



## Bioinformatics and Computational Bioengineering



### Uri Hershberg

*Associate Professor*

#### Research Interests

Bioinformatics, Immunology, Neural Computation, System Biology, Somatic Selection, Autoimmunity, Genetic Stability, Germline Diversity, Dendritic Cell, Transcription Elements, Pathogens, Computational And Mathematical Modeling, Complex Systems, Cognition And Inflammation

#### Links

- [Faculty Profile](#)
- [Systems Immunology Lab](#)



### Andres Kriete

*Associate Dean For Academic Affairs, Associate Teaching Professor*

#### Research Interests

Cellular And Computational Bioengineering, Systems Biology Of Aging, Control Theory, Bioimaging.

#### Links

- [Faculty Profile](#)



### Ahmet Sacan

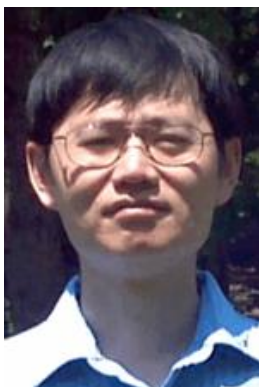
*Associate Teaching Professor*

#### Research Interests

Bioinformatics, Structural Bioinformatics, Databases, Data Mining, Protein Folding, Protein Structure Alignment, Protein-Protein Interactions, Computational Drug Design, Graphical User Interfaces, Gene Expression Analysis, Image Processing, Computer Vision, Automated Cell Tracking, Online Education Tools.

#### Links

- [Faculty Profile](#)
- [sacan.biomed.drexel.edu/ahmet](http://sacan.biomed.drexel.edu/ahmet)



### Ming Xiao

*Associate Professor*

#### Research Interests

Nanotechnology, Single Molecule Detection, Single Molecule Fluorescent Imaging, Genomics, Genetics, Genome Mapping, Dna Sequencing, Dna Biochemistry, And Biophysics.

#### Links

- [Faculty Profile](#)



## Biomaterials and Tissue Engineering



### Fred Allen

*Associate Teaching Professor And Associate Director For Undergraduate Education*

#### Research Interests

Tissue Engineering, Cell Engineering, Orthopedics, Bone Remodeling, Wound Healing, Mechanotransduction, Signal Transduction, Adhesion, Migration

#### Links

- [Faculty Profile](#)



### Lin Han

*Assistant Professor*

#### Research Interests

Nanoscale Structure-Property Relationships Of Biological Materials, Genetic And Molecular Origins Of Soft Joint Tissue Diseases, Biomaterials Under Extreme Conditions, Coupling Between Stimulus-Responsiveness And Geometry

#### Links

- [Faculty Profile](#)
- [Nanobiomechanics Laboratory](#)



### Dov Jaron

*Professor Emeritus, Calhoun Distinguished Professor Of Engineering In Medicine*

#### Research Interests

Engineering Development And Optimization Of Cardiac Assist Devices, Cardiovascular Dynamics, Cardiovascular Function Under Stress, Modeling Of Biological Systems, Mechanisms Of Gas Transport In The Mivtocirculation, Biomedical Instrumentation Biomatrices, Cell-Biomaterials Interactions, Artificial Internal Organs, Endothelial Cell Biology, Hemodynamic Forces, Atherosclerosis, Genomics, Signal Transduction

#### Links

- [Faculty Profile](#)



### Steven Kurtz

*Part-Time Research Professor*

#### Research Interests

Computational Biomechanics Of Bone-Implant Systems And Impact-Related Injuries, Orthopaedic Biomechanics, Contact Mechanics, Orthopaedic Biomaterials, Large-Deformation Mechanical Behavior And Wear Of Polymers, And Degradation And Crosslinking Of Polyolefins In Implant Applications.

#### Links

- [Faculty Profile](#)
- [Implant Research Center](#)



## Biomaterials and Tissue Engineering



### Peter Lewin

*Richard B. Beard Distinguished University Professor*

#### Research Interests

Ultrasonic Characterization Of Materials, Propagation Of Ultrasonic Waves In Inhomogeneous Media, Electro-Acoustic Transducers, Biological Effects Of Ultrasound, Physical Acoustics, And Underwater Acoustics

#### Links

- [Faculty Profile](#)
- [Ultrasound And Optics Wound Healing Team](#)



### Michael Neidrauer

*Assistant Research Professor*

#### Research Interests

Wound Healing, Near Infrared, Spectroscopy, Cell Culture, Data Analysis, Optical Coherence Tomography (Oct), Matlab, Life Sciences Assay Development, Confocal Microscopy, Biomaterials, In-Vivo, Medical Devices

#### Links

- [Faculty Profile](#)



### Adrian Shieh

*Associate Teaching Professor*

#### Research Interests

3-D Cell Culture, Cancer, Cell And Tissue Engineering, Extracellular Matrix, Fibroblasts, Interstitial Flow, Mechanobiology, Mechanotransduction, Tumor Invasion And Metastasis, Tumor Microenvironment

#### Teaching Interests

Active Learning, Biomechanics, Cell And Molecular Biology, Cell And Tissue Engineering, Problem-Based Learning, Stem Education

#### Links

- [Faculty Profile](#)



### Wan Shih

*Professor*

#### Research Interests

Piezoelectric Microcantilever Biosensors Development, Piezoelectric Finger Development, Quantum Dots Development, Tissue Elasticity Imaging, And Piezoelectric Microcantilever Force Probes.

#### Links

- [Faculty Profile](#)
- [Biosensors & Biomaterials Laboratory](#)



## Biomaterials and Tissue Engineering



### Kara Spiller

*Assistant Professor*

#### Research Interests

Macrophage-Biomaterial Interactions, Drug Delivery Systems, And Chronic Wound Healing.

#### Links

- [Faculty Profile](#)
- [Biomaterials And Regenerative Medicine Laboratory](#)



### Margaret Wheatley

*John M. Reid Professor*

#### Research Interests

Ultrasound Contrast Agent Development (Tumor Targeting And Triggered Drug Delivery), Controlled Release Technology (Bioactive Compounds), And Microencapsulated Allografts (Ex Vivo Gene Therapy) For Spinal Cord Repair.

#### Links

- [Faculty Profile](#)
- [Microencapsulation Laboratory](#)



### Yinghui Zhong

*Associate Professor*

#### Research Interests

Neural Tissue Engineering, Biomaterials, Neural Electrode/Tissue Interface, Spinal Cord Repair, Stem Cells, Surface Modification, And Drug Delivery.

#### Links

- [Faculty Profile](#)



### Leonid Zubkov

*Research Professor*

#### Research Interests

Physiology, Wound Healing, Physiologic Neovascularization, Near-Infrared Spectroscopy, Optical Tomography, Histological Techniques, Computer-Assisted Diagnosis, Infrared Spectrophotometry, Physiologic Monitoring, Experimental Diabetes Mellitus, Penetrating Wounds, Diabetes Complications, Skin, Animal Models, Radiation Scattering, Failure Analysis

#### Links

- [Faculty Profile](#)



## Biomechanics



### Sriram Balasubramanian

*Associate Professor*

#### Research Interests

Orthopedic Biomechanics, Pediatric Spine And Rib Cage Deformities, Scoliosis, Computational Modeling, Pediatric Long Bones, Animal Models, Injury Biomechanics, Spinal Kinetics And Kinematics, And Knee Kinematics.

#### Links

- [Faculty Profile](#)
- [Orthopedic Biomechanics Laboratory](#)



### Kenneth Barbee

*Professor, Senior Associate Dean, And Associate Dean For Research*

#### Research Interests

Cellular Biomechanics Of Neural And Vascular Injury, Mechanotransduction In The Cardiovascular System, Mechanical Control Of Growth And Development For Wound Healing And Tissue Engineering

#### Links

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- [Cellular Biomechanics Laboratory](#)



### Lin Han

*Assistant Professor*

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Nanoscale Structure-Property Relationships Of Biological Materials, Genetic And Molecular Origins Of Soft Joint Tissue Diseases, Biomaterials Under Extreme Conditions, Coupling Between Stimulus-Responsiveness And Geometry

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### Steven Kurtz

*Part-Time Research Professor*

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#### Links

- [Faculty Profile](#)
- [Implant Research Center](#)



## Biomechanics



### Rahamim Seliktar

*Professor Emeritus*

#### Research Interests

Rehabilitation Engineering, Limb Prosthetics, Biomechanics, Human Motion, Orthopedic Biomechanics, Assistive Technology

#### Links

- [Faculty Profile](#)



### Patricia Shewokis

*Professor*

#### Research Interests

Movement Science, Smart Prosthetics, "Brain-In-The-Loop" Cognitive Technologies, Motor Learning, Human Performance, Biofeedback, Neural Imaging, Statistics And Measurement, And Brain-Computer Interface (Bci).

#### Links

- [Faculty Profile](#)
- [Conquer Collaborative](#)



### Adrian Shieh

*Associate Teaching Professor*

#### Research Interests

3-D Cell Culture, Cancer, Cell And Tissue Engineering, Extracellular Matrix, Fibroblasts, Interstitial Flow, Mechanobiology, Mechanotransduction, Tumor Invasion And Metastasis, Tumor Microenvironment

#### Teaching Interests

Active Learning, Biomechanics, Cell And Molecular Biology, Cell And Tissue Engineering, Problem-Based Learning, Stem Education

#### Links

- [Faculty Profile](#)



### Amy Throckmorton

*Associate Professor*

#### Research Interests

Computational And Experimental Fluid Dynamics; Cardiovascular Modeling, Including Transient, Fluid-Structure Interaction, And Patient-Specific Anatomical Studies; Bench-To-Bedside Development Of Medical Devices; Artificial Organs Research; Prediction And Quantification Of Blood Trauma And Thrombosis In Medical Devices; Design Of Therapeutic Alternatives For Patients With Dysfunctional Single Ventricle Physiology; Human Factors Engineering Of Mechanical Circulatory Assist Devices

#### Links

- [Faculty Profile](#)
- [Biocirc Research Lab](#)



## Cardiovascular Engineering



### **Kenneth Barbee**

*Professor, Senior Associate Dean, And Associate Dean For Research*

#### **Research Interests**

Cellular Biomechanics Of Neural And Vascular Injury, Mechanotransduction In The Cardiovascular System, Mechanical Control Of Growth And Development For Wound Healing And Tissue Engineering

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- [Cellular Biomechanics Laboratory](#)



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#### **Links**

- [Faculty Profile](#)



### **Amy Throckmorton**

*Associate Professor*

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#### **Links**

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- [Biocirc Research Lab](#)



## Research Areas

### Drug Delivery



#### Margaret Wheatley

*John M. Reid Professor*

##### Research Interests

Ultrasound Contrast Agent Development (Tumor Targeting And Triggered Drug Delivery), Controlled Release Technology (Bioactive Compounds), And Microencapsulated Allografts (Ex Vivo Gene Therapy) For Spinal Cord Repair.

##### Links

- [Faculty Profile](#)
- [Microencapsulation Laboratory](#)



#### Yinghui Zhong

*Associate Professor*

##### Research Interests

Neural Tissue Engineering, Biomaterials, Neural Electrode/Tissue Interface, Spinal Cord Repair, Stem Cells, Surface Modification, And Drug Delivery.

##### Links

- [Faculty Profile](#)





## Research Areas

### Neuroengineering



#### Hasan Ayaz

*Associate Research Professor*

##### Research Interests

Neuroergonomics, Functional Neuroimaging, Biomedical Signal Processing, Neuroengineering, Functional Near Infrared Spectroscopy (Fnirs), Eeg, Brain Computer Interfaces (Bci)

##### Links

- [Faculty Profile](#)
- [Conquer Collaborative](#)



#### Jaimie Dougherty

*Assistant Teaching Professor*

##### Research Interests

Brain-Computer Interface, Neural Encoding, Electrophysiological Signal Acquisition And Processing.

##### Links

- [Faculty Profile](#)
- [Neurorobotics Lab](#)



#### Kurtulus Izzetoglu

*Associate Research Professor*

##### Research Interests

Cognitive Neuroengineering, Functional Brain Imaging, Near Infrared Spectroscopy, Medical Sensor Development, Biomedical Signal Processing, Human Performance Assessment, And Cognitive Aging.

##### Links

- [Faculty Profile](#)
- [Conquer Collaborative](#)



#### Hualou Liang

*Professor*

##### Research Interests

Neuroengineering, Neuroinformatics, Cognitive And Computational Neuroscience, Neural Data Analysis And Computational Modeling, Biomedical Signal Processing

##### Links

- [Faculty Profile](#)
- [Liang Research Group](#)

## Neuroengineering



### **Banu Onaral**

*H. H. Sun Professor And Senior Advisor To The President, Global Partnerships*

#### **Research Interests**

Functional Optical Brain Imaging, Biomedical Signal Processing, Complexity And Scaling In Biomedical Signals, Systems, And Imaging

#### **Links**

- [Faculty Profile](#)
- [Conquer Collaborative](#)



### **Kambiz Pourrezaei**

*Professor*

#### **Research Interests**

Nanotechnology, Near Infrared Imaging (Nir), Medical Devices

#### **Links**

- [Faculty Profile](#)
- [Conquer Collaborative](#)



### **Patricia Shewokis**

*Professor*

#### **Research Interests**

Movement Science, Smart Prosthetics, "Brain-In-The-Loop" Cognitive Technologies, Motor Learning, Human Performance, Biofeedback, Neural Imaging, Statistics And Measurement, And Brain-Computer Interface (Bci).

#### **Links**

- [Faculty Profile](#)
- [Conquer Collaborative](#)



### **Catherine Von Reyn**

*Assistant Professor*

#### **Research Interests**

Cell Type-Specific Genetic Engineering, Whole-Cell Patch Clamp In Behaving Animals, Modeling, And Detailed Behavioral Analysis To Identify And Characterize Sensorimotor Circuits.

#### **Links**

- [Faculty Profile](#)
- [Neural Circuit Engineering \(Nce\) Laboratory](#)

### Neuroengineering



#### **Yinghui Zhong**

*Associate Professor*

#### **Research Interests**

Neural Tissue Engineering, Biomaterials, Neural Electrode/Tissue Interface, Spinal Cord Repair, Stem Cells, Surface Modification, And Drug Delivery.

#### **Links**

- [Faculty Profile](#)