

Biomedical Engineering

Email: bme@wustl.edu
 Website: <https://bme.wustl.edu/academics/graduate-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

Hong Chen

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

Jianmin Cui

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

Song Hu

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

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

Yan Yu

Art Krieg Professor of Chemistry and of Biomedical Engineering
 PhD, University of Illinois, Urbana-Champaign
 Integrate nanotechnology and imaging techniques to study, detect, and manipulate the immune system and diseases

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

Abhinav Kumar Jha

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

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

Michael D. Vahey

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

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

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

Teaching Professor

Patricia Widder

MS, Washington University

Senior 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