












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
Jinho Kim Translational Bioengineering		Microfluidic approaches for functional recovery of donor lungs	Develop customized optical systems for fluorescent imaging		Develop visually-guided pulmonary drug delivery systems	Develop fluorescent molecular probes		Pulmonary tissue engineering
George McConnell Neuroinnovation		Neural basis for gait dysfunction in Parkinson's disease	Fluorescent microscopy of brain tissue	Strategies for closed-loop deep brain stimulation	Develop neural recording and stimulation devices		Neuromodulation to treat movement and psychiatric disorders	
Ravi Nataraj Movement Control Rehabilitation		Human locomotion and computational biomechanics	Functional imaging of brain and muscle activity	Feedback control of assistive devices after injury to spinal cord or limbs	Develop wearable, computerized interfaces for user-device integration		Cognitive agency and neuromuscular stimulation for rehabilitation	
Carrie Perlman Lung Mechanics		Identify mechanical mechanism of ventilation injury of edematous lungs	Confocal microscopic imaging of fresh and cleared lungs			Surface tension-lowering therapies for reducing ventilation injury		
Ramana Vinjamuri Sensorimotor Control		Hand kinematics and dynamics		Synergy strategies for optimizing movement control and rehabilitation	Develop hand exoskeletons, data gloves and biometrics		Brain-machine interfaces for controlling upper limb prostheses	
Hongjun Wang Tissue Reconstruction						Develop nanomedical therapies for cancer		Multifunctional tissue/organ formation
Shang Wang Biophotonics		Develop optical elastography for <i>in vivo</i> tissue and cell mechanics	<i>In vivo</i> dynamic imaging in mice for understanding ectopic pregnancy		Develop optical bioimaging and biomanipulation systems			
Xiaojun Yu Tissue Engineering							Peripheral nerve regeneration	Bone and neural tissue engineering
Antonia Zafariou Musculoskeletal Control and Dynamics		Investigate strategies used in athletics and everyday tasks		Elucidate muscle activation, reaction forces and joint coordination	Develop biofeedback to improve movement mechanics			