

Benjamin J. Radford

POLITICAL SCIENTIST · DATA SCIENTIST · TS/SCI

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Professional Experience

Assistant Professor

UNIVERSITY OF NORTH CAROLINA CHARLOTTE

Public Policy Ph.D. Program & Political Science and Public Administration

Charlotte, NC

2019–Present

President & Chief Scientist

LEVELUP RESEARCH, LLC

DARPA SafeDocs & DARPA Hybrid Fusion

Alexandria, VA

2018–Present

Principal Data Scientist

SOTERA DEFENSE SOLUTIONS / KEYW CORPORATION

DARPA cybersecurity attribution program

Arlington, VA

2017–2018

Senior Data Scientist

CAERUS ASSOCIATES / CYBRAICS

DARPA Network Defense

Arlington, VA

2015–2016

Education

Ph.D. in Political Science

DUKE UNIVERSITY

Durham, NC

2016

M.A. in Political Science

DUKE UNIVERSITY

Durham, NC

2013

B.A. in Mathematics and International Studies

UNIVERSITY OF NORTH CAROLINA AT ASHEVILLE

Asheville, NC

2010

Grants & Contracts

Co-PI, UNCC 12-Month Planning Grant (\$25,000)

2020

Subject Matter Expert, DARPA SafeDocs (\$998,998.86)

2019–2022

Co-PI, DARPA Hybrid Fusion (\$169,356.40)

2019–2020

Co-PI, DARPA contract (\$154,422.65)

2019

PI, DARPA contract (\$1M+)

2017–2018

Graduate Studies Fellowship, Duke University

2011–2016

Graduate School Conference Travel Fellowship, Duke University

2015, 14, 13

Peer-Reviewed Publications

“Multitask Models for Supervised Protest Detection in Texts”

2019

CEUR Workshop Proceedings. Vol. 2380.

“Automated Dictionary Generation for Political Event Coding”

2019

Political Science Research and Methods.

“Enemy at the Gates: Variation in Economic Growth from Civil Conflict.”

2017

Journal of Conflict Resolution: 61(10):2105–2129.

with Shahryar Minhas.

Technical and Policy Publications

- “Anomaly Detection in Cyber Network Data Using a Cyber Language Approach”** 2018
Prepared for the 2018 ASA Symposium on Data Science and Statistics. Available at arXiv:1808.10742.
with Bartley D. Richardson, Shawn E. Davis, Keegan Hines, and David Pekarek.
- “Sequence Aggregation Rules for Anomaly Detection in Computer Network Traffic”** 2018
Prepared for the 2018 ASA Symposium on Data Science and Statistics. Available at arXiv:1805.03735.
with Bartley D. Richardson and Shawn E. Davis.
- “Network Traffic Anomaly Detection Using Recurrent Neural Networks”** 2017
Proceedings of the 2017 MSS National Symposium on Sensor & Data Fusion. Available at arXiv:1803.10769.
with Leonardo Apolonio, Antonio Trias, and Jim A. Simpson.
- “Small-scale prediction of IEDs in Afghanistan using split-population duration regression”** 2015
Submitted to the Office of Naval Research.
with Andreas Beger and Michael D. Ward.
- “Comparing GDELT and ICEWS Event Data”** 2013
Published online. Available at Research Gate.
with Michael D. Ward, Andreas Beger, Josh Cutler, Matthew Dickenson, and Cassy Dorff.
- “The Evolution of US Policy towards Iran’s Nuclear Program: Lessons for the Obama Administration”** 2010
UNC Asheville Journal of Undergraduate Research.
- “Iran Likely to Take Accusatory Stance at CWC Review Conference”** 2008
WMD Insights (April): 39-43.
- “Summary of Recent United Nations Security Council, European Union, and United States Sanctions Against Iran”** 2008
WMD Insights (April): 44-50.
with Leonard Spector.
- “Algeria, Emirates Plan Nonproliferation-Friendly Nuclear Programs; Egypt Keeps Fuel Cycle Options Open, Rejects Expanded IAEA Monitoring”** 2008
WMD Insights (June): 2-7.
with Leonard Spector.

Software

- mmtsne** 2017
A package for estimating *multiple maps t-distributed stochastic neighbor embedding* (multiple maps t-SNE) models in R.
Open source and available on CRAN: <https://cran.r-project.org/package=mmtsne>

Invited Talks

- Georgia Tech School of Electrical and Computer Engineering** 2019
Machine Learning Approaches for Cybersecurity Incident Measurement
- DC Digital Analytics** 2018
Multilingual Text Classification with Multitask Neural Networks
- Symposium on Data Science and Statistics, American Statistical Association** 2018
Network Traffic Anomaly Detection Using Recurrent Neural Networks
- Conference on Applied Statistics in Defense, American Statistical Association** 2016
Cyberlanguage: Enhancing cybersecurity through statistical and natural language processing techniques

Working Papers

- “0-BlinC: Zero-Shot Bilingual Text Classification without Translation” *Working paper*
with Yaoyao Dai.
- “Multilingual Word Embedding for Zero-Shot Text Classification” *Working paper*
with Yaoyao Dai.
- “Varieties of Authoritarianism and Peace through Trade, 1950-1999” *Under review*
with Joseph Grieco and Christopher Gelpi.

Works in Progress

- “Structural Embedding for Explainable Word Vectors” *with Yaoyao Dai*
- “Forecasting Conflicts in Space and Time with Recurrent CNNs”
- “Inferring High-Resolution Latent Social Indicators from Unstructured Data”

Conference Presentations

- Annual Meeting of the Southern Political Science Association *2013, 2019, 2020*
- Annual Meeting of the American Political Science Association *2015, 2018*
- Conference on New Directions in Analyzing Text as Data *2018*
- Military Sensing Symposium, National Symposium on Sensor & Data Fusion *2017*
- Annual Meeting of the International Studies Association *2015*
- Annual Meeting of the Midwest Political Science Association *2013, 2014, 2015*
- Duke-UNC International Relations Workshop *2014*

Teaching Experience

- Instructor** *Charlotte, NC*
UNIVERSITY OF NORTH CAROLINA AT CHARLOTTE *2019–Present*
- GRAD 8009 & 6009: *Data Science for Social Scientific Inquiry*
 - GRAD 8101 & 8101: *Linear Regression*
 - POLS 3800: *Independent Study*
 - POLS 2220: *Political Science Research Methods*
- Invited Lecture** *Arlington, VA*
GEORGE MASON UNIVERSITY *Nov. 2017*
- CSI 899: *Computational Research and Applications*
- Teaching Assistant** for Professor Kyle Beardsley *Durham, NC*
DUKE UNIVERSITY *2013*
- POLSCI 130: *Introduction to Political Inquiry*

Academic Service

- Organizing Committee Member**, AESPEN LREC 2020 *2020*
- Reviewer**, IEEE: Transactions on Network and Service Management
- Reviewer**, Political Science Research & Methods
- Reviewer**, International Studies Review
- Chair & Discussant**, SPSA New Approaches in the Study of Terrorism and Civil War *2020*
- Discussant**, APSA Panel on Prediction *2015*
- Judge**, Northern Virginia Regional Science Fair *2019*

Honors, & Awards

Finalist , Data Visualization Contest, Duke University	2013
Graduated summa cum laude , University of North Carolina at Asheville	2010
Top Graduating Math Student , University of North Carolina at Asheville	2010
Distinction in International Studies , University of North Carolina at Asheville	2010
Finalist , Hasbro NERF <i>Battle of the Ads</i>	2010