Michele S. Zemplenyi

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SUMMARY

Biostatistician passionate about climate and sustainability issues with strong quantitative, leadership, and communication skills developed through research, consulting, teaching, and product management.

EDUCATION

Harvard University   Cambridge, MA
Ph.D., Biostatistics   2015 - 2020

- Dissertation Topic: "Statistical Methods for Environmental Epidemiology"
- Science & Innovation Fellow, Environmental Training Grant Fellow (NIH)
- Statistical Learning & Data Science Poster Award, Joint Statistical Meetings 2019
- 2020 Harvard T. H. Chan Teaching Assistant Award

Harvard University   Cambridge, MA
B.A., Statistics (Minor in Chemistry), summa cum laude, Phi Beta Kappa   2009 - 2013

- Hoopes Prize recipient for outstanding undergraduate thesis: "Design and Analysis of a Fractional Factorial Screening Experiment to Identify Small Molecule Inducers of Pancreatic β Cells"
- Awarded Certificate of Distinction in Teaching

WORK & LEADERSHIP EXPERIENCE

Urban Ocean Lab   Brooklyn, NY
Research Fellow   August 2020 – Present

- Develop policy recommendations for climate action plans and coastal resiliency initiatives to promote ocean-based solutions to climate change and protect coastal cities from sea-level rise

Bloomberg-Harvard City Leadership Initiative   Boston, MA
Covid-19 Recovery and Response Fellow   June – August 2020

- Performed comparative research on best practices for monitoring the impacts of Covid-19, as well as policy recommendations to support the city of Helsinki's economic recovery

Biostatistics Department, Harvard University   Boston, MA
Graduate Researcher (Advised by Dr. Brent Coull and Dr. Jeffrey Miller)   2016 - 2020

- Developed high-dimensional regression techniques for analyzing the effects of air pollution on human health and researched optimal Bayesian experimental design methods for discovery of gene networks

Harvard Center for Climate, Health, and the Global Environment   Boston, MA
Student Ambassador   2019 - 2020

- Co-authored an expert opinion on behalf of organizations petitioning the UK to strengthen the Clear Air Strategy in light of the Covid-19 pandemic
- Presented opportunities for increased climate education and training at the School of Public Health

Biostatistics Student Consulting Center   Boston, MA
President   2018 - 2020

- Manage and train a team of 25 consultants who handle 150 inquiries / year from student researchers at Harvard Medical School and Harvard T. H. Chan School of Public Health
- Secured funding for the Center by demonstrating its effectiveness to school leadership

Harvard Forward Campaign   Boston, MA
City Coordinator   2019 - 2020
- Organize outreach to Harvard alumni to support nominees to the Harvard Board of Overseers on a platform of increased funding for climate research and divestment from fossil fuels

Massachusetts Eye and Ear   Boston, MA
Statistician   2019 - Present
- Performed statistical analysis to evaluate effectiveness of eye imaging procedures in detecting glaucoma progression and predicting optic disc hemorrhage
- Contributed tables, figures, and writing for manuscripts in preparation for ophthalmology journals

New England Journal of Medicine   Boston, MA
Statistical Consultant   2018 - 2019
- Performed analyses to screen clinical trials for possible violations of randomization

Applied Predictive Technologies   Arlington, VA
Associate Product Manager   2013 - 2015
- Led engineering teams by creating product requirements to meet clients' needs and deadlines
- Designed software features and implemented new data visualization and modeling tools

TEACHING EXPERIENCE

Biostatistics Department, Harvard University   Boston, MA
Teaching Assistant   2016 - 2019
- Recipient of 2020 Harvard T. H. Chan School Teaching Assistant Award
- Created assignments, exams, and projects for five statistical courses taken by graduate students in public health ranging in size from 10-90 students
- Conducted weekly lab sessions and office hours to help students synthesize material

StatStart Summer Program   Boston, MA
Organizer & Teacher   2018 - 2019
- Revised curriculum and taught summer program for underrepresented high school students in STEM

SELECTED PUBLICATIONS

Zemplenyi M, et al. Function-on-Function Regression for the Identification of Epigenetic Regions Exhibiting Windows of Susceptibility to Environmental Exposures. To appear in *Annals of Applied Statistics*; pre-print: https://arxiv.org/abs/1912.07359.

Zhong J, Karlsson O, Wang G, Li J, Guo Y, Lin X, **Zemplenyi M**, Sanchez-Guerra M, Trevisi L, Urch B, Speck M, Liang L, Coull BA, Koutrakis P, Silverman F, Gold DR, Wu T, Baccarelli AA. B vitamins attenuate the epigenetic effects of ambient fine particles in a pilot human intervention trial, *PNAS*. 114 (13) (2017) 3503-3508.

Zurayk LF, Cheng KL, **Zemplenyi M**, Burke A, Dillon JK. Perceptions of Sexual Harassment in Oral and Maxillofacial Surgery Training and Practice, Journal of Oral and Maxillofacial Surgery. Published online August 29, 2019.

SKILLS & AFFILIATIONS

Technical: R, Matlab, Linux computing, Microsoft Office, JIRA. Experience with Python, SQL, Stata, Github
Languages: conversational Spanish, beginning Czech
Affiliations: Graduate Environmental Action Team, Harvard Graduate Student Science Policy Group, Union of Concerned Scientists Science Network, Citizen's Climate Lobby