GRADUATE STUDIES
Building a better quality of life

Develop technology for biomedical devices, renewable energy systems, defense systems and high-speed aircraft.

bme.engineering.arizona.edu

The proximity to a medical school, a hospital and state-of-the-art research equipment connected me to experts in many fields who supported my growth as a researcher and student.

- Kaitlyn Ammann, postdoctoral research associate

RESEARCH FOCUS AREAS
- Bioinstrumentation and devices
- Biomaterials
- Biomechanics
- Biomedical imaging and spectroscopy
- Biomedical informatics
- Biosensors
- Cardiovascular biomedical engineering
- Nanomedicine
- Neuroengineering
- Tissue engineering and regeneration

EMPHASIS ON INVENTION
22
UA national ranking for R&D expenditures (public universities)

IDEAL STUDENT ENVIRONMENT
- Multidisciplinary mentoring
- Flexible curriculum
- Strong commercialization support
- Hispanic-serving institution
- Year-round outdoor activities

DEGREES
- PhD Biomedical Engineering
- MS Biomedical Engineering

AFFILIATED CENTERS
- Arizona Center for Accelerated Biomedical Innovation
- BIO5 Institute
- Sarver Heart Center
- UA Cancer Center

FUNDING OPTIONS THROUGHOUT DEGREE LIFECYCLE

APPLICATION DEADLINES (fall admission only)

Domestic
- PhD – January 6
- MS – March 1

International
- December 1

CONTACTS
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Develop wearable sensors, disease diagnostics, brain mapping, prosthetics and drug therapy to improve health care.

- PhD Biomedical Engineering
- MS Biomedical Engineering

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- Kaitlyn Ammann, postdoctoral research associate
There’s a real entrepreneurial spirit here. People have the freedom to start new ideas. It’s a place where you’re going to learn those skills that you need to be successful through your entire career.

- Jennifer Barton, professor and director of the BIO5 Institute

Faculty Expertise

Jennifer Barton – barton@email.arizona.edu
miniature endoscopes that combine optical coherence tomography and fluorescence spectroscopy for colon and ovarian cancer detection • laser-tissue interaction and dynamic optical properties of blood

Ali Bilgin – bilgin@email.arizona.edu
MRI and X-ray optimization • accelerated MRI and MR parameter mapping • cancer imaging • data compression

Nan-kuei Chen – nkchen@email.arizona.edu
motion-immune MRI • MRI corrections and improvements • human brain connectivity imaging

Erika Eggers – eeggers@email.arizona.edu
neuronal signaling and sensory signal processing in the healthy and diabetic retina

Wolfgang Fink – wfink@email.arizona.edu
ocular biomechanics • artificial vision and vision prostheses • Scheimpflug imaging and ray tracing • computer classification of visual field data • wearable sensors • human brain-machine interfaces

Arthur Gmitro – gmitro@email.arizona.edu
multimodality imaging methods and techniques • confocal microendoscopy for cancer detection

Philipp Gutruf – pgutruf@email.arizona.edu
wireless, battery-free, implantable optogenetic devices

Elizabeth Hutchinson – hutchinsone@email.arizona.edu
preclinical imaging/neuroimaging brain disorders • traumatic brain injury

Dongkyun Kang – dkkang@email.arizona.edu
miniature endoscopy devices and in vivo microscopy

Minkyu Kim – minkyukim@email.arizona.edu
biopolymer materials for applications in health care, environmental safety and national defense

Kaveh Laksari – klaksari@email.arizona.edu
mechanisms, prevention and diagnosis of traumatic brain injury • cerebral hemodynamics in stroke patients

Marek Romanowski – marekrom@email.arizona.edu
contrast agents • nanoparticle and liposome materials for drug delivery • augmented and holographic imaging for surgical guidance

Marvin Sleian – sleian@email.arizona.edu
artificial hearts • drug-eluting stents • surgical anti-adhesive barriers • synthetic tissue and vascular sealants • myocardial revascularization and cell delivery methods

Tsu-Te Judith Su – judith@email.arizona.edu
label-free, single-molecule detection using ultrasensitive optical sensors

Vignesh Subbian – vsubbian@email.arizona.edu
computational medicine, biomedical data science and informatics • traumatic brain injury and intelligent systems • applied machine learning for neurological disorders

Jil Tardiff – jtardiff@email.arizona.edu
biophysics and drug delivery • sudden cardiac death

Nima Toosizadeh – ntoosizadeh@email.arizona.edu
motion analysis and assessment of function and cognitive decline in the elderly • wearable sensors

Ted Trouard – trouard@email.arizona.edu
MRI for neuroimaging and drug delivery

Urs Utzinger – utzinger@email.arizona.edu
fiber optic sensing and microscopy • imaging instrumentation for gynecological and gastrointestinal cancer • biosensors for minimally invasive cancer detection • whole-brain imaging microscopy

Jeong-Yeol Yoon – jyyoon@email.arizona.edu
medical diagnostics • water quality and food safety • handheld LAMP and PCR • organ-on-a-chip • tissue engineering

Yitshak Zohar – zohar@email.arizona.edu
microfluidic systems for biochemical-medical applications • organ-on-a-chip

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