

Program in Physical Therapy

Postdoctoral Research Appointee Washington University in St. Louis Program in Physical Therapy

The quantitative methodology and rehabilitation informatics group has an immediate opening for a postdoctoral appointee with expertise in measurement, longitudinal data analysis, and/or latent variable models. Candidates should also have a strong interest in advancing neurorehabilitation through quantitative approaches to the study of movement. This individual will take the lead in developing and validating measures of movement performance in daily life using wearable sensors.

We welcome creative scientists who are excited to work with clinical colleagues to explore the dimensionality of accelerometry data, classification within this multi-dimensional space, and the clinical validation of these measures.

The primary responsibility of the postdoctoral appointee will be to help conceive and design observational studies and then analyze data collected from accelerometers in “real-world” settings. Strong written communication skills are required. Attention to detail, organizational capability, and the ability to handle multiple concurrent tasks are essential. Writing manuscripts and applying for independent grants will be strongly encouraged. Funding is currently guaranteed for up to one year, so while the study PIs work to secure further funding, it is expected that the candidate will also apply for their own fellowships (e.g., through NIH or NSF).

The successful candidate will join a dynamic, collaborative, and growing research team, working directly with Drs. Keith Lohse and Catherine Lang. The position will be housed in the Program in Physical Therapy at Washington University School of Medicine. More detail on faculty research interests is located at: <https://pt.wustl.edu/research/our-research-areas/>. The appointment is not part of a clinical training program.

The overall mission of the Research Division in the Program in Physical Therapy is to understand how the movement system is affected by disease, injury, lifestyle, development, and aging, and to understand how movement can be used to promote health by enhancing physical function, activity, and participation across the lifespan. The laboratories in the Program in Physical Therapy perform state-of-the-art research in world-class research facilities and have an outstanding record of productivity, with the majority of matriculated postdoctoral trainees obtaining faculty or industry positions.

Primary Duties & Responsibilities

- Manages their own project, preparing and submitting papers on research.
- Performs grant preparation and reporting.
- Assists in the design of research studies.
- Develops proficiency in their ancillary skills, e.g. writing, public speaking, networking, critical evaluation of scientific documents, etc.
- Evaluates research findings and assists in the reporting of scientific work both inside and outside the University.
- Provides guidance and mentorship for more junior lab members.
- Maintains conscientious discharge of their research responsibilities.
- Maintains conformity with ethical standards in research.
- Maintains compliance with good laboratory practice, including the maintenance of adequate research records.
- Maintains collegial conduct towards co-trainees, staff members and members of the research group.

Required Qualifications

- Ph.D. degree.
- Strong background in quantitative psychology, applied statistics, and/or motor behavior.

Preferred Qualifications

- Expertise in all of the above areas is desirable but not essential (and two out of three is great).
- Fluent programmer in either R or Python, working collaboratively to write reproducible code, and familiar with many of the following concepts: reliability and validity, mixed-effects regression, principal component analyses, cluster analyses, and predictive modeling.
- Ability to bring kindness, creativity, and determination to the position. We are looking for someone who can be our colleague, benefit from our mentorship, and continue to work with us as their career matures.

Interested candidates for this postdoctoral research opportunity should send a cover letter, curriculum vitae, and a list of references to Dr. Keith Lohse at lohse@wustl.edu.

See jobs.wustl.edu (Job ID JR62473) for more details