

## Biomedical Engineering Society (BMES)

2017

Number of presentations = **38**

**Boldfaced** names represent Bioengineering undergraduate students

*Medial tibial plateau cartilage compression during a closed-chain flexion task*

Wiltman S, **Bottorff E**, Chambers A

*Development of 3D Printed, Low Cost Thumb Prosthetic*

**Bray TJ**, Spiess AM, Schull J, Meetze S

*Reaction times to intracortical microstimulation in a person with tetraplegia are similar to those of peripheral tactile and visual stimuli in able-bodied subjects*

**Bueggman G**, Weiss J, Gaunt R, Collinger J

*Effects of Aging on Liver Extracellular Matrix Structural Proteins*

**Burger B**, **Hartman A**, Stahl E

*The effect of oxygen on nitrite reduction to nitric oxide by the mitochondrial molybdopterin enzyme mARC2*

**Cecco EM**, Watkins CE, Gladwin MT

*Downregulation of CXCR-1 and CXCR-2 on Human Neutrophils in Extracorporeal Recirculation Through Fibers with Immobilized IL-8*

**De BN**, Malkin AD, Federspiel WJ, Kellum JA, Singbartl K

*Micro-BLIP: A New Tool for Instrumentation Education*

**Donovan JD**, **Snyder OS**, Stetten GS

*Spatial Memory Maintenance In Dorsal Premotor Cortex*

**Fleming NK**, Pavlovsky NP, Batista AP

*Modulating inflammation through cartilage-derived extracellular matrix for potential treatments of cartilage disease*

**Fritch M**, Tuan R, Lin H, Shen H

*Complex 3D tissue assembly using flat high-density cell sheets*

**Goller SE**, Balakrishna UL, Davidson LA

*Nanomolar Drag Reducing Polymers (DRPs) Reduce Near-wall Margination of Rigid RBCs in Microchannels: A Potential Therapy for Sickle Cell Disease*

Dan Crompton, **Shushma Gudla**, Marina V. Kameneva

*Effect of PNS-ECM hydrogel on functional recovery after peripheral nerve injury*

**Hartogs R**, Heisler C, LaBelle K, Prest T, Brown B

*Effect Of PNS-ECM Hydrogel on Sciatic Functional Index After Peripheral Nerve Injury*

**Heisler CN**, Hartogs R, LaBelle K, Prest T, Brown B

*Optical Control of Escherichia Coli Chemotaxis using the Photoswitchable Protein Dronpa*

**Vivian Hu**, **William McFadden**, Ian Carleton, Dorsin Chang, Gabrielle Gannon, Adam Butchy, Jason Lohmueller, Natasa Miskov-Zivanov, Cheryl Telmer, Sanjeev Shroff, and Alex Deiters

*Whole body cardiovascular modeling for ECMO training simulator*

**Huang L**, Shroff SG

*Biocompatibility and Functionality Assessment of a Novel Nitinol Tongue Prosthetic Device to Treat Dysphagia*

**Kern JK**, Chen YC, Chun YJC

*Effect of a peripheral nerve-specific extracellular matrix hydrogel on functional and sensory recovery from traumatic peripheral nerve injuries*

**LaBelle KE**, Heisler C, Hartogs R, Prest T, Brown B

*Assessing Intestinal Organoids Drug Response In A Well-Defined Synthetic Basement Membrane Microenvironment*

**Lee K**, Lampejo A, Hernandez-Gordillo V, Griffith L

*Four-Point Fortune-Teller-Inspired Origami Grasper for Increased Dexterity and Less Tissue Damage in Minimally Invasive Surgery*

**Liu H**, Yeow BS, Ren H

*EMS Backboard Pad: An Inflatable Spinal Support System*

**Lohss M.**, Freedman N., Samosky J.

*Evaluation of Segmentation Performance with 3T and 7T Magnetic Resonance Imaging using FreeSurfer*

**McKeon S**, Rangarajan A, Wu M, Santini T, Ibrahim T, Lopez O, Aizenstein H

*Preliminary development of a low-cost flexible endoscope for robotic minimally invasive nasopharyngoscopy*

**Meadows JM**, Yeow BS, Ren H

*Validation of an osteochondral bioreactor for in vitro drug screening*

**Overholt K**, Piroso A, Tuan RS, Gottardi R

*Rest-State Cortical Network Differences Associated with First-Episode Schizophrenia-Spectrum Psychosis*

**Phalen H**, Coffman B, Salisbury D, Sejdic E

*Comparative analysis of the destabilizing effects of anterior versus posterior releases on the thoracolumbar and lumbar spine*

Rynearson B, **Ramanathan R**, Allen M, Vaudreuil NJ, Bell KM, Bosch P

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

*In vitro characterization of melatonin-loaded conducting polymer coatings for neural electrodes*

**Schally E**, Golabchi A, Woeppel K, Taylor IM, Cui XT

*Interactions between waveform shape and visuomotor response properties in prefrontal cortex*

**Scott JA**, Khanna SB, Smith MA

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

**Shwetar YJ**, Bachman TN, Simon MA

*Stimulation of Elastic Fiber Proteins by Mesenchymal Stem Cell-Derived Factors*

**Sides R**, Sugiyama K, Ramaswamy AK, Vorp DA, Yanagisawa H, Weinbaum J

*Investigating Wheelchair Seating Parameters and Their Effect On Ramp Propulsion*

**Sivaprakasam A**, Bass S, Kamaraj D, Koontz A

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

**Snyder AM**, Lorentz KL, Haskett DG, Saleh K, D'Amore AN, Wagner WR, Weinbaum JS, Vorp DA

*Texture Simulation with One Degree of Freedom Normal to the Surface using a Loudspeaker*

**Snyder O**, Stetten G, Klatzky R

*In vivo Muscle Architecture Data for Musculoskeletal Models of the Human Leg*

**Felipe Suntaxi**, James Charles, William Anderst

*Optimizing Geometry of a 64-channel RF Head Coil*

**Neilesh Vinjamuri**, Tales Santini, Sossena Wood, and Tamer Ibrahim

*Effect of gleevec (imatinib mesylate) on bladder contractions in neonatal and adult rats*  
**Wenger LR**, Garcia GM, Daugherty SL, de Groat WC

*The Effects of an Osteoarthritis Unloader Brace on Knee Joint Space During Gait*  
**Yang S**, Nagai K, Anderst W

*Collagen fiber orientation mapping with Fourier ptychography polarized light microscopy*  
**Zhang E**, Yang B, Sigal I