











## Doctoral Research Opportunities Are Available In The Following Laboratories And Areas

Laboratory		Biomechanics	Imaging	Control Systems	Device Development	Molecular/Nano Therapies	Neural Engineering	Tissue Engineering
<b>Jinho Kim</b> Translational Bioengineering		Microfluidic approaches for functional recovery of donor lungs	Development of customized optical systems for fluorescent imaging		Development of visually-guided pulmonary drug delivery systems	Development of fluorescent molecular probes		Pulmonary tissue engineering
<b>George McConnell</b> Neuroinnovation					Neurostimulation device development		Deep brain stimulation for Parkinson's disease and obsessive-compulsive disorder	
<b>Ravi Nataraj</b> Movement Control Rehabilitation		Human locomotion, computational biomechanics and neuromechanical activation	Functional magnetic resonance imaging (fMRI) for cognitive agency and reward	Exoskeleton control for movement rehabilitation following stroke, spinal cord injury (SCI) or amputation	Assistive device development for restoration of mobility or person-specific movement enhancement		Cognitive agency for rehabilitation and functional neuromuscular stimulation (FNS) after SCI	
<b>Carrie Perلمان</b> Lung Mechanics		Reduction of ventilation injury in acute lung injury/pulmonary edema	Confocal pulmonary imaging			Biophysical mechanisms novel surface-tension lowering therapy for lung injury		
<b>Ramana Vinjamuri</b> Sensorimotor Control		Hand kinematics and dynamics		Synergy strategies for optimizing movement control and rehabilitation	Development of hand exoskeletons, data gloves and biometrics		Brain-machine interfaces for controlling upper limb prostheses	
<b>Hongjun Wang</b> Tissue Reconstruction						Development of nanomedical therapies for cancer		Multifunctional tissue/organ formation
<b>Xiaojun Yu</b> Tissue Engineering							Peripheral nerve regeneration	Bone and neural tissue engineering
<b>Antonia Zafariou</b> Musculoskeletal Control and Dynamics		Investigation of strategies used during athletic maneuvers and everyday tasks		Elucidation of muscle activation, reaction force, and joint coordination patterns	Development of biofeedback technology to improve movement mechanics			