

Biomedical Engineering

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

Faculty

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 Professor

Rohit V. Pappu

Gene K. Beare Distinguished Professor of Biomedical Engineering
PhD, Tufts University
Macromolecular self assembly and function; computational biophysics

Professors

Dennis L. Barbour

MD, PhD, Johns Hopkins University
Application of novel machine learning tools to diagnose and treat disorders of perception and cognition

Cory Berkland

PhD, University of Illinois
Developing new therapeutics and biomaterials for improving human health

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

Jin-Yu Shao

PhD, Duke University
Cell mechanics; receptor and ligand interactions; molecular biomechanics

Jon Silva

PhD, Washington University
Ion channel biophysics

Chao Zhou

PhD, University of Pennsylvania
Optical coherence tomography

Quing Zhu

Edwin H. Murty Professor of Engineering
PhD, University of Pennsylvania
Biophotonics and multimodality ultrasound and optical imaging

Associate Professors

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

Michelle Oyen

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

PhD, Louisiana Tech University
Peptide-based biomaterials; immunoengineering; immunology of nanoscale aggregates; development of vaccines and immunotherapies

Kurt A. Thoroughman

PhD, Johns Hopkins University
Human motor control and motor learning; neural computation

Assistant Professors

Yifan Dai

PhD, Case Western Reserve University
Decodes and encodes the physical chemistry of biological soft matter to understand biology and engineering precision medicine

Nate Huebsch

PhD, Harvard University
Cell-material Interactions, iPSC-based tissue modeling to study cardiac development and disease

Abhinav Kumar Jha

PhD, University of Arizona
Development of computational-imaging solutions for diagnosing and treating diseases

Christine M. O'Brien

PhD, Vanderbilt University
Developing optical spectroscopy and imaging tools to solve global problems in maternal-fetal health and reproductive diseases

Alexandra Rutz

PhD, Northwestern University
Engineering of electronic tissues using materials design and fabrication-based approaches

Ismael Seáñez

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

PhD, Massachusetts Institute of Technology
Biophysical mechanisms of infectious disease; fluorescence microscopy; microfluidics

Principal Lecturer

Patricia Widder

MS, Washington University

Lecturer

Katherine Schreiber

PhD, Saint Louis University

Professor of Practice

Joseph Klaesner

PhD, Vanderbilt 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