D.C. 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	Boston, MA May 2018 – May 2019
Organizer NETWORK SCIENCE INSTITUTE JOURNAL CLUB, NORTHEASTERN UNIVERSITY	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

MOBILIZATION

JOURNAL OF COMPLEX NETWORKS

SOCIAL MEDIA + SOCIETY

AMERICAN SOCIOLOGICAL REVIEW

PLOS ONE

TRANSACTIONS OF CHI (TOCHI)

SIGNS: JOURNAL OF WOMEN IN CULTURE AND SOCIETY

SOCIUS

CONFERENCE PEER REVIEW

INTERNATIONAL COMMUNICATION ASSOCIATION (ICA)

ACM CONF. ON HUMAN FACTORS IN COMPUTING SYSTEMS (CHI)

ACM WEB SCIENCE CONFERENCE (WebSci)

INTERNATIONAL AAAI CONF. ON WEB AND SOCIAL MEDIA (ICWSM)

ACM CONF. ON COMPUTER-SUPPORTED COOPERATIVE WORK (CSCW)

Teaching

INSTRUCTION

Summer Institute in Computational Social Science Boston Partner Site

MASSACHUSETTS INSTITUTE OF TECHNOLOGY

Summer 2019

Cambridge, MA

Jun. 2018

MATH 19 Fundamentals of Calculus I

DEPARTMENT OF MATHEMATICS AND STATISTICS, UNIVERSITY OF VERMONT

Fall 2016

Burlington, VT

Aug. 2016 – Dec. 2016

MATH 17 Applications of Finite Math

DEPARTMENT OF MATHEMATICS AND STATISTICS, UNIVERSITY OF VERMONT

Fall 2015, Spring 2016

Burlington, VT

Aug. 2015 – May 2015

GUEST LECTURES

Mesoscale Network Structures of Online Activism

CSE 410/540 MACHINE LEARNING AND SOCIETY, UNIVERSITY AT BUFFALO

Class of Dr. Kenneth Joseph, Spring 2021

Online

Apr. 2021

Comparing Text as Data with Word Shift Graphs

CSYS 303 PRINCIPLES OF COMPLEX SYSTEMS VOL. 2, UNIVERSITY OF VERMONT

Class of Professor Peter Dodds, Spring 2021

Online

Apr. 2021

Mesoscale Network Structures of Online Activism

COM 411 COMMUNICATION AND SOCIAL NETWORKS, PURDUE UNIVERSITY

Class of Dr. Jeremy Foote, Spring 2021

Online

Mar. 2021

Text as Data and Sentiment Analysis

COM 495 TURNING DATA INTO INSIGHT AND STORIES, PURDUE UNIVERSITY

Class of Dr. Jeremy Foote, Spring 2021

Online

Mar. 2021

Text as Data and Sentiment Analysis

POL 42050 QUANTITATIVE TEXT ANALYSIS, UNIVERSITY COLLEGE DUBLIN

Class of Dr. Martijn Schoonvelde, Spring 2021

Online

Mar. 2021

Text as Data and Computational Grounded Theory

INTRODUCTION TO QUALITATIVE METHODS, SCIENCES PO PARIS

Class of Professor Jen Schradie, Spring 2021

Online

Mar. 2021

Mesoscale Network Structure and Stochastic Block Models

DNDS 6004 STRUCTURE AND DYNAMICS OF COMPLEX NETWORKS, CENTRAL EUROPEAN UNIVERSITY

Class of Dr. Federico Battiston, Spring 2021

Online

Jan. 2021

Mesoscale Network Structure and Stochastic Block Models

INFSCI 2125 NETWORK SCIENCE & ANALYSIS, UNIVERSITY OF PITTSBURGH

Class of Dr. 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, Fall 2020

Online

Aug. 2020

TEACHING ASSISTANCE

COMM 2105 Social Networks

COMMUNICATION STUDIES DEPARTMENT, NORTHEASTERN UNIVERSITY

Class of Prof. Brooke Foucault Welles, Spring 2020

CSYS 300 Principles of Complex Systems

DEPARTMENT OF MATHEMATICS AND STATISTICS, UNIVERSITY OF VERMONT

Class of Prof. Peter Dodds, Fall 2016

Northeastern, MA

Jan. 2020 – May 2020

Burlington, VT

Aug. 2016 – Dec. 2016