

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-Present

PRIOR POSITIONS

MIT, *Department of Political Science*
Visiting Lecturer Fall, 2016

Wellesley College, *Department of Economics*
Visiting Lecturer Spring, 2016

EDUCATION

Ph.D., Economics, Boston University 2012-2017

M.Sc., Management and Applied Economics, Wharton, University of Pennsylvania 2009-2011

M.Sc., Economics, Barcelona Graduate School of Economics 2007-2008

A.B., Economics, University of Chicago 2001-2005

University of Kansas, Coursework in Computer Science and Mathematics 2000

INDUSTRY POSITIONS

Consultant, Inter-American Development Bank, Data Science 2019-20

Consultant, World Bank Group, Data Science 2014-2016; 2018-20

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, McMaster-Carr Supply Company 2005-2006

RESEARCH INTERESTS

Economics of Information Systems, IT for Development, Economics of Digitization, Online Media Piracy, IT Strategy, Applied Deep Learning, Machine Learning and Predictive Modeling

PUBLICATIONS

(4) [Open Data for Algorithms: Mapping Poverty in Belize Using Openly Available Satellite Features and Machine Learning](#), with Ryan Engstrom and Mike Mann. *Conditionally accepted*, **Information Technology for Development**

(3) Brett Danaher, Jonathan Hersh, Michael Smith, and Rahul Telang, [The Effect of Piracy Website Blocking on Consumer Behavior](#), (2020), **MIS Quarterly**

(2) Matthew Harding and Jonathan Hersh. [Big Data in Economics](#) (2018), **IZA World of Labor**

(1) 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.

SUBMITTED PAPERS

[The Paradox of Openness: Exposure vs. Efficiency of APIs](#), with Seth Benzell, Guillermo Lagarda Cuervas, and Marshall Van Alstyne. *Reject and resubmit, Management Science*

[Digitally Distracted at the Wheel: Myopic Smartphone Use and Car Accidents](#), with Bree Lang and Matt Lang. *Under review*

[Poverty from Space: Using High Resolution Satellite Imagery for Estimating Economic Well-being](#), with Ryan Engstrom and David Newhouse. *1st round revisions submitted, World Bank Economic Review*

[Sweet Diversity: Overseas Trade and Gains from Variety after 1492](#), with Hans-Joachim Voth. *1st round revisions submitted, Explorations in Economic History*

WORK IN PROGRESS

[Do Managers Trust Algorithms for High Stakes Decisions? A Machine Learning Decision Support Tool for Estimating Delays in Multi Million Dollar Loans](#)
First draft completed. Revising and running additional experiments

[The MegafilmesHD Shutdown in Brazil and its Effect on Piracy and Media Consumption](#), with Brett Danaher and Mike D. Smith
Analysis completed. Writing first draft.

[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](#)]
First draft completed. Revising draft for submission.

[Combining Deep Learning With Surveys to Generate Better Poverty Maps, with an application to Mexico](#), with Boris Babenko, David Newhouse, Anusha Ramakrishnan, and Tom Swartz [[latest slides](#)]
Analysis complete. Writing first draft

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.

POLICY REPORTS AND BOOK CHAPTERS

(1) Hersh, J., Engstrom, R., Mann, M., Mejia, A., Martin Rivero. (May, 2020). [Mapping Income Poverty in Belize Using satellite Features and Machine Learning](#) Inter-American Development Bank Monograph, May 2020 <http://dx.doi.org/10.18235/0002345>

CONFERENCE AND SEMINAR PRESENTATIONS

[Digitally Distracted at the Wheel: Myopic Smartphone Use and Car Accidents](#)
American Economic Association Annual Meeting (1/2019)
Federal Communications Commission (9/2019)
Anahuac University, Mexico (2/2020)

[The MegafilmesHD Shutdown in Brazil and its Effect on Piracy and Media Consumption](#)
Statistical Challenges in E-Commerce Research (2019)

Analyzing Conflict From Space: Identification of Physical Destruction During the Syrian Civil War with Artificial Intelligence

INFORMS International (2018)
Empirical Studies of Conflict Annual Meeting (2018)
Artificial Intelligence for Development (CEGA/World Bank) (2018)
Princeton University, Empirical Studies of Conflict (3/2018)

The Paradox of Openness: Exposure vs. Efficiency of APIs

Statistical Challenges in E-Commerce Research (2018)

Combining Deep Learning With Surveys to Generate Better Poverty Maps, with an application to Mexico
Pacific Development Conference (2018)

Poverty from Space: Using High Resolution Satellite Imagery for Estimating Economic Well-being

UC Riverside (11/2017)
Penn State (10/2017)
University of Southern California (9/2017)
UN Development Program, Human Development Report Office (7/2017)
Princeton University, Empirical Studies of Conflict (7/2017)
Chapman University, Argyros School of Business (12/2016)
World Bank, Development Economics Group (1/2017)
Geospatial Analysis for International Development, CEGA/Berkeley, (2017)
Prediction for Prevention of Armed Conflict, Barcelona, Spain (2017)
World Bank Annual Bank Conference on Development Economics (2016)

"Unintended Consequences of the African Growth and Opportunity Act: The Role of Trade Diversion and Structural Change"

Computational and Financial Econometrics (2016)
Center for the Study of African Economies: Economic Development in Africa (2016)
Eastern Economic Association (2016)

TEACHING

Chapman University

Fall 2019: Special Topics in Business (Machine Learning for Managers) [[Syllabus](#)]
Fall 2019: Statistical Models in Business Analytics (Introduction to Machine Learning) (x2) [[Syllabus](#)]
Fall 2018: Statistical Models in Business Analytics (x2) [[Syllabus](#)] [Instructor rating: 4.27/5]
Fall 2018: Development Economics [[Syllabus](#)] [Instructor rating: 4.45/5]
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]

Anahuac University, Mexico City

Winter 2020: Introduction to Machine Learning [[Syllabus](#)]

MIT

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

Wellesley College

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

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

World Bank

Winter 2019: Introduction to Machine Learning [\[Syllabus\]](#)

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

PROFESSIONAL SERVICE

Ad Hoc Referee: *MIS Quarterly, Management Science, Review of Economic Studies, World Bank Economic Review, Journal of Business Analytics, PLOS ONE, ICIS 2020, Social Sciences & Humanities Open, Journal of the European Economic Association*

Editorial Board: *Journal of Business Analytics*

Program Committee: ACM (Association for Computing Machinery) Conference on Computing and Sustainable Societies (ACM COMPASS 2020), 2020

Panel Organizer: Inter-American Development Bank (Big Data for Migration) 2019; 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	2018-20
Reviewer: Kay Family Foundation Data Analytics Grant	2018
Reviewer: Faculty Opportunity Fund	2020
Judge: American Statistical Association Southern California DataFest	2018, 2019

FELLOWSHIPS AND AWARDS

Chapman University Faculty Opportunity Fund “Spotting Violence from Space: The Detection of Housing Destruction in Syria” (\$13,460)	2019
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

INDUSTRY ADVISING

Introduction to Machine Learning, Statistical Institute of Belize, 2019 [link](#)
[DoubleCheck Solutions](#) (Member, Analytics Advisory Board)
[Lander Analytics](#)
 Arconic (Introduction to Deep Learning Mini-Course) [\[Syllabus\]](#)

OTHER PUBLIC TALKS

[How to Start a Data Science Insurrection at an Organization that Would Prefer You Not], [DC R Conference], November 9, 2018

Applications of Machine Learning to Development Economics Research, June 8, 2018 [slides]

“[Applying Deep Learning to Satellite Images to Estimate Violence in Syria and Poverty in Mexico]”, [New York R Conference], April 21, 2018

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, PyTorch, Keras

REFERENCES

Marshall Van Alstyne Boston University Phone: (617) 358-3571 mva@bu.edu	Michael D Smith Carnegie Mellon Phone: (412) 268-5978 mds@cmu.edu	Sam Bazzi Boston University Phone: (617) 353-6150 sbazzi@bu.edu
Ray Fisman Boston University Phone:(617) 353-6821 rfisman@bu.edu	Azer Bestavros Boston University Phone: (617) 353-9726 best@bu.edu	(Teaching) Daniel Hidalgo MIT Phone: (617) 253-5262 dhidalgo@mit.edu
