

# Stanford

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## Joy Ku

Research Technical Manager, Wu Tsai Human Performance Alliance

### Bio

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#### CURRENT ROLE AT STANFORD

Joy Ku is focused on biocomputation and the advancement of their use through teaching, science communications, community building, and the promotion of research resource sharing efforts, particularly as related to reproducibility and open-source science.

She is currently Deputy Director of the Wu Tsai Human Performance Alliance at Stanford (<https://humanperformance.stanford.edu>) and also leads the education and outreach efforts for the overall Wu Tsai Human Performance Alliance, which consists of institutions across the country, including Boston Children's Hospital, Salk, UC San Diego, the University of Kansas, and the University of Oregon. The Alliance's mission is to discover biological principles to optimize human performance and catalyze innovations in human health.

Dr. Ku is also the Director of Promotions and Didactic Interactions for the NIH-funded Restore Center (<https://restore.stanford.edu>), as well as the Director of Education and Communications for the Mobilize Center (<https://mobilize.stanford.edu>), an NIH Biomedical Technology Resource Center. Both Centers provide tools, infrastructure, and training to support the research community. The Mobilize Center's emphasis is on biomechanical modeling and machine learning algorithms to provide new insights into human movement from data sources, such as wearables, video, and medical images. The Restore Center's mission is to advance rehabilitation research using mobile sensor and video technology for real-world assessments of movement and factors affecting movement.

She also manages SimTK (<https://simtk.org>), a software, model, and data-sharing platform for the biocomputation research community.

### Publications

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#### PUBLICATIONS

- **Leveraging Mobile Technology for Public Health Promotion: A Multidisciplinary Perspective.** *Annual review of public health*  
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2018; 140 (2)
- **The mobilize center: an NIH big data to knowledge center to advance human movement research and improve mobility.** *Journal of the American Medical Informatics Association*  
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2015; 22 (6): 1120-1125
- **OpenMM 4: A Reusable, Extensible, Hardware Independent Library for High Performance Molecular Simulation** *JOURNAL OF CHEMICAL THEORY AND COMPUTATION*  
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- **Simbios: an NIH national center for physics-based simulation of biological structures** *JOURNAL OF THE AMERICAN MEDICAL INFORMATICS ASSOCIATION*  
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