



University of Rochester

Department of Biomedical Engineering

BMES

BIOMEDICAL ENGINEERING SOCIETY
2025 ANNUAL MEETING

OCTOBER 8-12, 2025
SAN DIEGO CONVENTION CENTER
SAN DIEGO, CA



SATURDAY PRESENTATIONS 1/2



Annika Deans
Undergraduate Student



Advancing cell therapies with in vitro barrier tissue models

Presenting Author: Annika Deans – University of Rochester
Co-Author: Isabelle Linares – University of Rochester
Co-Author: Lydia Taylor – Georgia Tech and Emory University
Co-Author: Michael Malloy – University of Rochester
PI: Craig Morrell – University of Rochester
PI: Tara Deans – University of Rochester
PI: James McGrath – University of Rochester



Talk - Cellular and Molecular Bioengineering
- CMBE Undergraduate Fire Talks
Saturday, Oct. 11, 8:35 AM - 8:40 AM
Location: Room 33B



Anabelle Creveling
Undergraduate Student



Uncovering Wrist Posture Effects on Finger Movement Decoding: Implications for Prosthetic Control

Presenting Author: Anabelle Creveling - Univ. of Rochester
Co-Author: Sreya Pothuraju - University of Pittsburgh
PI: Robert Gaunt - University of Pittsburgh



Poster Y9
Neural Engineering - Poster Session E
Saturday, Oct. 11, 10:00 - 11:00 AM
Location: Exhibit Hall F, G & H



Yimei Du
Undergraduate Student



Contractile Response of Rhodamine-labeled Tissue Engineered Skeletal Muscle from Healthy and Rheumatoid Arthritis Donors

Presenting Author: Yimei Du – University of Rochester



Poster Z2
Tissue Engineering -
Poster Session E
Saturday, Oct. 11, 10:00 -11:00 AM
Location: Exhibit Hall E, F & G



Zachary Greenwell
Undergraduate Student



The Lung-Brain Inflammatory Nexus: Development of a microphysiological system for modeling respiratory disease effects on the brain

Presenting Author: Zachary Greenwall - Univ. of Rochester
Co-Author: Gram S. Hepner - University of Rochester
Co-Author: Brian Hassard - University of Rochester
Co-Author: Sebastião Martin - University of Rochester
PI: Benjamin Miller, PhD – University of Rochester



Poster X26
Nano and Micro Technologies
- Poster Session E
Saturday, Oct. 11, 10:00- 11:00 AM
Location: Exhibit Hall F, G & H



Brayden Hirotsu
Undergraduate Student

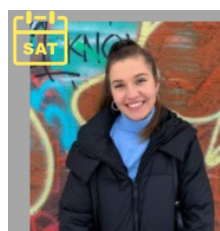


Developing A Novel Frequency Domain Diffuse Optical Spectroscopy for Early Prediction of Neoadjuvant Chemotherapy Efficacy in Breast Cancer

Presenting Author: Brayden Hirotsu – University of Rochester
Co-Author: Devin C. Johnson - University of California Irvine
Co-Author: Joseph Majeski - University of Pennsylvania
Co-Author: Vincent Ching-Roa - University of Rochester
Co-Author: Prashant Waiba - University of Rochester
Co-Author: Michael Giacomelli - University of Rochester
PI: Regine Choe – University of Rochester



Poster S1 - Biomedical Imaging and Instrumentation - Poster Session E
Saturday, Oct. 11, 10:00- 11:00 AM
Location: Exhibit Hall F, G & H



Hana Kalčo
PhD Student
Boston University



Alumni
BS, 2022

Modulation of Inflammatory Signaling by IL-15 in the Rotator Cuff is Dependent on Sex

Presenting Author: Jonathan Sim - Boston University
Co Author: Hana Kalčo - Boston University
PI: Brianne Connizzo - Boston University



Poster Y26
Orthopedic and Rehabilitation Engineering - Poster Session E
Saturday, Oct. 11, 10:00–11:00 AM
Exhibit Hall F, G & H



Miriana Kelley
Undergraduate Student



Computationally Modeling Pore Deformation in Articular Cartilage with Finite Element Analysis

Presenting Author: Miriana Kelley – University of Rochester
PI: Mark R. Buckley - University of Rochester



Poster Q6
Biomechanics- Poster Session E
Saturday, Oct. 11, 10:00 - 11:00 AM
Location: Exhibit Hall F, G & H



Liam O'Donnell
Undergraduate Student



Systems Model Predicts Switch-like Behavior of IL-2 Production in CD4+ T-Cells

Presenting Author: Liam O'Donnell – University of Rochester
Co-Author: Malcolm O'Malley – University of Virginia
Co-Author: Jeffrey J. Saucerman, PhD - University of Virginia



Poster N10
Bioinformatics, Computational and Systems Biology - Poster Session E
Saturday, Oct. 11, 10:00–11:00 AM
Location: Exhibit Hall F, G & H





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SATURDAY PRESENTATIONS 2/2



Julia Sides
Undergraduate Student
University of Rochester

Mechanical Change in Sports Bras Induced by Simulated Application and Removal

Presenting Author: Julia Sides – University of Rochester
Co-Author: Tasneem Sabir – Manchester Metropolitan University
Co-Author: Thomas Allen – Manchester Metropolitan University
Co-Author: Rebecca Grant – Loughborough University
Last Author: Katherine Rizzone – URMIC
PI: Mark Buckley – University of Rochester



Poster Q23
Biomechanics - Poster Session E
Saturday, Oct. 11, 10:00 – 11:00 AM
Location: Exhibit Hall F, G & H



Julia Sides
Undergraduate Student
University of Rochester

Effects of Macromolecule Accumulation on the Mechanical Properties of Porcine Flexor Tendon

Presenting Author: Julia Sides – University of Rochester
Primary Investigator: Mark Buckley, PhD – Univ. of Rochester



Poster Q23 - Orthopedic and Rehabilitation Engineering
- Poster Session E
Saturday, Oct. 11, 10:00 – 11:00 AM
Location: Exhibit Hall F, G & H



Whasil Lee
Associate Professor
University of Rochester

Musculoskeletal Biology and Mechanics - Track Chair

Session Chair: Alejandro Almaraz – University of Pittsburgh
Session Chair: Katherine Hixon – Dartmouth College
Track Chair: Whasil Lee – University of Rochester
Track Chair: Deva D. Chan – Purdue University
Track Chair: Jessica Isaacs - Exponent, Inc.

Platform Session

Orthopedic and Rehabilitation Engineering
- Platform Session
Saturday, October 11, 12:30 PM - 2:00 PM
Location: Room 23C



Isabelle Linares
Graduate Student
University of Rochester

Synovial fibroblasts exacerbate inflammation and peritendinous adhesions in a tissue-on-chip model of tendon fibrosis

Presenting Author: Isabelle Linares – Univ. of Rochester
PI: James McGrath – University of Rochester
Last Author: Hani Awad – University of Rochester



Talk - Nano and Micro Technologies - Micro/Nano Technologies In Therapeutic Development
Saturday, Oct. 11, 1:15 - 1:30 PM
Location: Room 26A



Stephen McAlevey
Associate Professor
University of Rochester

Beyond Linear Elasticity Imaging with Acoustic Radiation Force Ultrasound Shearwave Elastography

Presenting Author: Stephen McAlevey – Univ. of Rochester
Co-Author: Siladitya Khan – University of Rochester
Co-Author: Fan Feng – University of Rochester
Co-Author: Zimeng Gao – URMIC
Co-Author: Marvin Doyley – URMIC
Co-Author: Stefanie Hollenbach – URMIC



Talk - Biomedical Imaging and Instrumentation - Ultrasound Imaging and Therapeutic Ultrasound (US)
Saturday, Oct. 11, 1:45 - 2:00 PM
Location: Room 30C

...and more!

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