

Eric A. Dunipace

✉ edunipace@mail.harvard.edu
📍 [ericdunipace](https://ericdunipace.github.io)
<https://ericdunipace.github.io>

Psychiatry Resident

Education

- 2023 **Doctor of Medicine**, *David Geffen School of Medicine*, UCLA.
- 2021 **Doctor of Philosophy**, *Biostatistics*, Harvard University.
- 2019 **Master of Arts**, *Biostatistics*, Harvard University.
- 2014 **Master of Science**, *Global Health and Population*, Harvard University.
- 2008 **Bachelor of Arts with Honors**, *Molecular and Cell Biology*, University of California, Berkeley.

Publications

- 2022 Ngamdu, K. S., Mallawaarachchi, I., Dunipace, E. A., Chuang, L.-H., Jafri, S. H., Shah, N. R., Jeong, Y. N., & Morrison, A. R. (2022). Association between periodontal disease and cardiovascular disease using publicly available data from the national health and nutrition examination survey (NHANES). *The American Journal of Cardiology*.
- 2018 Huang, W. A., Dunipace, E. A., Sorg, J. M., & Vaseghi, M. (2018). Liver disease as a predictor of new onset atrial fibrillation. *Journal of the American Heart Association*, 7(15). <https://www.ahajournals.org/doi/10.1161/JAHA.118.008703>
- 2014 Moussally, J., Dunipace, E., & Fu, R. (2014). TraumaLink: Helping people survive traffic accidents in Bangladesh, In *health and South Asia*. Cambridge, Massachusetts, The Lakshmi Mittal South Asia Institute at Harvard University.
- 2011 Lightfield, K., Persson, J., Trinidad, N., Brubaker, S., Kofoed, E., Sauer, J.-D., Dunipace, E., Warren, S., Miao, E., & Vance, R. (2011). Differential requirements for NAIP5 in activation of the NLRC4 inflammasome. *Infection and Immunity*, 79(4). <https://doi.org/10.1128/IAI.01187-10>
- 2008 Lightfield, K., Persson, J., Brubaker, S., Witte, C., von Moltke, J., Dunipace, E., Henry, T., Sun, Y.-H., Cado, D., Dietrich, W., Monack, D., Tsolis, R., & Vance, R. (2008). Critical function for Naip5 in inflammasome activation by a conserved carboxy-terminal domain of flagellin. *Nature Immunology*, 9(10). <https://doi.org/10.1038/ni.1646>

Submitted Papers

- 2022 Dunipace, E. A. (2022a). Graph-based tests for multivariate covariate balance under multi-valued treatments. <https://arxiv.org/abs/2207.10855>
- 2022 Dunipace, E. A. (2022b). Optimal transport weights for causal inference. <https://arxiv.org/abs/2109.01991>
- 2021 Dunipace, E. A., & Trippa, L. (2021). Interpretable model summaries using the wasserstein distance, 1–42. <https://arxiv.org/abs/2012.09999>

Invited Presentations

- Feb. 2023 *Optimal Transport Weights for Causal Inference*, Missing Values & Causal Inference Virtual Seminar. École Polytechnique and Université de Montpellier. Paris/Montpellier, France.
- Dec. 2022 *Optimal Transport Weights for Causal Inference*, CMStatistics 2022. King's College, London, UK
- Oct. 2021 *Interpretable Posterior Summaries Using the Wasserstein Distance*, Research Frontiers in Biomathematics seminar series. UCLA. Los Angeles, CA

Conference Presentations

- 2022 *Cavernous Sinus Metastasis of p16-Tonsillar Squamous Cell Carcinoma: A Diagnostic Challenge*, Combined Section Meetings of the Triological Society. Coronado, CA
- 2020 *Optimal transport weights for causal inference*, Joint Statistical Meetings. Online

- 2019 *Interpretable Posterior Summaries Using the Wasserstein Distance*, Joint Statistical Meetings. Denver, CO
- 2015 *Connecting Californians to Care*, Network of Ethnic Physician Organization Summit. Riverside, CA

Doctoral Thesis

Title *Optimal Transport Methods for Causal Inference, Multisample Testing, and Model Interpretation*
Advisors José R. Zubizarreta and Lorenzo Trippa
Year 2021

Master's Thesis

Title *Estimating the Causal Effects of the Maternal Health Voucher Program in Bangladesh*
Advisor Goodarz Danaei
Year 2014

Bachelor's Thesis

Title *Role of Naip5 and Flagellin in Innate Immune Responses to Legionella pneumophila and Salmonella typhimurium*
Advisor Russell Vance
Year 2008

Awards and Scholarships

- 2018 Certificate of Distinction in Teaching, Department of Biostatistics, Harvard University
- 2014 David Geffen Scholarship, David Geffen School of Medicine, UCLA
- 2013 Global Health and Population Departmental Scholarship, Harvard University
- 2013 Deans' Health and Life Sciences Challenge Finalist, Harvard University
- 2013 South Asia Institute Summer Research Grant, Harvard University
- 2013 Maternal Health Task Force Summer Internship, Harvard University
- 2011 Oscar Geballe Postgraduate Scholarship, Department of Intercollegiate Athletics, UC Berkeley
- 2008 Outstanding Immunologist, Department of Molecular and Cell Biology, UC Berkeley
- 2008 Best Recruiter, Cal Men's Swim Team, UC Berkeley

Software

- R **approxOT**: approximate optimal transport library
- R **causalOT**: optimal transport methods for weighting in causal inference
- R **graphTest**: graph-based multisample testing
- R **RcppCGAL**: header files for the CGAL library
- R **WpProj**: Wasserstein projections for interpretable models

Teaching as Primary Instructor

- Summer 2020 **Biostatistics Summer Prep Program for Incoming PhD Students**, *Harvard University*.
- Summer 2019 **StatStart Instructor**, *Harvard University*.

Teaching as Teaching Fellow

- Fall 2020 **Department of Biostatistics Tutor at Large**, *Harvard University*.
- Fall 2019 **Biostatistics 260: Introduction to Data Science**, *Harvard University*.
- Summer 2019 **Data Science in Action: Convolutional Neural Networks for Self Driving Cars**, *Harvard University*.
- Spring 2019 **Biostatistics 210: Applied Regression Analysis**, *Harvard University*.
- Fall 2018 **ID 201: Core Principles of Biostatistics and Epidemiology**, *Harvard University*.
- Fall 2018 **Biostatistics 210: Applied Regression Analysis**, *Harvard University*.

Positions

- 2023–Present **Resident Physician**, *Department of Psychiatry and Behavioral Sciences*, Stanford University.
- 2013–Present **Co-Founder and Vice President of Impact Evaluation**, *TraumaLink*, Dhaka, Bangladesh.
- 2015–2016 **Co-President**, *Connecting Californians to Care*, Los Angeles, CA.
- 2013 **Research Assistant**, *Global Fund to Fight Aids, Tuberculosis and Malaria*.
- 2013 **Student Summer Fellowship**, *Population Council*, Dhaka, Bangladesh.
- 2012 **Volunteer**, *Ambassadors for Sustained Health*, New York City, NY.
- 2011–2012 **HIV Test Councilor**, *GMHC*, New York City, NY.
- 2011–2012 **MCAT Instructor**, *Kaplan*, New York City, NY.
- 2011 **Research Library Volunteer**, *GMHC*, New York City, NY.
- 2010–2012 **Swim Instructor and Office Staff**, *Imagine Swimming*, New York City, NY.
- 2008–2010 **Research Associate**, *Aurora Algae, Inc. (Defunct)*, Alameda, CA.
- 2006–2008 **Research Assistant**, *Vance Lab*, Berkeley, CA.

Activities

- Consultant Biostatistics Student Consulting Center (2018–2021)
- Mentor Student Mentor, Department of Biostatistics (2020–2021)
- Referee *Trials* (2019–Present), *Harvard Public Health Review* (2019–2021)
- Tutor Department of Biostatistics (2017–2021)
- Extracurricular Big C Society (2008–Present), Folk-rock band (2008–2010), Cal Men's Swimming Team (2003–2008), Bear Student Athlete Advisory Committee (2006–2008)