

# Michael J. Lopez

## Assistant Professor of Statistics, Skidmore College

815 North Broadway | Harder Hall | Saratoga Springs | NY | 12866  
*email:* mlopez1@skidmore.edu | *phone:* 978-407-2221 | *twitter:* @StatsByLopez

### Education

---

#### **Ph.D., Biostatistics, Brown University**, Providence, RI (2014)

Dissertation: Causal Inference for Multiple Treatments

Adviser: Roee Gutman, PhD

#### **M.S., Statistics, University of Massachusetts**, Amherst, MA (2010)

Mu Sigma Rho

#### **B.A. Mathematics, Bates College**, Lewiston, ME (2004)

Phi Beta Kappa, Rhodes Scholar state finalist

Senior thesis: "Nomar or Derek? Statistical Analysis in Baseball"

### Selected Honors

---

- Joint Statistical Meetings (JSM)
  - Student paper award winner, Health Policy Statistics Section, 2013 (Montreal)
  - Student paper award winner, Health Policy Statistics Section, 2014 (Boston)
- Sloan Sports Analytics Conference: Best research paper finalist (top-16 of 300), 2014
- "March Mania" Kaggle machine learning contest, 2014, first-place prize (of 400+ entrants)
- Bates College Lindholm Scholar Athlete of the Year, 2004
  - Given to most outstanding scholar-athlete in graduating class

### Teaching Experience

---

#### **Skidmore College**

- "Intro to Statistics", Fall 2014
- "Intermediate Data Analysis," Fall 2014

#### **Brown University**

- "Applied Statistics", Summer 2013
- "Introduction to Mathematical Statistics: bootcamp for incoming students", Summer 2012, 2013
- "Introduction to Biostatistics", Fall 2011-Spring 2013 (Teaching Assistant)

#### **University of Massachusetts, Worcester**

- "Introduction to Clinical Epidemiology (Biostatistics portion)", Summer 2014

## University of Massachusetts-Amherst

- “Elementary Statistics”, Summer 2009
- “Elementary Statistics”, Fall 2009-Spring 2010 (Teaching Assistant)

## Mt. Holyoke College

- Grader, substitute lecturer for “Probability” with G. Cobb, Spring 2010
- Grader, substitute lecturer for “Linear Models” with G. Cobb, Spring 2010

## Framingham High School

- High school math teacher, 2005-2008 (AP Statistics, Geometry, Algebra I/II)
- Among over 200 faculty, named “Best teacher” and “Teacher whose class we are least likely to skip” by the graduating class of 2008

## Publications, Talks, and Posters

---

### Refereed Publications (in press)

- **Michael J. Lopez**, “Inefficiencies in the National Hockey League’s Points System and the Teams that Take Advantage,” *Journal of Sports Economics*, 2013.
- Jeffrey Guenette, **Michael J. Lopez**, Eunhee Kim, Damian Dupuy, “Correlation of Imaging-Features with Pain Palliation Following Radiofrequency Ablation of Solitary Painful Osseous Metastases,” *Radiology*, 2013
- **Michael J. Lopez**, Kevin Snyder, “Biased Impartiality Among National Hockey League Referees,” *International Journal of Sport Finance*, 2013
- Susanna E Winston, Brian T Montague, **Michael J. Lopez**, Allison Delong, Chloe Le Marchand, Armando Bedoya, Fizza Gillani and Curt G Beckwith, “Evaluation of longitudinal clinical outcomes and adherence to care among HIV-infected refugees,” *Journal of the International Association of Physicians in AIDS Care*, 2012.

### Refereed Publications (in production)

- **Michael J. Lopez**, Roeel Gutman, “Nutritional Label Use and Body Mass Index: Causal Inference Under Multiple Exposures,” Status: Under review, Joint Statistical Meetings 2013 Student Paper winner
- **Michael J. Lopez**, Roeel Gutman, “Vector Matching to estimate the causal effects of multiple treatments,” Status: In progress, Joint Statistical Meetings 2014 Student Paper winner
- **Michael J. Lopez**, Mark Morabito, “Changes in on-ice behavior associated with the National Hockey League’s points system,” Status: Submitted

- Zachary Drapkin, Kristen Lindgren, **Michael J. Lopez**, Maureen Estevez, “The assessment of a newly-developed interactive, computerized MRI training tool for teaching 3-dimensional neuroanatomy to undergraduate medical students,” Status: Submitted
- Lucas Breen, Madeleine Cook, **Michael J. Lopez**, Lulu Cao, James Clifton, LM Camara, Maja Pucic Bakovic, Gordan Lauc, Damian Dupuy, Djuro Josic, “IgG Glycosylation Patterns in Patients Undergoing Image-Guided Tumor Ablation,” Status: Submitted
- Edwin Sang, Joe Hogan, **Michael J. Lopez** et al. “Role of Food Assistance in Treatment Adherence and Survival Among HIV-infected Patients on Antiretroviral Therapy in Western Kenya,” Status: In progress.
- Kevin Snyder, **Michael J. Lopez**, “Players, passivity, and penalties; a study of aggression in the NFL,” Status: Submitted

### Non-Refereed Publications

- **Michael J. Lopez**, Matt Gagne, “The case for 3-point wins,” *Sports Illustrated*. April 29, 2013.
- **Michael J. Lopez**, “Three-point rule a slam dunk,” *Hockey News*. July, 2013.
- **Michael J. Lopez**, Adrian Esparza, Michael Lavine, and Jenna Marquard, “Your textbook can’t help you here - applying traditional methods to atypical data,” *Chance*, 2014
- **Michael J. Lopez**, “How the NFL’s Parity is Somewhat of a Hoax,” *Sloan Sports Analytics Conference website*. January, 2014.
- **Michael J. Lopez**, “And Albuquerque is Where? The Effect of Travel Distance on NCAA Tournament Play,” TeamRankings.com. March 2012. Web.
- **Michael J. Lopez**, “When is a Win More Than a Win? Using Round of 64 Games to Predict Tournament Success,” TeamRankings.com. March 2012. Web.

### Invited Talks

- UMass Medical School, July 2014: “Causal inference with multiple treatments”
- Skidmore College, February 2014: “Nutritional Labels: Worth the read?”
- American College of Radiology Imaging Network, Brown University, May, 2013 “Using imaging features to predict metastasis outcomes”
- Brown University HIV working group, June 2011: “Access to HIV care among refugees in Rhode Island”

### Conference Talks

- Joint Statistical Meetings, 2014: “Matching on a vector to estimate the causal effects of multiple treatments”
- Joint Statistical Meetings, 2013: “Causal effects of nutritional label use using subclassification and regression”
- New England Symposium on Statistics, 2012: “Nutritional Labels and BMI: Causal inference in the multiple exposure setting”

- New England Mathematical Association of America, 2002 “The Babylonians had it first; floating point arithmetic in the Babylonian number system”

## Posters

- Sloan Sports Analytics Conference, 2014: “Tilted Ice: How certain National Hockey League teams are manipulating the league’s point system”
- Atlantic Causal Inference Conference, 2014: “Matching on a Vector to Estimate Causal Effects of Multiple Treatments”
- Brown Public Health Day, 2013, “Matching on a Vector to Estimate Causal Effects of Multiple Treatments”
- New England Symposium on Sports and Statistics, 2013 “Players, passivity, and penalties: a study of aggression in the NFL”
- New England Symposium on Statistics, 2013: “Nutritional Labels and BMI: Causal inference in the multiple exposure setting”
- New England Symposium on Sports and Statistics, 2011: “Hey Ref, you owe us one!” Make up Calls in Professional Hockey”

## Grants/Fellowships

---

- F31 pre-doctoral fellowship, National Institute on Aging
  - Period: September, 2013-current
  - Title: “Treatment choice for an aging population: Causal inference with multiple treatments”
  - Role: Principal Investigator
- Brown University June Rockwell Levy Fellowship
  - Awarded to two students in the Bio-Med program for outstanding promise
  - Period: September, 2011-August, 2012

## Refereeing (ad-hoc)

---

- Journal of Quantitative Analysis in Sports
- Journal of the American Statistical Association
- Journal of Statistics Education

## Skills, Service, & Certifications

---

- Proficient in R, SAS, STATA
- Brown University Sheridan Teaching Center
  - Certificate I: Reflective Teaching Practice
  - Certificate III: Professional Development Seminar
- Brown University Responsible Conduct in Research Training
- Human Subjects Research certified (CITI program)
- Promys For Teachers, Boston University, 2006
- Brown University: Atlantic Causal Inference Conference 2014 planning committee