

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 2019-21

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

PEER-REVIEWED PUBLICATIONS

(4) Hersh, J., Engstrom, R., & Mann, M. (2020). [Open data for algorithms: mapping poverty in Belize using open satellite derived features and machine learning](#). **Information Technology for Development**, 1-30.

(3) Danaher B, Hersh J, Smith M, and Telang R. (2020). [The Effect of Piracy Website Blocking on Consumer Behavior](#) **MIS Quarterly**, 44:2

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

(1) Bettenhausen B., Hanss E., Hersh J., and Villarreal C. (2014). [Historical Health Conditions in Major US Cities: The HUE Data Set](#) **Historical Methods**, 47: 67-80.

PAPERS WITH EDITORIAL DECISIONS

Mueller M., Groger A., Hersh J., Matranga A., Serrat J. Analyzing Conflict From Space: Identification of Physical Destruction During the Syrian Civil War with Artificial Intelligence [[Arxiv Version](#)] *Revisions requested at Proceedings of the National Academic of Sciences*

Benzell, S., Hersh J. Lagarda Cuervas, G., Van Alstyne M.V. (2018). [The Paradox of Openness: Exposure vs. Efficiency of APIs](#), with Seth Benzell, Guillermo Lagarda Cuervas, and Marshall Van Alstyne. *Reject and resubmit, Management Science*

Engstrom R., Hersh J., Newhouse D., (2017). [Poverty from Space: Using High Resolution Satellite Imagery for Estimating Economic Well-being](#), *2nd round revisions requested, World Bank Economic Review*

Hersh J., and Voth H.J. (2018). [Sweet Diversity: Overseas Trade and Gains from Variety after 1492](#), with Hans-Joachim Voth. *2nd round revisions requested, Explorations in Economic History*

SUBMITTED PAPERS

Danaher B., and Hersh J. (2020). [Whom Should Antipiracy Enforcement Actions Target? Evidence from the MegafilmesHD Shutdown in Brazil](#), *Under review*

Hersh J., Lang B., and Lang M. (2020). [Digitally Distracted at the Wheel: Myopic Smartphone Use and Car Accidents](#), *Under review*

WORK IN PROGRESS

Hersh J. Carter S., Estevez A., Estevez M., Riba J.P. (2020). [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

Newhouse D., Babenko B., Hersh J., Ramakrishnan A., Swartz T., 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) Babenko B., Hersh J., Newhouse D., Ramakrishnan A., and Swartz T.. [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., Copenhagen 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

Do Managers Trust Algorithms for High Stakes Decisions? A Machine Learning Decision Support Tool for Estimating Delays in Multi Million Dollar Loans

INFORMS Conference on Information Systems & Technology (CIST) 2020

Digitally Distracted at the Wheel: Myopic Smartphone Use and Car Accidents

Anahuac University, Mexico (2/2020)
Federal Communications Commission (9/2019)
*American Economic Association Annual Meeting (1/2019)
*UC Riverside (2018)

Whom Should Antipiracy Enforcement Actions Target? Evidence from the MegafilmesHD Shutdown in Brazil
Statistical Challenges in E-Commerce Research (2019)

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

*Berkeley (2020)
*ENS Lyon (2019)
*Trinity College (2019)
*Uppsala ViEWS (2019)
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)

* Denote presentation by co-author

TEACHING

Chapman University, MGSC 310: Statistical Models in Business Analytics (Introduction to Machine Learning)

Fall 2020 (x2)[[Syllabus](#)] [Instructor rating: 4.27/5]
Fall 2019 (x2) [Instructor rating: 4.32/5]

Chapman University, BUS 696: Special Topics in Business (Machine Learning for Managers)

Fall 2020[[Syllabus](#)] [Instructor rating: 4.49/5]
Fall 2019 [Instructor rating: 3.49/5]

Chapman University, ECON 441: Development Economics

Fall 2018 [*Instructor rating: 4.45/5*] [[Syllabus](#)]

Spring 2018 [*Instructor rating: 3.81/5*]

Chapman University, MGSC 207: Introduction to Business Analytics

Fall 2017 [*Instructor rating: 4.21/5*] [[Syllabus](#)]

Anahuac University, Mexico City, Introduction to Machine Learning

Winter 2020 [[Syllabus](#)]

MIT, Quantitative Research Methods III (Political Science PhD quantitative sequence)

Fall 2017 [[Syllabus](#)]

Wellesley College, Development Economics

Spring 2016, [[Syllabus](#)] [92.8% course recommend/strongly recommend/neutral]

Wellesley College, Introductory Microeconomics

Spring 2016 (x2) [[Syllabus](#)] [95.2% course recommend/strongly recommend/neutral]

World Bank, Introduction to Machine Learning

Winter 2019, [*Instructor rating: 6.23/7*]

Summer 2018, [*Instructor rating: 6.07/7*]

Summer 2017, [*Instructor rating: 6.64/7*]

Summer 2016

PROFESSIONAL SERVICE

Ad Hoc Referee: *Economic Inquiry*, *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

2019-2020

Management Science hiring committee

Reviewer, Faculty Opportunity Fund University Grant

Academic Advisor, Data Analytics Accelerator

2018-2019

Graduate and MBA Academic Committee Member

Judge, American Statistical Association Southern California DataFest

Management Science hiring committee

Judge, Panther Cage Match, Leatherby Center for Entrepreneurship and Business Ethics
2017-2018
Management Science hiring committee
Reviewer, Kay Family Foundation Data Analytics Grant
Graduate and MBA Academic Committee Member
Judge, American Statistical Association Southern California DataFest

FELLOWSHIPS AND AWARDS

Kay Family Foundation Data Analytics Grant, "Towards Responsive Social Safety Nets: Openly Derived Indicators as Proxies for Subnational Multi-Dimensional Vulnerability in Africa" (\$93,150) 2020-2022
Chapman University Faculty Opportunity Fund (\$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, Central Bank of Belize, 2020 [link](#)
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
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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
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