

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 Stuckenholtz

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