



A total of 42 Bucknell University Posters were submitted to the Symposium.

Poster Session I

#6 Qixiao (Jimmy) Zhu, Bucknell University

The Implementation of Augmented Reality and Low Latency Protocols in Musical Instrumental Collaborations

Categories: Engineering, Computer Science and Natural Sciences / Arts, Humanities and Social Sciences

Mentor: Paul J. Botelho

#9 Julie Pinchiaroli, Bucknell University

Microscale mechanics of actin-intermediate filaments composite networks

Categories: Engineering, Computer Science and Natural Sciences / Life Sciences

Mentor: Bekele Gurmessa

#10 Warren Wang, Bucknell University

Applications of Motion Tracking in Temporally Coherent Echocardiography Video Segmentation

Categories: Engineering, Computer Science and Natural Sciences / Life Sciences

Mentor: Joshua V. Stough

#11 Jeffrey Cai, Bucknell University

Domain Adaptation on Segmentation of Echocardiography

Categories: Engineering, Computer Science and Natural Sciences / Studies of Health and Wellness across disciplines

Mentor: Joshua V. Stough

#12 **Nick Huo**, Bucknell University

Facial Nerve Paralysis Severity Grading by Computer Vision and Machine Learning

Categories: Engineering, Computer Science and Natural Sciences / Studies of Health and Wellness across disciplines

Mentor: Keith Buffinton & Joshua V. Stough

#17 **Mackenzie Ferguson**, Bucknell University

Transient Storage Zones & Civil Infrastructure Interactions in Local Streams near Lewisburg, PA

Categories: Engineering, Computer Science and Natural Sciences / Life Sciences

Mentors: Jessica Newlin

#18 **Jessica Lineen**, Bucknell University

Obesity and Immunity: Impact of the adipose gene on bacterial pathogenesis

Categories: Life Sciences / Engineering, Computer Science and Natural Sciences

Mentor: Moria Chambers

#20 **Victoria Hall**, Bucknell University

Effect of Subthalamic Nucleus Deep Brain Stimulation on Levodopa and Dyskinesia Reduction in Parkinson Disease

Categories: Engineering, Computer Science and Natural Sciences / Studies of Health and Wellness across disciplines

Mentor: Karlo Malaga

#22 **Yuhan Chen**, Bucknell University

Debugging the Get-2-Goal Medical App

Categories: Engineering, Computer Science and Natural Sciences / Studies of Health and Wellness across disciplines

Mentor: Lea Wittie

#23 **Marianne Voigt**, Bucknell University

Modeling the Effects of Femoral Anteversion on Joint Loads in the Hip

Categories: Engineering, Computer Science and Natural Sciences / Studies of Health and Wellness across disciplines

Mentor: Benjamin Wheatley

Poster Session II

#2 **Jingyi Zhou**, Bucknell University

Data Quality Differs by Race and Ethnicity: Evidence from CPS for Black Hispanics

Categories: Arts, Humanities and Social Sciences / Engineering, Computer Science and Natural Sciences

Mentor: Stephan Lefebvre

#3 **Reece Pauling**, Bucknell University

Botanical Garden Project

Categories: Arts, Humanities and Social Sciences / Studies of Health and Wellness across disciplines

Mentor: Katherine Faull

#4 **Emma Keller**, Bucknell University

Marble burying shows sex dependent effects of EtOH

Categories: Arts, Humanities and Social Sciences / Engineering, Computer Science and Natural Sciences

Mentor: Judy Grisel

#6 **Allyson Clarke**, Bucknell University

Detecting Muscle Fatigue in sEMG Data Through Machine Learning

Categories: Engineering, Computer Science and Natural Sciences / Life Sciences

Mentor: Benjamin Wheatley

#8 **Quan Nguyen Tu & Bangyan Li**, Bucknell University

ProPANE Notetaking Assistive Technology

Categories: Engineering, Computer Science and Natural Sciences / Studies of Health and Wellness across disciplines

Mentor: Robert Nickel

#9 **Sarah Vestal**, Bucknell University

Analysis of Upper Extremity Joint Kinematics and Surface Electromyography

Categories: Engineering, Computer Science and Natural Sciences / Studies of Health and Wellness across disciplines

Mentor: Benjamin Wheatley

#13 **Morgan Thomas, Riley Beebe & Zhengkai Zhu**, Bucknell University

*Meiotic Segregation of the Sex Trivalent System in *Hierodula membranacea**

Categories: Life Sciences / Engineering, Computer Science and Natural Sciences

Mentor: Leocadia Paliulis

#14 **Michelle Vovsha**, Bucknell University

*Testing the Activity of *Photinus Pylalis CecX* Against Different Bacterial Strains*

Categories: Life Sciences / Engineering, Computer Science and Natural Sciences

Mentor: Moria Chambers

#15 **Hannah Holmes**, Bucknell University

Losing Light: Pheromone Use in Firefly Mate Attraction

Categories: Life Sciences / Engineering, Computer Science and Natural Sciences

Mentor: Sarah Lower

#16 **Grace Ginder**, Bucknell University

The impact of antimicrobial peptides on resistance to bacterial infection

Categories: Life Sciences / Engineering, Computer Science and Natural Sciences

Mentor: Moria Chambers

#19 **Claire Engel**, Bucknell University

Data sharing between Get-2-Goal medical app and Apple Health app

Categories: Engineering, Computer Science and Natural Sciences / Studies of Health and Wellness across disciplines

Mentor: Lea Wittie

#21 **Omid Mohammadi**, Bucknell University

Accessibility - Get2Goal Medical App

Categories: Studies of Health and Wellness across disciplines / Engineering, Computer Science and Natural Sciences

Mentor: Lea Wittie & Anne Ross

#22 **Collin Murphy**, Bucknell University

Predicting Patient-Specific Optimal Deep Brain Stimulation Locus Using Subthalamic Nucleus Anatomy

Categories: Engineering, Computer Science and Natural Sciences / Life Sciences

Mentor: Karlo Malaga

#23 **Melanie Gamboa**, Bucknell University

Bacteria Impaired Streams in Union County

Categories: Engineering, Computer Science and Natural Sciences / Studies of Health and Wellness across disciplines

Mentor: Deborah Sills

#24 **Jacqueline Zak**, Bucknell University

Deep Brain Stimulation of the Subthalamic Nucleus and its Effect on Gait Disturbances in Parkinson Disease

Categories: Engineering, Computer Science and Natural Sciences / Studies of Health and Wellness across disciplines

Mentor: Karlo Malaga

Poster Session III

#1 **Amanda Pennett**, Bucknell University

Union County Solar Energy Awareness

Categories: Arts, Humanities and Social Sciences / Life Sciences

Mentor: Shaunna Barnhart

#5 **Benjamin Shimer**, Bucknell University

Visualizing Acid Mine Drainage in the Shamokin Creek Watershed: Environmental Injustices and Consequences from Coal Mining

Categories: Arts, Humanities and Social Sciences / Engineering, Computer Science and Natural Sciences

Mentor: Shaunna Barnhart

#6 **Brandon Burkett**, Bucknell University

Using Smartphone GPS Data to Analyze Athlete Performance

Categories: Engineering, Computer Science and Natural Sciences / Studies of Health and Wellness across disciplines

Mentor: Stu Thompson

#7 **Jake Schaefer**, Bucknell University

Leveraging Ovis Canadensis Horn Shapes for Impact Mitigation

Categories: Engineering, Computer Science and Natural Sciences / Studies of Health and Wellness across disciplines

Mentor: Benjamin Wheatley

#9 **Elena Marchetti**, Bucknell University

Understanding the nucleation of 3D covalent frameworks using small molecule analogs

Categories: Engineering, Computer Science and Natural Sciences / Life Sciences

Mentor: Brian Smith

#10 **Hannah Kim**, Bucknell University

Building a Digital Twin: A Virtual Model of an Electric Vehicle

Categories: Engineering, Computer Science and Natural Sciences / Life Sciences

Mentor: Craig Beal

#11 **Eleanor Lowe**, Bucknell University

Melt Crystallization of the Elusive Form III Polymorph of Acetaminophen

Categories: Engineering, Computer Science and Natural Sciences / Life Sciences

Mentor: Brian Smith

#14 **Ryan Walker, Aidan Sullivan & Sarah Townsend**, Bucknell University

*The Impact of Host Condition and Life-stage on Immune System Investment in *Photinus pyralis**

Categories: Life Sciences / Engineering, Computer Science and Natural Sciences

Mentor: Moria Chambers & Sarah Lower

#15 **Ding Zhang**, Bucknell University

Turbidity Estimation Based on Sampled Images of Reference and Test Water Samples

Categories: Engineering, Computer Science and Natural Sciences / Life Sciences

Mentor: Alan Marchiori

#16 **Abby Gearhart**, Bucknell University

Using temperature as a tracer to assess groundwater-surface water exchange in a forested headwater stream in Pennsylvania

Categories: Engineering, Computer Science and Natural Sciences / Life Sciences

Mentor: Ben Hayes

#19 **Kate Strong**, Bucknell University

Get-2-Goal Diabetes App: Estimating Risk and Remission

Categories: Engineering, Computer Science and Natural Sciences / Studies of Health and Wellness across disciplines

Mentor: Lea Wittie

#20 **Julia Calderone**, Bucknell University

Usability of the Get-2-Goal App

Categories: Engineering, Computer Science and Natural Sciences / Studies of Health and Wellness across disciplines

Mentor: Lea Wittie

#21 **Matthew Kroen**, Bucknell University

Comparison of Orientation-Specific and Traditional Measures of Subthalamic Nucleus Activation

Categories: Engineering, Computer Science and Natural Sciences / Studies of Health and Wellness across disciplines

Mentor: Karlo Malaga

#22 **Keeler Thomas**, Bucknell University

Optimal Tissue Activation During Thalamic Deep Brain Stimulation for Essential Tremor

Categories: Engineering, Computer Science and Natural Sciences / Studies of Health and Wellness across disciplines

Mentor: Karlo Malaga

#23 **Mary Robinson**, Bucknell University

Deep Brain Stimulation of the Subthalamic Nucleus and its Effect on Verbal Fluency in Parkinson's Disease Patients

Categories: Engineering, Computer Science and Natural Sciences / Studies of Health and Wellness across disciplines

Mentor: Karlo Malaga

#24 **Rebecca Stinson**, Bucknell University

Assessing Stability of Thalamic Segmentation using Diffusion Tensor MRI

Categories: Engineering, Computer Science and Natural Sciences / Studies of Health and Wellness across disciplines

Mentor: Karlo Malaga

#25 **Jimmy Pronchick**, Bucknell University

Collecting Language Production Data Online

Categories: Arts, Humanities and Social Sciences / Engineering, Computer Science and Natural Sciences

Mentor: Heidi Lorimor