Washington University in St. Louis

# Biomedical Engineering

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| Phone: | 314-935-7208 |
| Website: | https://bme.wustl.edu/academics/undergraduate-programs/index.html |

## Faculty

### Chair

**Lori A. Setton (https://engineering.wustl.edu/Profiles/Pages/Lori-Setton.aspx)**
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 Professor

**Rohit V. Pappu (https://engineering.wustl.edu/faculty/Rohit-Pappu.html)**
Gene K. Beare Distinguished Professor of Biomedical Engineering
PhD, Tufts University
Macromolecular self assembly and function; computational biophysics

### Professors

**Dennis L. Barbour (https://engineering.wustl.edu/faculty/Dennis-Barbour.html)**
MD, PhD, Johns Hopkins University
Application of novel machine learning tools to diagnose and treat disorders of perception and cognition

**Jianmin Cui (https://engineering.wustl.edu/faculty/Jianmin-Cui.html)**
PhD, State University of New York–Stony Brook
Ion channels; channel structure-function relationship; biophysics

**Daniel Moran (https://engineering.wustl.edu/faculty/Daniel-Moran.html)**
PhD, Arizona State University
Motor control; neural engineering; neuroprosthetics; movement biomechanics

**Baranidharan Raman (https://engineering.wustl.edu/faculty/Barani-Raman.html)**
PhD, Texas A&M University
Computational and systems neuroscience; neuromorphic engineering; pattern recognition; sensor-based machine olfaction

**Jin-Yu Shao (https://engineering.wustl.edu/faculty/Jin-Yu-Shao.html)**
PhD, Duke University
Cell mechanics; receptor and ligand interactions; molecular biomechanics

**Jon Silva (https://engineering.wustl.edu/faculty/Jonathan-Silva.html)**
Dennis & Barbara Kessler Career Development Associate Professor
PhD, Washington University
Ion channel biophysics

**Chao Zhou (https://engineering.wustl.edu/faculty/Chao-Zhou.html)**
PhD, University of Pennsylvania
Optical coherence tomography

**Quing Zhu (https://engineering.wustl.edu/faculty/Quing-Zhu.html)**
Edwin H. Murty Professor of Engineering
PhD, University of Pennsylvania
Biophotonics and multimodality ultrasound and optical imaging

### Associate Professors

**Hong Chen (https://engineering.wustl.edu/faculty/Hong-Chen.html)**
PhD, University of Washington
Physical acoustics; therapeutic ultrasound and ultrasound imaging

**Song Hu (https://engineering.wustl.edu/faculty/Song-Hu.html)**
PhD, Washington University in St. Louis
Optical and photoacoustic technologies for high-resolution structural, functional, metabolic and molecular imaging in vivo

**Michelle Oyen (https://engineering.wustl.edu/faculty/Michelle-Oyen.html)**
PhD, University of Minnesota
Bioengineering approaches to the study of pregnancy and childbirth; mechanical properties of hydrogel and hydrogel composite materials; biomimetic materials referencing both hard and soft natural tissues

**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

**Kurt A. Thoroughman (https://engineering.wustl.edu/faculty/Kurt-Thoroughman.html)**
PhD, Johns Hopkins University
Human motor control and motor learning; neural computation

### Assistant Professors

**Nate Huebsch (https://engineering.wustl.edu/faculty/Nathaniel-Huebsch.html)**
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

**Christine M. O'Brien (https://engineering.wustl.edu/faculty/Christine-OBrien.html)**
PhD, Vanderbilt University
Developing optical spectroscopy and imaging tools to solve global problems in maternal-fetal health and reproductive diseases

**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 (https://engineering.wustl.edu/faculty/Katherine-Schreiber.html)**
PhD, Saint Louis University

## Senior Professor

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

## Senior Emeritus Professors

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

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