BIOMEDICAL & HEALTH RESEARCH EXPERTISE

OVERVIEW
Developing enhanced health outcomes to improve people’s quality of living and enabling earlier and more accurate diagnoses and treatments for disease.

RESEARCH HIGHLIGHTS
• Biomechanics
  ◦ Orthopaedics and musculoskeletal
• Rehabilitation
  ◦ Mobility and assistive technology
  ◦ Robotics
• Medical imaging
  ◦ MRI and ultrasound
  ◦ Cardiovascular modeling

Partner with us:
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EXPERT FACULTY AND FACILITIES

Biomechanics & Rehabilitation
Brooke Slavens, Richard and Joanne Grigg Associate Professor, Mechanical Engineering and Biomedical Engineering, slavens@uwm.edu
- Experimental and computational biomechanics
- Pediatric mobility and rehabilitation
- Musculoskeletal imaging
- Gait analysis

Jacob Rammer, Assistant Professor, Biomedical Engineering, jrrammer@uwm.edu
- Advanced biomechanical instrumentation and modeling technique

Priya Premnath, Assistant Professor, Biomedical Engineering, premnath@uwm.edu
- Pharmaceutical approaches to improve tissue regeneration
- Targeted biomaterials to treat fractures in osteoporosis and advanced age
- Imaging techniques and animal models to investigate bone healing

Robotics
Habib Rahman, Richard and Joanne Grigg Associate Professor, Mechanical Engineering and Computer Science, rahmanmh@uwm.edu
- Designing and creating wearable robots for daily living assistance

Medical Imaging & Modeling
Roshan D’Souza, Richard and Joanne Grigg Associate Professor, Mechanical Engineering, dsouza@uwm.edu
- 4D cardiovascular flow MRI
- Complex systems simulation
- Computational biology

Yongjin Sung, Associate Professor, Mechanical Engineering and Biomedical Engineering, ysung4@uwm.edu
- 3D imaging flow cytometry
- Near-infrared chemical, x-ray phase contrast and radioluminescence imaging
- Non-invasive diagnostics

Qingsu Cheng, Assistant Professor, Biomedical Engineering, chengq@uwm.edu
- Bioimaging and nanotechnology
- Interaction between microenvironmental factors and diseases
- Breast cancer early detection, risk assessment and treatment

Jun Zhang, Professor, Electrical Engineering & Computer Science, junzhang@uwm.edu
- Cardiovascular disease intervention
- Image processing and computer vision

Mahsa Dabagh, Assistant Professor, Biomedical Engineering, dabaghme@uwm.edu
- Diagnosis, prevention, and treatment of cancer and vascular diseases
- Large-scale biomedical models
- Mehanosensors in cancer metastasis, wound healing, and progression of atherosclerosis cardiovascular diseases

Woo Jin Chang, Associate Professor, Mechanical Engineering, wjchang@uwm.edu
- Bionanotechnology
- BioMEMS and biosensors
- Environmental and biomedical monitoring

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