Minki (Phillip) Lee

Contact Department of Mathematics

Research Scientist

University of Michigan Information

530 Church St, Ann Arbor, MI 48109 Tel: +1734-369-0435

Homepage: minkiplee.github.io

⊠ E-mail:minkilee@umich.edu

Jan 2025 – present

Goldwater Foundation

Ann Arbor Community Foundation

APPOINTMENTS

Academic

Department of Mathematics, University of Michigan, Ann Arbor, MI

EDUCATION University of Michigan, Ann Arbor, MI Sep 2023 - Dec 2024

Master of Science, Mathematics (Applied Math Track)

Advisor: Daniel B. Forger

University of Michigan, Ann Arbor, MI Sep 2020 – Dec 2024

Bachelor of Science, Mathematics (with Highest Honors)

RESEARCH Interests

Computational Psychiatry, Circadian rhythms, Sleep, Machine Learning, Nonlinear Dynamics

Honors and AWARDS

PUBLICATIONS

2025 Student Travel Grant National Institute for Theory and Mathematics in Biology

2024 Best Poster Presentation Award Society for Mathematical Biology

2024 Rackham International Travel Grant University of Michigan

2024 Outstanding Achievement in Mathematics Award University of Michigan

2023 Barry M. Goldwater Scholarship

*: co-first author, †: co-corresponding author

2020 Andrew J. Lum & David R. Juillet Scholarship

2023 Wilfred Kaplan Award in Applied Mathematics University of Michigan

2020-2024 Department of Mathematics Merit Scholarship

University of Michigan

Kim R*, Fang Y, Lee MP, Kim DW, Tang Z, Sen S, Forger DB[†], Seasonal timing and interindividual differences in shiftwork adaptation, NPJ Digit. Med. (2025).

Mayer C[∗], Kim DW[∗], Zhang M, **Lee MP**, Forger DB, Burgess HJ, Moon C[†], Predicting circadian phase in community-dwelling later-life adults using actigraphy data, J. Sleep Res. (2024).

Lee MP*, Kim DW*, Fang Y, Kim R, Bohnert ASB, Sen S, Forger DB†, The real-world association between digital markers of circadian disruption and mental health risks, NPJ Digit. Med. (2024).

Lee MP*, Kim DW*, Mayer C, Walch O, Forger DB, The combination of topological data analysis and mathematical modeling improves sleep stage prediction from consumer-grade wearables, J. Biol. Rhythms (2024).

Lee MP*, Hoang K*, Park S, Song YM, Joo EY, Chang W[†], Kim JH[†], Kim JK[†], Imputing missing sleep data from wearables with neural network in real-world settings, Sleep (2023).

Kim DW*, Lee MP*, Forger DB[†], Wearable data assimilation to estimate the circadian phase, SIAM J. Appl. Math (2023).

Kim DW*, Mayer C*, Lee MP, Choi SW, Tewari M, Forger DB, Efficient assessment of real-world dynamics of circadian rhythms in heart rate and body temperature from wearable data, J. R. Soc. Interface (2023).

PRESENTATION 2025 NSF Simons Foundation NITMB MathBio Convergence Conference, Poster, Chicago, IL

2025 Biological Research Information Center Seminar, POSTECH, Online

2024 Society for Mathematical Biology Annual Meeting, Poster, Seoul, South Korea

2024 Society for Research on Biological Rhythms Biennial Meeting, Poster, San Juan, Puerto Rico

2023 SIAM Great Lakes Section Annual Meeting, Contributed talk, Lansing, MI, USA 2022 SIAM Great Lakes Section Annual Meeting, Minisymposium, Detroit, MI, USA 2022 IBS Biomedical Mathematics Seminar, Daejeon, South Korea

2022 Annual Conference of Korean Society for Industrial and Applied Mathematics, Poster, Daejeon, South Korea

2021 University of Michigan Mathematics REU Seminar, Virtual

PEER REVIEW ACTIVITY npj Biosensing, Scientific Reports