

**Graduate Student Research Position in Biomechanics at USC
Degree Programs in Biomedical Engineering and Integrative Biology**

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USC Biomechanics Research Laboratory

University Park Campus
University of Southern California
Los Angeles, CA 90089-0652

Highly motivated graduate students interested in pursuing a doctoral degree in the /Biomechanics Research Laboratory/ at the University of Southern California are invited to apply.

Our research focuses on the mechanisms organisms use to generate and control momentum during functional movements. We integrate experimentation and modeling techniques to study control and dynamics of whole body or task oriented movements (e.g. elite athletes, musicians, individuals with spinal cord injury, extinct hyenas, T-Rex) in ecologically valid contexts (e.g. Olympic competition, workplace, home, research lab, geologically relevant environments).

Instrumentation and computing resources in the Biomechanics Research Laboratory and our practice gym facility includes: force plates (6, Kistler, Bertec), telemetered electromyography (16 channels, Konigsberg), 3D motion capture software, high speed digital video cameras (5), high end multiprocessor computers for graphics, simulation, finite element, and modeling applications (ADAMS, Mechanical Dynamics, mimics), and multimedia teaching lab (24, NT).

Active collaborative relationships with Rancho Los Amigos National Rehabilitation Center, Westwood VA Hospital, Colburn School of Music, Los Angeles County Natural History Museum, USC athletic teams and US National Governing Bodies of Sport.

Strongest consideration will be given to highly motivated applicants with good communication and teamwork skills with an interest in identifying how organisms interact with their environment by using mechanics, neuromuscular control, and dynamic modeling. Courses often taken by doctoral students in biomechanics are offered within and outside the department in areas like biomedical engineering, integrative biology, computer science, physical therapy, mechanical engineering, and statistics. Doctoral students in may apply to become Teaching or Research Assistants and will receive stipends, health benefits, and tuition remission as part of their assistantships or fellowships.

Los Angeles, California is a diverse and exciting place to live. The beach, mountains, and international culture provide a rich background for your development as a person and scientist.

If you are interested in learning more about our program, please contact me directly (mcnitt@usc.edu).

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<http://dornsife.usc.edu/labs/biomech/grad-programs/>