

Chapman University
Argyros School of Business
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CURRENT POSITION

Chapman University, Argyros School of Business Assistant Professor, Economics and Management Science 2017-

PRIOR POSITIONS

MIT, Department of Political Science
Visiting Lecturer Fall, 2016

Wellesley College, Department of Economics
Visiting Lecturer Spring, 2015

EDUCATION

Ph.D., Economics, Boston University 2017
M.Sc., Management and Applied Economics, Wharton, University of Pennsylvania 2011
A.B., Economics, University of Chicago 2005

RESEARCH INTERESTS

Economics of Digitization, Technology Strategy, Applied Deep Learning, Machine Learning and Predictive Modeling

PUBLICATIONS AND WORKING PAPERS

- (7) Brett Danaher, **Jonathan Hersh**, Michael Smith, and Rahul Telang, "The Effect of Piracy Website Blocking on Consumer Behavior", *Submitted to MIS Quarterly*
- (6) Bree Lang, Matt Lang, and **Jonathan Hersh**. (2018), [Car Accidents and 3G Coverage: An Application of Machine Learning](#), *Submitted to American Economic Review*
- (5) Matthew Harding and **Jonathan Hersh**. [Big Data in Economics](#) (2018), *IZA World of Labor*
- (4) Ryan Engstrom, **Jonathan Hersh**, and David Newhouse. [Poverty from Space: Using High Resolution Satellite Imagery for Estimating Economic Well-being](#), *Submitted to PLOS One*
- (3) Marium Afzal, **Jonathan Hersh**, and David Newhouse. [Building a Better Model: Variable Selection to Predict Poverty in Pakistan and Sri Lanka](#).
- (2) Brian Bettenhausen, Eric Hanss, **Jonathan Hersh**, and Carlos Villarreal. [Historical Health Conditions in Major US Cities: The HUE Data Set](#) *Historical Methods*, (2014) 47: 67-80.
- (1) **Jonathan Hersh** and Hans-Joachim Voth. (2011). [Sweet Diversity: Overseas Trade and Gains from Variety after 1492](#).

SELECTED WORK IN PROGRESS

Nowcasting Firm Performance and Cyberattacks Using API Data, with Seth Benzell, Guillermo Lagarda Cuervas, and Marshall Van Alstyne [[latest slides](#)],

Delay Forecasts in Infrastructure Projects and Managerial Decisions

Analyzing Conflict From Space: Identification of Physical Destruction During the Syrian Civil War with Artificial Intelligence, with Andre Groger, Andrea Matranga and Hannes Mueller [[latest slides](#)]

How Can Poverty Estimates Derived from Artificial Intelligence and Satellite Imagery Improve Surveys? Evidence from Mexico, with Boris Babenko, David Newhouse, Anusha Ramakrishnan, and Tom Swartz [[latest slides](#)]

PEER-REVIEWED CONFERENCE PUBLICATIONS

(2) Boris Babenko, **Jonathan Hersh**, David Newhouse, Anusha Ramakrishnan, and Tom Swartz. [Poverty Mapping Using Convolutional Neural Networks Trained on High and Medium Resolution Satellite Images, With an Application in Mexico](#), Neural Information Processing Systems (NIPS 2017)

(1) Engstrom, R., Newhouse, D., Haldavanekar, V., Copenhaver, A., & **Hersh, J.** (2017, March). [Evaluating the Relationship Between Spatial and Spectral Features Derived from High Spatial Resolution Satellite Data and Urban Poverty in Colombo, Sri Lanka](#). In Urban Remote Sensing Event (JURSE), 2017 Joint (pp. 1-4). IEEE.

INVITED SEMINAR PRESENTATIONS

2017-2018: UC Riverside; Penn State; University of Southern California; Princeton University (Empirical Studies of Conflict)

2016-2017: Chapman University (Argyros School of Business); World Bank (Development Economics Group)

INVITED CONFERENCE PRESENTATIONS

2019: American Economic Association Annual Meeting (*scheduled*)

2018: INFORMS International; Statistical Challenges in E-Commerce Research 2018; Empirical Studies of Conflict; New York R Conference; 11th Digital Economics Conference (Toulouse School of Economics); Artificial Intelligence for Development (CEGA/World Bank); Pacific Development Conference (UC Davis)

2017: Geospatial Analysis for International Development (CEGA/Berkeley); UN Development Program (Human Development Report Office); World Bank (POV Summer University); Princeton University (Empirical Studies of Conflict); Prediction for Prevention of Armed Conflict (Barcelona, Spain)

2016: Computational and Financial Econometrics (Seville, Spain); Annual Bank Conference on Development Economics (World Bank); Center for the Study of African Economies: Economic Development in Africa (Oxford); Eastern Economic Association; Kiel Institute (Firms in International Trade Summer School)

TEACHING

Chapman University

Fall 2019: Statistical Models in Business Analytics (x2) [[Syllabus](#)]

Fall 2019: Development Economics [[Syllabus](#)]

Spring 2018: Machine Learning Applications in Business [\[Syllabus\]](#) [Instructor rating: 5/5]

Spring 2018: Development Economics [\[Syllabus\]](#) [Instructor rating: 3.81/5]

Fall 2018: Introduction to Business Analytics [\[Syllabus\]](#) [Instructor rating: 4.21/5]

MIT

Fall 2017: Quantitative Research Methods III (Political Science PhD quantitative sequence) [\[Syllabus\]](#)

World Bank, Summer University

Summer 2018: Introduction to Machine Learning [\[Syllabus\]](#) [Instructor rating: 6.07/7]

Summer 2017: Introduction to Machine Learning [Instructor rating: 6.64/7]

Summer 2016: Introduction to Machine Learning

Wellesley College

Spring 2016: Development Economics [\[Syllabus\]](#) [92.8% course recommend/strongly recommend/neural]

Spring 2016: Introductory Microeconomics [\[Syllabus\]](#) [95.2% course recommend/strongly recommend/neural]

PROFESSIONAL SERVICE

Referee: *World Bank Economic Review*, *Journal of Business Analytics*

Panel Organizer: Pacific Development Conference 2018

Instructor's Manual Author: *R for Everyone: Advanced Analytics and Graphics* (Addison Wesley) [\[link1\]](#) [\[link2\]](#)

Discussant: 11th Digital Economics Conference (Toulouse School of Economics) [\[slides\]](#); Pacific Development Conference (UC Davis) [\[slides\]](#)

DEPARTMENT AND UNIVERSITY SERVICE

Committee Member: Graduate and MBA Academic Committee 2018-19

Reviewer: Kay Family Foundation Data Analytics Grant 2018

Judge: American Statistical Association Southern California DataFest 2018

FELLOWSHIPS AND AWARDS

La Caixa Research Grant on Socioeconomic Well-being (\$20,000) 2017

Hariri Institute for Computational Science Graduate Fellowship 2016

Big Data Innovation Challenge Award, World Bank Group (\$104,000) 2014

Teaching Fellowship, Boston University 2013-2014

PREVIOUS POSITIONS

Consultant, World Bank Group, Poverty Global Practice 2014-2016

Research Manager, University of Chicago Center for Population Economics 2011-2012

Research Professional (RA Emily Oster), University of Chicago Booth School of Business 2008-2009

Economist, RCF Economic and Financial Consulting 2006-2008

Systems Analyst and Developer, McMaster-Carr Supply Company 2005-2006

INDUSTRY ADVISING

[DoubleCheck Solutions](#) (Member, Analytics Advisory Board)
[Lander Analytics](#)
Arconic (Introduction to Deep Learning Mini-Course) [[Syllabus](#)]
World Bank
Inter-American Development Bank

SOFTWARE

Rlasso A Stata wrapper that allows for estimation of glmnet models within Stata. Performs regularization and best subset selection using the R glmnet package for Lasso, Ridge and Elastic Net regression from within Stata. [[code](#)] [[help file](#)] [[desc](#)]

CODING

R, Stata, Python, C++, SQL, Keras

REFERENCES

Ray Fisman Boston University Phone: (617) 353-6821 rfisman@bu.edu	Sam Bazzi Boston University Phone: (617) 353-6150 sbazzi@bu.edu	Marianne Baxter Boston University Phone: (617) 353-4399 mbaxter@bu.edu
Marshall Van Alstyne Boston University Phone: (617) 358-3571 mva@bu.edu	Azer Bestavros Boston University Phone: (617) 353-9726 best@bu.edu	Matthew Harding UC Irvine harding1@uci.edu
(Teaching) Daniel Hidalgo MIT Phone: (617) 253-5262 dhidalgo@mit.edu	(Teaching) Kristen Butcher Wellesley College Phone: (781) 283-2179 kbutcher@wellesley.edu	
