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 May 2020

- Dissertation Topic: "Statistical Methods for Environmental Epidemiology"
- Djokovic 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 May 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

RESEARCH & LEADERSHIP EXPERIENCE

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

- Perform 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

- Report on climate-related research and funding in the biostatistics department to Center leadership
- Present opportunities for increased climate education and training at the School of Public Health

Biostatistics Student Consulting Center Boston, MA
President 2018 - Present

- 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 - Present

- 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

- 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
- Recipient of 2020 Harvard T. H. Chan School Teaching Assistant Award

StatStart Summer Program Boston, MA
Teacher 2018 - 2019

- Revised curriculum and organized 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. Under Review at *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.

Oppenheimer A, Bellinger D, Coull BA, Weisskopf M, **Zemplenyi** M, Korrick SA. Prenatal exposure to chemical mixtures and inhibitory control among adolescents in the New Bedford Cohort. In progress.

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