

Science 20XX

2017

Number of presentations = **36**

Boldfaced names represent Bioengineering undergraduate students

Iman L. Benbourenane, Deanna Easley, Maurice Kotz, Steven Abramowitch
Comparative Analysis of Photogrammetry Versus Laser-based Methods of Measuring the Physical Dimensions of Objects

Tyler J. Bray, Skip Meetze, Jon Schull, Alexander M. Spiess
Development of a 3D Printed, Low Cost Thumb Prosthetic

Nowa Bronner, Oliver Schlüter
Examination of Two Tet-On Constructs with Sh95 in the Visual Cortex

Grace Brueggman, Jeffrey Weiss, Robert Gaunt, Jennifer Collinger
Reaction Times to Intracortical Microstimulation in a Person with Tetraplegia are Similar to Those of Peripheral Tactile and Visual Stimuli in Able-bodied Subjects

Bianca De, Alexander D. Malkin, William J. Federspiel, John A. Kellum, Kai Singbartl
Downregulation of CXCR-1 and CXCR-2 on Human Neutrophils in Extracorporeal Recirculation through Hollow Fibers with Immobilized IL-8

David Denberg, Lance A. Davidson, Spandan Maiti
Incorporating Cellular Mechanics of Contractility and Cell Adhesion into 3D Finite Element Models of Embryonic Epithelial Morphogenesis

Nathan Fleming, Nicholas Pavlovsky, Aaron Batista
Spatial Memory Maintenance in Dorsal Premotor Cortex

Madalyn R. Fritch, Rocky Tuan, Hang Lin, He Shen
Modulating Inflammation through Cartilage-derived Extracellular Matrix for Potential Treatments of Cartilage Disease

Shayla Goller, Uma Balakrishnan, Lance Davidson
Complex 3D Tissue Assembly Using Flat High-density Cell Sheets

Shushma Gudla, Daniel Crompton, Jonathan H. Waters, Marina V. Kameneva
Nanomolar Drag Reducing Polymers (DRPs) Reduce Near-wall Margination of Rigid RBCs in Microchannels: A Potential Therapy for Sickle Cell Disease (SCD)

Ruben Hartogs, **Christine Heisler**, **Kathryn LaBelle**, Travis Prest, Bryan Brown
Effect of PNS-ECM Hydrogel on Functional Recovery after Peripheral Nerve Injury

Christine Heisler, Kathryn LaBelle, Ruben Hartogs, Travis Prest, Bryan Brown
Effect of Peripheral Nerve-specific Extracellular Matrix Hydrogel on Functional Recovery after Peripheral Nerve Injury

Le Huang, Sanjeev Shroff
Whole Body Cardiovascular and Respiratory Modeling for ECMO Training Simulator

Daniel Jacobs, Dima Denisenko, Samuel Luketich, Richard Hoff, Xinzhu Gu, William R. Wagner, Antonio D'Amore
Computational Quantification of Enhanced de novo Extracellular Matrix Elaboration in an Elastomeric Scaffold Model with Engineered Micro-Architecture

James Kern, Yanfei Chen, Youngjae Chun
Biocompatibility and Functionality Assessment of a Novel Nitinol Tongue Prosthetic Device to Treat Dysphagia

Hannah Liu, BokSeng Yeow, Hongliang Ren
Four-Point Fortune Teller-inspired Origami Grasper for Increased Dexterity and Less Tissue Damage in Minimally Invasive Surgery

Shane D. McKeon, Anusha Rangarajan, Minjie Wu, Nadim Farhat, Tales Santini, Sossena Wood, Tamer Ibrahim, Milos Ikonovic, Julia Kofler, Oscar Lopez, Bill Klunk, Howard Aizenstein
Co-registration of In Vivo and Ex Vivo Human MRI Brain Images

Jacob Meadows, Bok Seng Yeow, Hongliang Ren
Preliminary Development of a Low-cost Flexible Endoscope for Robotic Minimally Invasive Nasopharyngoscopy

Ian Moran, Jonquil Mau, Savio L-Y. Woo
The Development of a Mg Ring for the Regeneration of a Torn ACL for Human Application

Nathaniel Myers, Michael Washington
Thermoresponsive NIPAAm-Based Gel for Targeted Delivery to the Retina

Kalon J. Overholt, Riccardo Gottardi, Rocky S. Tuan
Modeling Osteoarthritis in a Bone-Cartilage Bioreactor

Henry Phalen, Brian Coffman, Dean Salisbury, Ervin Sejdic
Differential Activation of Rest-state Cortical Networks in First-episode Schizophrenia-spectrum Psychosis

Bryan Rynearson, **Rahul Ramanathan,** Marcus Allen, Nicholas Vaudreuil, Kevin Bell, Patrick Bosch
Comparative Analysis of the Destabilizing Effects of Anterior Versus Posterior Releases on the Thoracolumbar and Lumbar Spine

Katherine Rohde

Correction of Gibbs Ringing Artifact in DW-MRI with Biomimetic Brain Phantom as Ground Truth

Eliza Schally, Asiyeh Golabchi, Kevin Woepel, Ian M. Taylor, X. Tracy Cui

In Vitro Characterization of Melatonin-loaded Conducting Polymer Coatings for Neural Electrodes

Jonathan A. Scott, Sanjeev B. Khanna, Matthew A. Smith

Interactions between Waveform Shape and Visuomotor Response Properties in Prefrontal Cortex

Yousif Shwetar, Timothy N. Bachman, Christopher B. Link, Michael Boisen

Assessment of Patient Hemodynamics Pre-Left Ventricle Assist Device Implant to Determine Chance of Right Ventricular Failure

Rachel Sides, Kaori Sugiyama, Aneesh Ramaswamy, MS, David Vorp, Hiromi Yanagisawa, Justin Weinbaum

Stimulation of Elastic Fiber Proteins by Mesenchymal Stem Cell-derived Factors

Andrew Sivaprakasam, Sarah Bass, Deepan Kamaraj, MS, Alicia Koontz

Investigating Wheelchair Seating Parameters and Their Effect on Ramp Propulsion

Catherine Smith, Gerald Ferrer, Joao Novaretti, Benjamin Rothrauff, MS, Rocky Tuan, Volker Musahl, Richard Debski

Biomaterial Repair of the Rat Supraspinatus Tendon Enthesis

Abigail M. Snyder, Katherine L. Lorentz, Antonio D'Amore, Justin S. Weinbaum, William R. Wagner, David A. Vorp

Assessment of Human Stem Cell Retention and Host Cell Invasion in an Implanted Seeded Tubular Scaffold

Oliver Snyder, George Stetten, Roberta Klatzky

Arbitrary Texture Simulation with One Degree of Freedom Normal to the Surface Using a Loudspeaker

Nicholas Strauch, Ya Gao, Sachin Velankar

Improving Fabrication of Topographically Actuating Vascular Grafts

Sarah Tolaymat, Daniel Crompton, Marina V. Kameneva

Optimization of Storage Conditions and Evaluation of Stored Drag Reducing Polymer (DRP) Solutions for Use in Preclinical Animal Studies

Shumeng Yang, Kanto Nagai, William Anderst

The Effects of an Osteoarthritis Unloader Brace on Knee Joint Space during Gait

Eric Zhang, Bin Yang, Ian A. Sigal

Collagen Fiber Orientation Mapping with Fourier Ptychography Polarized Light Microscopy