Ryan J. Gallagher

Network Science Ph.D. Student Merging Text and Networks for Computational Social Science

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Education

Northeastern University   *Boston, MA*

Ph.D. Network Science   *Sep. 2017 – PRESENT*

Advisor: Prof. Brooke Foucault Welles

University of Vermont   *Burlington, VT*

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

Advisors: Prof. Christopher M. Danforth, Prof. 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

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. arXiv preprint 2008.02250, 2020.

A Clarified Typology of Core-Periphery Structure in Networks

Ryan J. Gallagher, Jean-Gabriel Young, Brooke Foucault Welles. arXiv preprint 2005.10191, 2020.

Journal Articles

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. Forthcoming in *Computational Communication Research*, 2020.

Reclaiming Stigmatized Narratives: The Networked Disclosure Landscape of #MeToo

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

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

Ryan J. Gallagher, Andrew J. Reagan, Christopher M. Danforth, Peter Shreidan Dodds. *PLoS ONE*, 13(4):e0195644, 2018.

Anchored Correlation Explanation: Topic Modeling with Minimal Domain Knowledge

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

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

Talks

Word Shift: A General Method for Visualizing and Explaining Pairwise Comparisons Between Texts   *Burlington, VT*

Story Time, Computational Story Lab, University of Vermont   *Jul. 2020*

Reclaiming Stigmatized Narratives: The Networked Disclosure Landscape of #MeToo   *Cambridge, MA*

International Conference on Computational Social Science (IC2S2) 2020, MIT   *Jul. 2020*

Diversity of Core-Periphery Structure in Real Networks   *Buffalo, NY*

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*

The Topic Topology of "Slacktivist" Networks   *Indianapolis, IN*

Information, Self-Organizing Dynamics and Synchronization on Networks Satellite Symposium, NetSci 2017   *Jun. 2017*

Honors & Awards

Honors

2019	**Invited Participant**, 1 Year Until 2020: US Election Research Workshop, Facebook	*Menlo Park, CA*
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*
2017	**Outstanding Masters Thesis Honorable Mention**, University of Vermont	*Burlington, VT*
2015	**Honorary Inductee**, Pi Mu Epsilon Mathematics Honor Society, University of Connecticut	*Storrs, CT*

Awards

2019	**Best Paper Honorable Mention**, CSCW 2019, Association for Computing Machinery (ACM)	*Austin, TX*
2019	**NULab Travel Grant**, NULab for Texts, Maps, and Networks, Northeastern University	*Boston, MA*
2019	**NetSI Travel Grant**, Network Science Institute, Northeastern University	*Boston, MA*
2018	**NetSI Travel Grant**, Network Science Institute, Northeastern University	*Boston, MA*
2017	**SYNS Travel Grant**, Society of Young Network Scientists, NetSci 2017	*Indianapolis, IN*
2015	**Outstanding Presentation Award**, Mathematical Association of America, Joint Math Meeting 2015	*San Antonio, TX*
2015	**MAA Travel Grant**, Mathematical Association of America, Joint Math Meeting 2015	*San Antonio, TX*
2014	**MAA Travel Grant**, Mathematical Association of America, Joint Math Meeting 2014	*Baltimore, MD*

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*
WORD SHIFTERATOR: PYTHON, GITHUB.COM/RYANJGALLAGHER/SHIFTERATOR *May 2018 – PRESENT*

Core Developer *Los Angeles, CA*
ANCHORED CorEx TOPIC MODEL: PYTHON, GITHUB.COM/GREGVERSTEEG/COREX_TOPIC *Jun. 2017 – PRESENT*

CONFERENCES, INSTITUTES, AND WORKSHOPS

Program Committee *Southampton, UK*
12TH AMC CONFERENCE ON WEB SCIENCE 2020 (WEBSCI) *Dec. 2019 – Jul. 2020*

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*

Co-Organizer *Burlington, VT*
AM I A (ALL MATH IS APPLIED) SEMINAR, UNIVERSITY OF VERMONT *Aug. 2016 – May 2017*

PEER REVIEW

SOCIAL MEDIA + SOCIETY	NEW MEDIA & SOCIETY	INTERNATIONAL COMMUNICATION ASSOCIATION
TRANSACTIONS OF CHI (TOCHI)	AMERICAN SOCIOLOGICAL REVIEW	SIGNS: JOURNAL OF WOMENN IN CULTURE AND SOCIETY
JOURNAL OF COMPLEX NETWORKS	SOCIAL NETWORKS ANALYSIS AND MINING	INT. CONF. ON WEB AND SOCIAL MEDIA (ICWSM)
MOBILIZATION	SOCIUS	PLOS ONE
WEBSCI		

Teaching

Teaching Assistant *Boston, MA*
COMMUNICATION STUDIES DEPARTMENT, NORTHEASTERN UNIVERSITY *Jan. 2020 – Apr. 2020*

    Spring 2020   COMM 2105 Social Networks

Instructor *Burlington, VT*

Fall 2016   MATH19 Fundamentals of Calculus I
Spring 2016   MATH17 Applications of Finite Math
Fall 2015   MATH17 Applications of Finite Math

Help Session Tutor *Burlington, VT*

Algebra, Precalculus, Finite Math, Calculus I, Calculus II

Course Grader *Burlington, VT*

Fall 2016   CSYS300 Principles of Complex Systems

Supplemental Instruction Leader *Storrs, CT*

Spring 2015   MATH1132Q Calculus II