**BIOENG 1002: Intramural Internship**

**2021 Spring Technical Symposium**

Number of presentations = **47**

**Anna Martinez**  
Mentor: Dr. William Anderst  
*Adjacent Segment Disc Deformation after Cervical Arthrodesis*

**Sagar Sharma**  
Mentor: Dr. Michael Lotze  
*Role of Autophagy Inhibition in Infiltrating T cell Diversity and Clonality in Pancreatic Cancer*

**Sean Hartwick**  
Mentor: Dr. James Menegazzi  
*Articulating Laryngoscope Design*

**Kevin Xu**  
Mentor: Dr. Mark Gartner  
*A Low-cost Biotelemetry Device Adapted to Monitor Manatee Environments*

**Anna Kelly**  
Mentor: Dr. Justin Weinbaum  
*Electrospinning Tissue Engineered Vascular Grafts*

**Robert Kwiat**  
Mentor: Dr. Eric Lagasse  
*The Potential for Engineering an Ectopic Thymus in the Lymph Node*

**Nicholas Lagerman**  
Mentor: Dr. David Vorp  
*Parallel Test Benches for AAA Fenestration Device Design*

**Jack Latella**  
Mentor: Dr. Fabrisia Ambrosio  
*Computational Classification of Drug-Induced Age Change in Muscle*

**Katherine Yang**  
Mentor: Dr. Asim Ejaz  
*Role of Annexin A3 in Differentiation of Preadipocytes to Mature Adipocytes*
Gloriani Sanchez Marrero  
Mentor: Dr. Jonathan Vande Geest  
_The Recurrent Laryngeal Nerve Mechanical Environment as a Factor in the Onset of Idiopathic Vocal Fold Paralysis_

Boyan Zhang  
Mentor: Dr. Gelsy Torres-Oviedo  
_Assessing Generalization of Incline Adaptation in Young, Healthy Adults_

Zachary Roy  
Mentor: Dr. Goeran Fiedler  
_Reengineering Evolution with Evo-Prostheses_

Nathaniel Mitrik  
Mentor: Dr. Goeran Fiedler  
_Evo-Prosthesis: Improving Balance with Evolution_

Reetwan Bandyopadhyay  
Mentor: Dr. Steven Little  
_Encapsulating BAPN in PLGA Microspheres_

Jacob McDonald  
Mentor: Dr. Ioannis Zervantonakis  
_Bioinformatic Analysis of Fibroblast-mediated Drug Resistance_

Nick Ferchack  
Mentor: Dr. Ioannis Zervantonakis  
_Design and Validation of a Microfluidic Culture Platform for Anti-Cancer Drug Profiling_

Rachel Martello  
Mentor: Dr. Richard Debski  
_Bony Morphology Changes of the Greater Tuberosity in Rotator Cuff Tears_

Chris Deschler  
Mentor: Dr. Kurt Beschorner  
_Effects of Reach and Lean on Ladder Tipping Risk_

Emily Meehan  
Mentor: Dr. Kurt Beschorner  
_Predicting ACOF in Non-Slip Resistant Shoes_

Isaiah Johnston  
Mentor: Dr. Kurt Beschorner  
_COF Change Over Time with Gait_
Rosh Bharthi
Mentor: Dr. Kurt Beschorner
*Correlation between the Locations of Shoe Wear Region and Center of the Contact Region at Peak Friction*

Emily Swist
Mentor: Dr. Warren Ruder
*Customizable 3D-Printed Plate Rocker*

Emily Lickert
Mentor: Dr. Warren Ruder
*Analyzing a 3D-Printed Peristaltic Pump for Use in Antibiotic Efficacy Studies*

Sara Grunblatt
Mentor: Dr. Warren Ruder
*Utilization of a 3D-Printed Peristaltic Pump for Disease Modeling Applications*

Austin Sims
Mentor: Dr. Aditi Gurkar
*Creating a Post-Mitotic Model for Oxidative Telomere Damage*

Kestrel Merritt
Mentor: Dr. Partha Roy
*Inhibiting Angiogenesis by Targeting Pfn1*

Yuxuan Hu
Mentor: Dr. George Stetten
*FingerSight: Vibrotactile for Guidance of Hand-Held Tools by Visually Impaired*

Sida Wilson
Mentor: Dr. Carsten Stuckenholz
*Gene Analysis and Identification: Using CRISPR/Cas9 to Study the Biomechanics of Embryogenesis*

Sara Kron
Mentor: Dr. William Clark
*Designing a Muscle Force Measurement System for Physical Therapy*

Carol Vinski
Mentor: Dr. Bryan Brown
*Assessment of Luminal Fillers in Nerve Guidance Conduits for Promoting Regeneration Following Peripheral Nerve Injury*
Govardhan Nair  
Mentor: Dr. Spandan Maiti  
*Deep Learning for the Stress Analysis of the Human Ascending Aorta*

Anish Salvi  
Mentor: Dr. Prahlad Menon  
*Automatic Segmentation of Abdominal Aortic Aneurysms*

Rachyl Rackin  
Mentor: Dr. Amirhossein Alavi  
*Spinal Fusion Monitoring Implants Empowered by Bone Piezoelectric Signal*

Jordan Ferrell  
Mentor: Dr. Young Chun  
*Self-expanding Biodegradable Pediatric Heart Valve*

Jeremy Reimenschneider  
Mentor: Dr. Deepak Sarpal  
*Abnormal Stimuli Processing Across Clozapine Treatment*

Juan Correa  
Mentor: Dr. Douglas Weber  
*Analysis of Forearm Muscle Activity in People with Spinal Cord Injury*

Katherine Dash  
Mentor: Dr. Konasale Prasad  
*Simulating Structural Covariance Networks in Schizophrenia Patients*

Abby Wuenschel  
Mentor: Dr. Ipsita Banerjee  
*Development of a Mathematical Model to Predict 3D Bioprinting Resolution*

Garima Patel  
Mentor: Dr. Steven Abramowitch  
*Teaching Students about the Human Body and Disease*

Lucy Kress  
Mentor: Dr. Steven Abramowitch  
*Summer With Swanson: Teaching Digital Electronics Concepts through Remote Activities*

Katherine Lebrun  
Mentor: Dr. Steven Abramowitch  
*Vaginal Configuration Changes with Age and Parity*
Katie Gaines  
Mentor: Dr. William Federspiel  
*Effect of Hematocrit on the CO2 Removal Rate of Artificial Lungs*

Kangxin Wang  
Mentor: Dr. Zhi-Hong Mao  
*A Wearable EEG and ECG Recording System with Adaptive Auditory Stimulation for Stress Relief and Sleep Aid*

Victoria Turchick  
Mentor: Dr. Mark Redfern  
*Analysis of Stride Segmentation Methods to Identify Heel Strike*

Klaire Dickey  
Mentor: Dr. Rakié Cham  
*The Impact of Lighting Conditions on the Manual Dexterity of Adults with Vision Loss*

Shan Leng  
Mentor: Dr. Helmet Karim  
*Predicting Drinking Behavior Using Ecological Momentary Assessments and Random Forest Machine Learning Models*

Jane Lasak  
Mentor: Dr. Fabrisia Ambrosio  
*Age-Related Impairment of Muscle Stem Cell Self-Renewal*