

Graduate Student Research Assistant

Our team has developed a patented, prototype floor vibration monitoring system that can detect human falls and collect gait information, localizing and estimating the force of each fall or footstep using only the structural vibrations caused by the action. The Physical Therapy Department in the USC Arnold School of Public Health seeks a Graduate Research Assistant to join the interdisciplinary team in research and development.

There is a clear need for an automated, patient-independent fall detection system amongst the aging population as falls are the leading cause of health complications. Better yet would be a system that can detect all falls or changes in gait, both of which are predictors of oncoming injurious falls. Our technology has the potential to leverage these indicators in time to intervene before a life-threatening incident occurs.

And we want you to be a part of developing the innovative technology, working with participants and our team to validate and further develop the technology in real-world installations and experiments.

Required

We require these minimum qualifications for the role so you don't get in too far over your head.

- Graduate Student (MS or PhD)
- Strong people skills
- Strong organizational skills
- Strong attention to detail
- Strong verbal and written communication skills
- Engineering or similar analytical science background
- Programming experience, 1 yr

Preferred

This position's work will incorporate various aspects, including the following. Experience in these areas is a plus.

- Programming experience, 2 yr
- Machine learning experience, 2 yr
- [Python](#) 3.x experience, 1yr
- [Git](#) familiarity
- Structural dynamics and vibrations experience, 2yr
- Supervisory experience related to research teams, 1yr
- Experimental design and data collection experience, 2yr

Position

This position offers the following:

- 10-15 hr per week
- Flexible schedule
- Some local travel required
- Training and mentoring
- \$15-\$20/hr, depending on experience and qualifications
- and more!

If interested, please contact

Dr. Stacy Fritz, PhD, PT

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