

Lily Koffman

BIOSTATISTICS PHD CANDIDATE · JOHNS HOPKINS BLOOMBERG SCHOOL OF PUBLIC HEALTH

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Education

Johns Hopkins Bloomberg School of Public Health

Baltimore, MD

2021 - present

PHD CANDIDATE IN BIOSTATISTICS

- Advisor: Dr. Ciprian Crainiceanu
- Anticipated graduation spring 2026
- Dissertation topic: methods for analyzing and processing high-density data

Harvard TH Chan School of Public Health

Boston, MA

2019-2021

MS BIOSTATISTICS

- Research advisor: Dr. Sébastien Haneuse

Harvard University

Cambridge, MA

2015-2019

AB STATISTICS

- Thesis research advisor: Kevin Rader

Publications

PUBLISHED & PEER REVIEWED

Goeddel, L., Hernandez, M., **Koffman, L.**, et. al. 2025. Fine-Mapping the Association of Acute Kidney Injury with Mean Arterial and Central Venous Pressures during Coronary Artery Bypass Surgery. *Anesthesia & Analgesia*

Gao, S., Zhou, X., **Koffman, L.** et al. 2025. Comparing step counting algorithms for high-resolution wrist accelerometry data in older adults in the ARIC study. *The Journals of Gerontology: Series A*.

Koffman, L., Crainiceanu, C.M., Muschelli, J. 2024. Comparing Step Counting Algorithms for High-Resolution Wrist Accelerometry Data in NHANES 2011-2014. *Medicine & Science in Sport & Exercise*.

Goeddel, L., Hernandez, M., **Koffman, L.** et. al. 2024. Assessment of Renal Vein Stasis Index by Transesophageal Echocardiography During Cardiac Surgery: A Feasibility Study. *Anesthesia & Analgesia*.

Goeddel, L., **Koffman, L.**, Hernandez, M. et. al. 2024. Occurrence of Low Cardiac Index During Normotensive Periods in Cardiac Surgery: A Prospective Cohort Study Using Continuous Noninvasive Cardiac Output Monitoring. *Anesthesia & Analgesia*.

Koffman, L., Muschelli, J. 2024. Evaluating Step Counting Algorithms on Subsecond Wrist-Worn Accelerometry: A Comparison Using Publicly Available Data Sets. *Journal for the Measurement of Physical Behaviour*.

Koffman, L., Crainiceanu, C.M., Leroux, A. 2024. Walking fingerprinting. *Journal of the Royal Statistical Society Series C: Applied Statistics*.

Koffman, L., Crainiceanu, C.M., Roemmich, R.T., French, M.A. 2023. Identifying Unique Subgroups of Individuals With Stroke Using Heart Rate and Steps to Characterize Physical Activity. *Journal of the American Heart Association*.

Lin J. J. Y., **Koffman, L.**, Tehrani, M. W., et al. 2023. Reliability of low mass toenail samples as biomarkers of chronic metal exposure. *Journal of Exposure Science and Environmental Epidemiology*.

Koffman, L., Zhang, Y., Harezlak, J., Crainiceanu, C.M., Leroux, A. 2023. Fingerprinting walking using wrist-worn accelerometers. *Gait & Posture*.

Koffman, L., Levis, A.W., Haneuse, S. et. al. 2021. Evaluation of Intensive Telephonic Nutritional and Lifestyle Counseling to Enhance Outcomes of Bariatric Surgery. *Obesity Surgery*.

Koffman, L., Levis, A.W., Arterburn, D. et. al 2021. Investigating Bias from Missing Data in an Electronic Health Records-Based Study of Weight Loss After Bariatric Surgery. *Obesity Surgery*.

PREPRINTS

Koffman, L. Muschelli, J., Crainiceanu, C.M. Walking Fingerprinting Using Wrist Accelerometry During Activities of Daily Living in NHANES. arXiv:2506.17160

Talks and Posters

CONTRIBUTED POSTERS

Koffman, L., Muschelli, J., Crainiceanu, C. Fingerprinting walking in a large epidemiological study. Poster: ENAR, New Orleans, LA.

Koffman, L., Crainiceanu, C., Roemmich, R., French, M.A. 2023. Identifying Unique Subgroups of Individuals Post-Stroke Using Heart Rate and Steps to Characterize Physical Activity. Poster: APTA-CSM, San Diego, CA.

Balasubramanian, A., French, M., **Koffman, L.**, et al. 2023. Classifying Physical Conditioning Using Remote Monitoring in Chronic Obstructive Pulmonary Disease. Poster. American Thoracic Society International Conference, Washington D.C.

TALKS

Walking Fingerprinting in a large epidemiological study. Building Future Faculty Workshop, NC State University, April 10, 2025* and Functional Data Working Group at Emory (FUDGE), April 15, 2025*

NHANES Accelerometry and Derivatives. BIRS: Emerging Statistical Methods for Digital Health Data, February 2025

Walking Fingerprinting. ENAR 2024 Spring Meeting

Application of Open-Source Step Counting Algorithms on Publicly-Available Data. Pre-ENAR Workshop: Statistical Methods for Digital Health Technologies Data, March 2024

A nonrandom sample of medical statistics. MedStar Health General Surgery Baltimore Grand Rounds, March 2024*

Livin' On the Edge: U.S. Ski & Snowboard's Competitive Edge via Analytics. Panelist: Comcast Sports Tech Webinar, Dec 2020*

*denotes invited talk

Professional Experience

Pfizer

Cambridge, MA
Summer 2024

STATISTICS INTERN

- AI/ML Quantitative and Digital Sciences Team
- Mentor: Nunzio Camerlingo
- Analysis of treatment effects using data collected from wearable digital health technologies

US Ski and Snowboard

Park City, UT
2019-2020

DATA & ANALYTICS INTERN WITH GUS KAEDING

- Prediction of alpine skiing performance from training data (article)
- Modeling of medal probabilities to inform funding decisions and team naming criteria
- Analysis of female participation in the American Birkebeiner
- Creation of app to visualize force plate output

Awards and Fellowships

- 2025 **Joseph Zeger Travel Award**, Johns Hopkins Bloomberg Department of Biostatistics
2019-2021 **Presidential Scholar**, Harvard TH Chan School of Public Health
2020 **WiST Fellowship**, Women in Sports Technology

Teaching Experience

- 2023-24 **Statistical Methods in Public Health**, Lead Teaching Assistant
Spring 2023 **Statistical Methods in Public Health**, Lead Teaching Assistant
Fall 2022 **Statistical Methods in Public Health**, Teaching Assistant

Leadership

- 2023-2025 **Wearable and Implantable Technology (WIT) Research Group**, Organizer
- 2025 **JHU Biostatistics Writing Accountability Group (WAG)**, Founder & Organizer
- 2025 **Mobile and Wearable Data Science ASA Interest Group**, Communications Officer
- 2019 **Harvard University Division I Nordic Ski Team**, Captain