

MATTEO BONVINI

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Via Santa Franca 63
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EDUCATION

Carnegie Mellon University

Ph.D. candidate in Statistics.
M.S. in Statistics

Pittsburgh, PA
Expected May 2022
December 2019

Harvard University

B.A. *cum laude* and high honors in Statistics. Thesis: A Study on Tests of MCAR.

Cambridge, MA
May 2016

RESEARCH EXPERIENCE

Carnegie Mellon University, Department of Statistics & Data Science

Ph.D. Researcher (Advisor: Edward Kennedy)

Pittsburgh, PA
August 2017 – present

- Work on novel sensitivity analysis framework; derive new estimators for treatment effects on the treated with noncompliance; investigate bandwidth choice in the context of regression discontinuity designs.

Advanced Data Analysis Project (Advisor: Edward Kennedy, Co-Advisor: Lindsay Page)

November 2017 – December 2018

- Estimated causal effects from experiment in education with multivariate treatment and partial compliance.

Massachusetts Institute of Technology, Critical Data

Member

Cambridge, MA
January 2016 – September 2017

- Worked on modeling baseline serum creatinine values for patients in the ICU using machine learning algorithms.

Harvard University, Department of Statistics

Independent Research Projects (Advisor: Victoria Liublinska)

Cambridge, MA
December 2013 – April 2016

- Formulated extensions to existing MCAR tests and studied their performances in simulations (Mar. 2015 – Apr. 2016).
Performed simulations on model selection criteria (Dec. 2013 – Jun. 2014).

Harvard Business School

Research Assistant for Professors Josh Lerner (HBS), Erin Scott (NUS), Pian Shu (HBS)

Cambridge, MA
June 2014 – December 2015

- Summarized literature and analyzed data on the relationship between professor attributes and student achievement.
Analysis for the project “Transitions into Entrepreneurship and Career Progressions of HBS Alumni” (Jun. – Aug. 2014).

WORK EXPERIENCE

Cornerstone Research

Analyst

Boston, MA
June 2015 – June 2017

- Worked closely with industry experts to estimate damages for commercial litigations. Conducted “but-for” analyses to assess causal claims made during the litigation process. Co-edited expert reports for litigations in the pharmaceutical and financial services industries (Sept. 2016 – Jun. 2017).
- Worked as a summer analyst on litigations in the financial services and pharmaceutical industries (Jun. – Aug. 2015).

TEACHING EXPERIENCE

Carnegie Mellon University, Department of Statistics & Data Science

Primary Instructor

- Introduction to Statistical Inference (36-226)

Summer 2019

Teaching Assistant

- Undergraduate Advanced Data Analysis (Head TA) (36-402)
- Statistical Graphics and Visualization (36-315)
- Statistical Graphics and Visualization (36-315)

Spring 2019

Spring 2018

Fall 2017

AWARDS & HONORS

Academic & Research

- Harvard Business School PRIMO Fellowship
- Harvard College Scholar

Summer 2014
2013 – 2014

Teaching

- Carnegie Mellon University, Department of Statistics & Data Science “Best TA of the Year” Award Spring 2019

SKILLS

Languages: Italian (native language), fluent English and conversational French.

Computer: R, STATA, SAS, Python, MATLAB, LaTeX. Familiar with AMPL, OCaml, and Java.

REFeree SERVICE

Statistical & Methodological Journals

International Journal of Biostatistics, Journal of the Royal Statistical Society: Series B, Statistics in Medicine.

Medical & Other Scientific Journals

Circulation.

PUBLICATIONS & MANUSCRIPTS

5. **Bonvini, M.** and Kennedy, E. H.. Sensitivity analysis via the proportion of unmeasured confounding. *arXiv preprint arXiv:1912.02793*, 2019.

4. Dauvin, A., Donado C., Bachtiger, P., Huang, K., Sauer, C. M., Ramazzotti, D., **Bonvini, M.**, and Celi, L.A.. Machine learning can accurately predict pre-admission baseline hemoglobin and creatinine in intensive care patients. *npj Digital Medicine*, 2 (1), 1-10, 2019.

3. Pricolo, V. E., Viani, K., **Bonvini, M.**, Abelli, C. and McDuffie, T.. Challenges in management of squamous cell carcinoma of the anus in New England and across the United States - a review of the National Cancer Data Base. *American Journal of Clinical Oncology*, 41 (7), 662-666, 2018.

2. Pricolo, V. E., **Bonvini, M.** and Abelli, C.. Patterns of care for anal cancer in the United States: a comparison between academic and community cancer centers. *BMC Cancer*, 18 (1), 567, 2018.

1. Pricolo, V. E., Fei, P., Crowley, S., Camisa, V. and **Bonvini, M.**. A novel enhanced recovery protocol for colectomy, combining multimodal analgesia with pharmacologic intervention, reduces postoperative opioids use and hospital length of stay. *International Journal of Surgery Open*, 13, 24-28, 2018.

INVITED CONFERENCE PRESENTATIONS

5. International Conference on Computational & Methodological Statistics, London, United Kingdom. (12/2019)

4. Joint Statistical Meetings, Denver, CO. (7/2019).

3. Atlantic Causal Inference Conference, Montreal, Canada (5/2019).

2. Joint Statistical Meetings, Vancouver, Canada. (8/2018).

1. Atlantic Causal Inference Conference, Pittsburgh, PA (5/2018).