






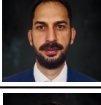






BIOMEDICAL ENGINEERING

RESEARCH AREAS

AREAS

- AI and deep learning
- Biomechanics
- Control systems
- Device development
- Engineering physiology
- Imaging
- Drug development/delivery
- Tissue engineering
- Neural engineering

Laboratory	Professor		Research	AI and Data Science	Biomechanics	Control Systems	Device Engineering	Engineered Biomaterials	Imaging and Diagnostics	Drug delivery	Tissue Engineering	Neural Interfaces
Gan Laboratory	Dr. Yu Gan		Machine and deep learning for biomedical image analysis	High	Low	Low	Low	Low	Medium-High	Low	Low	Low
Laboratory of Ophthalmic Research Development (LORD)	Dr. Jennifer Kang-Mieler		Imaging, hemodynamics, electrophysiology and drug delivery for retinal diseases	High	Low	Low	Low	High	Medium-High	Medium	Medium	High
Translational Lung Bioengineering Laboratory	Dr. Jinho Kim		Tissue engineering for repairing diseased or damaged lung tissue	Low	High	Low	High	Low	Medium-High	Low	Medium	Low
Laboratory for NeuroInnovation	Dr. George C. McConnell		Deep brain stimulation for neural and psychiatric disease	Low	Low	High	High	High	Low	Low	Low	High
Movement Control REhabilitation Laboratory (MOCORE)	Dr. Raviraj Nataraj		Control systems for user integration with rehabilitative movement devices	Low	High	High	High	Low	Medium-High	Low	Low	High
Lung Microscopic Mechanics Laboratory	Dr. Carrie E. Perlman		Surface-tension-reducing therapeutic for ventilation injury in acute lung disease	Low	High	Low	Low	High	Medium-High	Medium	Low	Low
Biom mineralization and Biospectroscopy Lab	Dr. William Querido		Infrared spectral imaging for elucidating bone health	Low	High	Low	Low	Low	Medium-High	Low	Medium	Low
InBrain Electronics Laboratory	Dr. Ilke Uguz		Neural implants for brain-machine interfaces and neurodegenerative diseases	Low	Low	Low	High	High	Low	Medium	Low	High
Tissue Reconstruction Laboratory	Dr. Hongjun Wang		Tissue engineering, including 3D printing of bioscaffolds, and regenerative medicine	Low	Low	Low	Low	Low	Low	Medium	Medium	Low
Wang Laboratory	Dr. Shang Wang		Optical bioimaging for understanding mammalian reproduction and development	High	Low	High	High	High	Low	Low	Low	Low
Yu Laboratory	Dr. Xiaojun Yu		Polymeric biomaterials for tissue engineering and drug delivery	Low	Low	Low	Low	Low	Low	Medium	Medium	High
Musculoskeletal Control and Dynamics Laboratory	Dr. Antonia Zaferiou		Biomechanics of mobility and agility for design of human-centered movement training	Low	High	High	High	Low	Low	Low	Low	Low