



## Caleb Luke Mayer

Postdoctoral Scholar, Genetics

 Curriculum Vitae available Online

### Bio

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#### PROFESSIONAL EDUCATION

- Doctor of Philosophy, University of Michigan Ann Arbor (2023)
- BS, Haverford College (2018)

#### STANFORD ADVISORS

- Michael Snyder, Postdoctoral Faculty Sponsor

### Publications

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#### PUBLICATIONS

- **Predicting circadian phase in community-dwelling later-life adults using actigraphy data.** *Journal of sleep research*  
Mayer, C., Kim, D. W., Zhang, M., Lee, M. P., Forger, D. B., Burgess, H. J., Moon, C.  
2024: e14425
- **The Combination of Topological Data Analysis and Mathematical Modeling Improves Sleep Stage Prediction From Consumer-Grade Wearables.** *Journal of biological rhythms*  
Lee, M. P., Kim, D. W., Mayer, C., Walch, O., Forger, D. B.  
2024: 7487304241288607
- **Lifestyle Profiling Using Wearables and Prediction of Glucose Metabolism in Individuals with Normoglycemia or Prediabetes.** *medRxiv : the preprint server for health sciences*  
Park, H., Metwally, A. A., Delfarah, A., Wu, Y., Perelman, D., Rodgar, M., Mayer, C., Celli, A., McLaughlin, T., Mignot, E., Snyder, M.  
2024
- **Efficient assessment of real-world dynamics of circadian rhythms in heart rate and body temperature from wearable data** *JOURNAL OF THE ROYAL SOCIETY INTERFACE*  
Kim, D., Mayer, C., Lee, M. P., Choi, S., Tewari, M., Forger, D. B.  
2023; 20 (205): 20230030
- **Impact of Light Schedules and Model Parameters on the Circadian Outcomes of Individuals** *JOURNAL OF BIOLOGICAL RHYTHMS*  
Mayer, C., Walch, O., Forger, D. B., Hannay, K.  
2023; 38 (4): 379-391
- **Consumer-grade wearables identify changes in multiple physiological systems during COVID-19 disease progression** *CELL REPORTS MEDICINE*  
Mayer, C., Tyler, J., Fang, Y., Flora, C., Frank, E., Tewari, M., Choi, S., Sen, S., Forger, D. B.  
2022; 3 (4): 100601
- **Distinct Circadian Assessments From Wearable Data Reveal Social Distancing Promoted Internal Desynchrony Between Circadian Markers** *FRONTIERS IN DIGITAL HEALTH*  
Huang, Y., Mayer, C., Walch, O. J., Bowman, C., Sen, S., Goldstein, C., Tyler, J., Forger, D. B.

2021; 3: 727504

- **Predicting circadian phase across populations: a comparison of mathematical models and wearable devices** *SLEEP*  
Huang, Y., Mayer, C., Cheng, P., Siddula, A., Burgess, H. J., Drake, C., Goldstein, C., Walch, O., Forger, D. B.  
2021; 44 (10)
- **High-frequency temperature monitoring for early detection of febrile adverse events in patients with cancer** *CANCER CELL*  
Flora, C., Tyler, J., Mayer, C., Warner, D. E., Khan, S. N., Gupta, V., Lindstrom, R., Mazzoli, A., Rozwadowski, M., Braun, T. M., Ghosh, M., Forger, D. B., Choi, et al  
2021; 39 (9): 1167-1168
- **TRAVELING WAVE SOLUTIONS FOR A CANCER STEM CELL INVASION MODEL** *DISCRETE AND CONTINUOUS DYNAMICAL SYSTEMS-SERIES B*  
Mayer, C., Stachura, E.  
2021; 26 (9): 5067-5093
- **A method for characterizing daily physiology from widely used wearables** *CELL REPORTS METHODS*  
Bowman, C., Huang, Y., Walch, O. J., Fang, Y., Frank, E., Tyler, J., Mayer, C., Stockbridge, C., Goldstein, C., Sen, S., Forger, D. B.  
2021; 1 (4)
- **Monitoring Beliefs and Physiological Measures Using Wearable Sensors and Smartphone Technology Among Students at Risk of COVID-19: Protocol for a mHealth Study** *JMIR RESEARCH PROTOCOLS*  
Cislo, C., Clingan, C., Gilley, K., Rozwadowski, M., Gainsburg, I., Bradley, C., Barabas, J., Sandford, E., Olesnavich, M., Tyler, J., Mayer, C., DeMoss, M., Flora, et al  
2021; 10 (6)
- **Monitoring Health Care Workers at Risk for COVID-19 Using Wearable Sensors and Smartphone Technology: Protocol for an Observational mHealth Study** *JMIR RESEARCH PROTOCOLS*  
Clingan, C. A., Dittakavi, M., Rozwadowski, M., Gilley, K. N., Cislo, C. R., Barabas, J., Sandford, E., Olesnavich, M., Flora, C., Tyler, J., Mayer, C., Stoneman, E., Braun, et al  
2021; 10 (5): e29562
- **Predicting circadian misalignment with wearable technology: validation of wrist-worn actigraphy and photometry in night shift workers** *SLEEP*  
Cheng, P., Walch, O., Huang, Y., Mayer, C., Sagong, C., Castelan, A., Burgess, H. J., Roth, T., Forger, D. B., Drake, C. L.  
2021; 44 (2)