Biomedical Engineering

**Email:** bme@wustl.edu  
**Website:** https://bme.wustl.edu/academics/graduate-programs/index.html

**Chair**

**Lori A. Setton**
Lucy and Stanley Lopata Distinguished Professor of Biomedical Engineering  
PhD, Columbia University  
Biomaterials for local drug delivery; tissue regenerations specific to the knee joints and spine

**Endowed Professors**

**Rohit V. Pappu**  
Edwin H. Murty Professor of Engineering  
PhD, Tufts University  
Macromolecular self assembly and function; computational biophysics

**Yoram Rudy**  
Fred Saigh Distinguished Professor of Engineering  
PhD, Case Western Reserve University  
Cardiac electrophysiology; modeling of the cardiac system

**Professors**

**Jianmin Cui**  
PhD, State University of New York–Stony Brook  
Ion channels; channel structure-function relationship; biophysics

**Daniel Moran**  
PhD, Arizona State University  
Motor control; neural engineering; neuroprosthetics; movement biomechanics

**Baranidharan Raman**  
PhD, Texas A&M University  
Computational and systems neuroscience; neuromorphic engineering; pattern recognition; sensor-based machine olfaction

**Quing Zhu**  
PhD, University of Pennsylvania  
Biophotonics and multimodality ultrasound and optical imaging

**Associate Professors**

**Dennis L. Barbour**  
MD, PhD, Johns Hopkins University  
Application of novel machine learning tools to diagnose and treat disorders of perception and cognition

**Hong Chen**  
PhD, University of Washington  
Physical acoustics; therapeutic ultrasound and ultrasound imaging

**Song Hu**  
PhD, Washington University in St. Louis  
Optical and photoacoustic technologies for high-resolution structural, functional, metabolic and molecular imaging in vivo

**Princess Imoukhuede**  
PhD, California Institute of Technology  
Ligand-receptor signal transduction; angiogenesis; computational systems bioengineering

**Jin-Yu Shao**  
PhD, Duke University  
Cell mechanics; receptor and ligand interactions; molecular biomechanics

**Jon Silva**  
PhD, Washington University  
Ion channel biophysics

**Kurt A. Thoroughman**  
PhD, Johns Hopkins University  
Human motor control and motor learning; neural computation

**Chao Zhou**  
PhD, University of Pennsylvania  
Optical coherence tomography

**Assistant Professors**

**Nate Huebsch**  
PhD, Harvard University  
Cell-material Interactions, iPSC-based tissue modeling to study cardiac development and disease
Abhinav Kumar Jha (https://engineering.wustl.edu/faculty/Abhinav-Jha.html)
PhD, University of Arizona
Development of computational-imaging solutions for diagnosing and treating diseases

Jai S. Rudra (https://engineering.wustl.edu/faculty/Jai-Rudra.html)
PhD, Louisiana Tech University
Peptide-based biomaterials; immunoengineering; immunology of nanoscale aggregates; development of vaccines and immunotherapies

Alexandra Rutz (https://engineering.wustl.edu/faculty/Alexandra-Rutz.html)
PhD, Northwestern University
Engineering of electronic tissues using materials design and fabrication-based approaches

Ismael Seáñez (https://engineering.wustl.edu/faculty/Ismael-Seanez.html)
PhD, California Institute of Technology
Neuro-rehabilitation tools and programs that promote active use of residual mobility and maximize recovery through the use of body-machine interfaces

Michael D. Vahey (https://engineering.wustl.edu/faculty/Michael-Vahey.html)
PhD, Massachusetts Institute of Technology
Biophysical mechanisms of infectious disease; fluorescence microscopy; microfluidics

**Principal Lecturer**

Patricia Widder (https://engineering.wustl.edu/faculty/Patricia-Widder.html)
MS, Washington University

**Lecturer**

Katherine Schreiber
PhD, Saint Louis University

**Senior Professor**

Larry Taber
PhD, Stanford University
Mechanics of growth and development; cardiac mechanics

**Senior Emeritus Professor**

Frank Yin
MD, PhD, University of California, San Diego