

# KYLE A. JOYCE

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I am an educator with 10+ years of experience in developing and teaching undergraduate and graduate courses in traditional and online formats. I have taught graduate and undergraduate courses on probability and mathematical statistics, mathematics for political scientists, modeling complex adaptive systems, agent-based modeling, monte carlo simulation methods, game theory and international relations, the scientific study of war, and ethnic conflict.

In my courses I provide students with the analytical and critical thinking skills necessary to better understand theoretical arguments and evaluate those arguments in light of empirical evidence using historical events and/or statistical analysis.

I focus on teaching students how to construct and clearly articulate theoretical arguments, conduct empirical analysis, and provide a clear, coherent, and convincing explanation of their results both through writing assignments and verbal presentations.

My courses are designed to provide students with a broad range of skills to enable them to succeed in their careers regardless of their career paths (government, private sector, non-profit, law school, graduate programs). I have advised and mentored numerous undergraduate and graduate students including supervising senior honors theses and serving on dissertation committees. My students have received law degrees, PhD's, and pursued careers in government, academia, the private sector, and non-profit organizations.

## ACADEMIC APPOINTMENTS

January           Lecturer

2018-present    Master of Science in Data Analytics and Policy Program, Johns Hopkins University

Developed and taught an online graduate course on Computational Modeling for Policy and Security Analysis. The course introduces students to computational (agent-based) modeling and provides students with the theoretical (complex adaptive systems) and programming (NetLogo) tools to develop and analyze models to improve domestic and foreign policy.

2008-2016       Assistant Professor of Political Science

Department of Political Science, University of California, Davis

Published 6 articles in peer-reviewed journals on topics in Political Methodology and International Relations. Received  $\approx$ \$600,000 in grants from the National Science Foundation and the University of California, Davis. Supervised undergraduate and graduate research assistants as part of a research team. Served on 4 Ph.D. dissertation committees (including one as chair) and supervised 7 undergraduate honors theses. Taught undergraduate courses on International Relations and Ph.D. courses on Political Methodology. Presented papers at national conferences. Performed professional service including organizing panels for national conferences, reviewing manuscripts for peer-reviewed journals, grant proposals for funding agencies, and books for academic presses. Served on departmental and university committees.

## EDUCATION

- Ph.D. Political Science, The Pennsylvania State University, 2008  
Dissertation: Third Parties and the Dynamics of War Expansion
- M.A. International Relations, University of Essex, 2002 (with distinction)  
Thesis: To War or Not to War: Arms Races and Dispute Escalation
- B.S. Political Science, Eastern New Mexico University, 2000 (with distinction)  
Thesis: Politics and Economics in the United States Federal Budget Process
- B.S. History, Eastern New Mexico University, 2000 (with distinction)  
Thesis: The Evolution of Political Institutions in Northern Ireland and Their Impact on the Development and Implementation of the Good Friday Agreement

## ADDITIONAL EDUCATION

- Summer 2006 Empirical Implications of Theoretical Models (EITM) Summer Institute, University of Michigan
- Summer 2005 Graduate Workshop in Computational Social Science Modeling & Complexity, Santa Fe Institute
- Summer 2003 Inter-University Consortium for Political & Social Research (ICPSR), University of Michigan  
Course: Maximum Likelihood Estimation
- Winter 2003 Program in Foreign Policy Decision Making, Texas A&M University  
Course: Winter Institute in Mathematical Modeling
- Summer 2001 Summer School in Social Science Data Analysis & Collection, University of Essex  
Courses: Game Theory & Social Science, Mathematics for Social Scientists I, II, III
- Summer 2000 Study Abroad, American College Dublin  
Courses: Irish History, The Irish Famine, James Joyce

## REFEREED PUBLICATIONS

- 2016 **The Effects of Shocks on International Networks: Changes in the Attributes of States and the Structure of International Alliance Networks** (with Zeev Maoz). *Journal of Peace Research* 53(3): 292-309.
- 2015 **Challenges to Inference in the Study of Crisis Bargaining** (with Philip Arena). *Political Science Research and Methods* 3(3): 569-587.
- 2014 **When and Whom To Join: The Expansion of Ongoing Violent Interstate Conflicts** (with Faten Ghosn and Reşat Bayer). *British Journal of Political Science* 44(1): 205-238.
- 2013 **Geographic Proximity and Third Party Joiners in Militarized Interstate Disputes** (with Alex Braithwaite). *Journal of Peace Research* 50(5): 595-608.
- 2008 **Third-Party Intervention and the Civil War Process** (with Dylan Balch-Lindsay and Andrew J. Enterline). *Journal of Peace Research* 45(3): 345-363.
- 2007 **Event Dependence and Heterogeneity in Duration Models: The Conditional Frailty Model** (with Janet M. Box-Steffensmeier and Suzanna De Boef). *Political Analysis* 15(3): 237-256.

## WORKS IN PROGRESS

**The Cascading Dynamics of War Expansion: An Agent-Based Computational Model**

## GRANTS & AWARDS (TOTAL: \$597,319)

- 2012-2016 The Effects of Shocks on Interacting Social and Physical Networks (Co-PI with George Barnett, Raissa D'Souza, and Zeev Maoz), National Science Foundation, Interface between Computer Science and Economics & Social Science Program (ICES-1216048: September 1, 2012-August 31, 2016), \$275,691.
- 2012-2015 The Effects of Shocks on International Networks: An Agent-Based Model with Simulated and Real-World Data (Co-PI with Zeev Maoz), National Science Foundation, Political Science Program (SES-1155643: July 1, 2012-June 30, 2015), \$255,220.
- 2012-2013 Hellman Fellowship, University of California, Davis, \$20,000.
- April-July 2011 International Short Visit Fellowship, ETH Zürich, Switzerland  
Swiss National Science Foundation (with Lars-Erik Cederman), CHF 10,870.
- 2009-2015 Various Internal Grants  
University of California, Davis, \$26,800.
- 2007-2008 Third Parties and the Dynamics of War Expansion,  
Doctoral Dissertation Improvement Grant, National Science Foundation,  
Methodology, Measurement, and Statistics Program  
(SES-0648771: March 15, 2007-March 14, 2008), \$8,532.
- 2007-2008 Robert S. Friedman Award for Excellence in Teaching  
Department of Political Science, The Pennsylvania State University
- 2008 International Relations Pre-Doctoral Teaching Fellowship  
Department of Political Science, The Pennsylvania State University
- Spring 2007 Pre-Doctoral Fellow, Quantitative Social Science Initiative  
Department of Political Science, The Pennsylvania State University
- 2004-2005 Pre-Doctoral Fellow, Social Science Statistics Partnership  
Department of Political Science, The Pennsylvania State University
- 2003-2004 Outstanding Graduate Student Award  
Department of Political Science, The Pennsylvania State University
- 2001 Department of Government Prize for Best MA Student, University of Essex
- 2000 Political Science Student of the Year, Eastern New Mexico University
- 2000 History Student Merit Award, Eastern New Mexico University

## **TEACHING EXPERIENCE**

- 2018-2020 Computational Modeling for Policy and Security Analysis (Graduate)  
Johns Hopkins University
- 2016 International Relations Theory (Undergraduate)  
The Pennsylvania State University World Campus
- 2012-2014 Complex Systems Models in the Social Sciences (at the Inter-University Consortium  
for Political & Social Research (ICPSR)) (Graduate)  
University of Michigan
- 2009-2014 Modeling Complex Adaptive Systems (Graduate)  
University of California, Davis
- 2010-2016 Ethnic Conflict (Undergraduate)  
University of California, Davis
- 2009-2016 The Scientific Study of War (Undergraduate)  
University of California, Davis
- 2008-2014 Probability and Mathematical Statistics (Graduate)  
University of California, Davis
- 2008-2014 Math Camp (one-week) for Political Science Students (Graduate)  
University of California, Davis and The Pennsylvania State University (2003, 2005)
- 2008 Game Theory in International Relations (Undergraduate)  
The Pennsylvania State University
- 2005 Monte Carlo Simulation Methods (Graduate)  
The Pennsylvania State University

## **CONFERENCE PRESENTATIONS**

- Annual Meeting of the American Political Science Association: 2007, 2009, 2010, 2011, 2013, 2015
- Annual Meeting of the Midwest Political Science Association: 2007, 2008, 2009, 2013, 2014, 2015
- Annual Meeting of the International Studies Association: 2008, 2009, 2013, 2014, 2015
- Annual Meeting of the Peace Science Society: 2007, 2010, 2013
- Annual Meeting of the Society for Political Methodology (poster): 2007, 2010
- Political Networks Conference: 2008, 2013
- Jan Tinbergen European Peace Science Conference: 2007
- North American Association for Computational Social and Organization Sciences: 2007
- NetSci: 2014
- Annual Meeting of the Western Political Science Association: 2015

## **INVITED PRESENTATIONS**

- 2013 Network Analysis and the Study of International Security Workshop,  
George Washington University.
- 2007 Air Force ROTC, Leadership Laboratory, The Pennsylvania State University.
- 2007 New Faces in Security Studies, Triangle Institute for Security Studies,  
Duke University.
- 2007 Applying Complexity Science to Peacebuilding and Conflict Analysis,  
Fletcher School of Law and Diplomacy, Tufts University.

## **REFERENCES**

Available Upon Request