

ALMA GRACIC

<https://www.almagravic.com>
agravic@bus.miami.edu

CONTACT INFORMATION

Miami Herbert Business School
523-A Jenkins Building, 5250 University Drive
Coral Gables, FL 33124-6520
Cell: +1 (904) 508-3838

EDUCATION

University of Miami, 2015-Present
Ph.D. Candidate in Economics
Thesis Title: “*Media Sentiment, Social Networks and Public Opinion*”
Expected Completion Date: May 2020

Earlham College, May 2013, B.A. in Chemistry
United World College, June 2009, International Baccalaureate (IB) Diploma

References:

Professor Christopher F. Parmeter (Chair)
Univ. of Miami Herbert Business School
cparmeter@bus.miami.edu
+1 (305) 284-4397

Professor Alex Horenstein
Univ. of Miami Herbert Business School
horenstein@bus.miami.edu
+1 (305) 284-1627

Professor Ayca Kaya
Univ. of Miami Herbert Business School
akaya@bus.miami.edu
+1 (305) 284-1626

RESEARCH INTERESTS

Applied Econometrics, Big Data Analytics, Behavioral Economics, Political Economy, Financial Economics, Social Networks, Predictive Modeling.

TEACHING EXPERIENCE

University of Miami, Miami USA

Instructor:

ECO 212 Principles of Macroeconomics (Mean overall student evaluation: 4.8/5)- Summer 2019

Teaching Assistant:

ECO 620 Econometrics- Fall 2016

ECO 443 Economic Analysis of Energy and Commodity Markets- Spring 2016, Spring 2017, Spring 2018

ECO 351 Economics of Development- Spring 2016, Spring 2017, Spring 2018

ECO 211 Principles of Microeconomics- Fall 2017, Fall 2018, Fall 2019

PROFESSIONAL WORK EXPERIENCE

R&D Research Associate, 2013-2015

VISTAKON, Division of Johnson & Johnson Vision Care, Inc.

Developed a highly technical set of skills working on a medical device project design in the field of ophthalmic devices (smart contact lenses).

Communications and Event Planning Intern, University City Science Center, Spring 2012

Assisted in creation of marketing material and worked on press releases for events happening at the Science Center during the Philadelphia Science Festival and Philly Tech Week.

Researcher, Department of Physics Earlham College, Summer 2012

Engaged in developing two projects related to molecular dynamics and molecular visualization. Performed steered molecular dynamics (SMD) simulations, using RMSD as a reaction coordinate and the AMBER force field, to assess both the stability of Z[WC]-DNA and to investigate the role of Z[WC] as an intermediate structure in the B-DNA to Z-DNA transition.

Researcher, Department of Chemistry Earlham College, Summer 2011

Conducted research that seeks to identify the effects of different synthetic environments (air or inert atmosphere) on the size and spectroscopic properties of quantum dots synthesized with different fatty acids; facilitated characterization by fluorescence and UV-Vis spectroscopy.

Academic Mentor and Tutor, Hecht Athletic Center University of Miami, 2015-2016

Responsible for advising, mentoring, and monitoring the academic progress of student-athletes.

PROFESSIONAL ACTIVITIES

- Poster Presenter at Big Data Conference, Miami, FL, December 2019, *Winner of the Third Place Poster Presentation*
- Presenter at the Southern Economic Association 89th Annual Meeting, Fort Lauderdale, FL, November 2019
- Chair and Presenter at the Missouri Valley Economic Association 56th Annual Conference, Kansas City, MO, October 2019
- Presenter at the 2nd Workshop in Applied and Theoretical Economics, Gainesville, FL, October 2019
- Presenter at YSI North America Convening, Los Angeles, CA, February 2019
- Presenter at Brown Bag Seminar, University of Miami, April 2019
- Discussant at Inequality by the Numbers Workshop, CUNY Graduate Center, NYC, June 2017
- Organizer of the Annual Research Conference and Science Conference, Earlham College, Richmond, IN, Spring 2013
- Member of the Senior Gift Committee, Earlham College, Richmond, IN, Spring 2013
- Presenter at the Science Conference, Earlham College, Richmond, IN, Fall 2012
- Presenter at the Undergraduate Research Conference, Butler University, Indianapolis, IN, Spring 2011
- Presenter at the Annual Research Conference, Earlham College, Richmond, IN, Spring 2011
- Poster Presenter at the 12th Annual ACS Local Section, Eli Lilly and Company, Indianapolis, IN, Fall 2011

- Participant of the Ford Knight Project in Mathematics and Social Justice, Department of Mathematics Earlham College, Richmond, IN, Spring 2011

HONORS, SCHOLARSHIPS AND FELLOWSHIPS

- Economics Research Fellowship, University of Miami, 2015–2020
- The Shelby Davis Scholarship, United World College Scholars Program, 2007-2013
- Earlham International Scholarship, Earlham College, 2009-2013
- YSI Travel Stipend, Institute for New Economic Thinking, 2019
- Bosnia & Herzegovina Mathematics Competition, Regional First Place, 2005

TECHNICAL SKILLS

Python, R, R Studio, Matlab, LaTeX, Microsoft Office

LANGUAGES

English (fluent), Bosnian/Serbian/Croatian (native), Spanish (advanced), German (beginner)

INTERESTS

Technology, Current Affairs, Kickboxing, Reading, Travelling, Volunteering, Interior Design

RESEARCH PAPERS

“News Sentiment and Network Effects” (JMP)

Abstract: Timely understanding of public perception is of vital importance for policymakers, as this measure influences how they respond to public issues. I use the wealth of data available from Twitter to measure public opinion that is traditionally captured with time consuming and expensive surveys. In particular, this study focuses on improving forecasting performance of social and economic activities, such as daily presidential approval ratings, through machine learning techniques. It measures media sentiment shocks and evaluates the network effects via both active (retweets) and passive (favorites) network activities. Additionally, I build a neural network to account for nonlinearity in emotion-based predictions. I train the sentiment index measured from news and its network response on measures available from polls, and find that using social media data can establish a presidential approval index in real-time and with more precision. I also find that shocks in media sentiments have a more immediate effect, while network predictors have a longer lasting impact. Granger analysis shows that the past values of the media sentiment and its network effects are important beyond past values of the approval index alone. Results indicate that the model can successfully classify the public’s opinions and emotions. In the second part of the paper I evaluate the effects of “self-promotion”. Results suggest that signals found in the sentiment and the network response to the President’s own tweets are predecessors to the same effects in media, and consequently to the President’s approval index.

“Markets and Customer Confidence: Analysis of Economic and Financial News and Social Network Signals”

Abstract: Through the opinion mining approach, I test whether a data-driven model of opinion dynamics is able to accurately forecast public sentiment from active online participants. I construct daily economic and market sentiment indices to evaluate if network signals have predictive capabilities of economic indicators. Results indicate that volatility index is best predicted with short term rolling averages of three days. For the consumer confidence index, a longer time frame is needed, up to four weeks, as customers are much more dependent on macroeconomic factors than short term market fluctuations. Hence, findings suggest that we can have interim snapshots, by using social media, as long as we adjust the windows and properly select keywords.