Congratulations to the recipients of the 2019 Undergraduate Summer Research Fellowships!

The following is a list of students receiving the 2019 Provost Summer Undergraduate Research Fellowship awards.

John Badiola
Major: Biomechanical Engineering
Faculty Adviser: Sergei Adamovich, Department of Biomedical Engineering
Project: Developing a Universal Alternative Communication Device

Sean Bannon
Major: Chemical Engineering
Faculty Adviser: Kathleen McEnnis, Otto H. York Department of Chemical and Materials Engineering
Project: Creation of a PLGA encapsulated platinum nanoparticle drug delivery system for treatment of triple negative breast cancer using electrohydrodynamic co-jetting

Quratulain Butt
Major: Biomedical Engineering
Faculty Adviser: Eun Jung Lee, Department of Biomedical Engineering
Project: Characterization of Cytokines Released for Post-Myocardial Infarction Therapy

Ilham Chahla
Major: Biomedical Engineering
Faculty Adviser: Xianlian Zhou, Department of Biomedical Engineering
Project: Determination of Mechanical Properties of a Rat Brain Using Simulated Indentations

Ediha Choudhury
Major: Biomedical Engineering
Faculty Adviser: Murat Guvendiren, Otto H. York Department of Chemical and Materials Engineering, Department of Biomedical Engineering
Project: 3D Printing PCL/HA Based Scaffolds for Bone Regeneration

Matthew DaSilva
Major: Biomedical Engineering
Faculty Adviser: Saikat Pal, Department of Biomedical Engineering
Project: Subject-Specific Finite Element Models of the foot joint of Veterans with Spinal Cord Injuries

Kelly DiCristina
Major: Biomedical Engieering
Faculty Adviser: Bryan Pfister, Department of Biomedical Engineering
Project: The Effect of Traumatic Injury on Glial Subtypes

Madhusudan Duwadi
Major: Biomedical Engineering
Faculty Adviser: Antje Ihlefeld, Department of Biomedical Engineering
Project: Effect of Tone Duration on Masked Thresholds in Gerbils

Thinuri Fernando
Major: Biomedical Engineering
Faculty Adviser: Maciej Skotak, Department of Biomedical Engineering
Project: The relationship between the reflected and transmitted pressure in a simplified geometry model: a parametric experimental study

Swata Gade
Major: Biology
Faculty Adviser: Namas Chandra, Venkata Kakulavarapu, Department of Biomedical Engineering

Project: Therapeutic Efficacy of Human Mesenchymal Stem Cells in Blast-Induced Traumatic Brain Injury (TBI)

Rama Hannineh
Major: Biomedical Engineering
Faculty Adviser: Samuel Lieber, Department of Engineering Technology
Project: Advanced Manufacturing of Tissue Engineering Materials: Relating Material Properties and Cutting Mechanics

John Hawks
Major: Biochemistry
Faculty Adviser: Edgardo Farinis, Department of Chemistry and Environmental Science
Project: High throughput assay for screening KaiC libraries

Omar Ilyas
Major: Information Technology
Faculty Adviser: Amy K Hoover, Department of Informatics
Project: Rehabilitating Stroke Patients through Adaptive Digital Environments

AKM Islam
Major: Information Technology
Faculty Adviser: Aritra Dasgupta, Department of Information Systems
Project: Developing a Visualization Interface for Urban Data-driven Social Science Research

Supriya Iyer
Major: Biomedical Engineering
Faculty Adviser: Maciej Skotak, Department of Biomedical Engineering
Project: The relationship between the reflected and transmitted pressure in a simplified geometry model: a parametric experimental study

Rachel Lee
Major: Biomedical Engineering
Faculty Adviser: Pier Alexandre Champagne, Department of Chemistry and Environmental Science
Project: Boron Kinetic Isotope Effect in Boronic Acid Oxidation

Nicole Loehle
Major: Chemical Engineering
Faculty Adviser: Xiaoyang Xu, Otto H. York Department of Chemical and Materials Engineering
Project: Engineering Nanoparticles for Brain Drug Delivery

Richard Marsh
Major: Chemical Engineering
Faculty Adviser: Jay Meegoda, Department of Civil and Environmental Engineering
Project: Sonochemical Degradation of Emerging Pollutants

Anna Mathew
Major: Biology
Faculty Adviser: Vivek Kumar, Department of Biomedical Engineering
Project: Novel Drug Delivery System using Anti-Angiogenic Peptides for Glioblastoma Multiforme

Brian McGrath
Major: Electronic and Computer Engineering Technology
Faculty Adviser: Seyyedmohsen Azizi, Department of Engineering Technology
Project: Robotic Leg Prototype for Balance Stability Analysis and Control - PART III: The Nervous System

Michael Mobilio
Major: Information Technology
Faculty Adviser: Michael Lee, Department of Informatics
Project: Encouraging the Use of Built-in Language Features for Learning Control Flow

Mahathi Mohan Gowda
Major: Forensic Sciences
Faculty Adviser: Kristen Severi, Department of Biology
Project: Investigating the role of a genetically-conserved spinal neuronal class, Dmrt3, in the functional control of locomotion in zebrafish.

Marcos Molina
Major: Chemical Engineering
Faculty Adviser: Gennady Gor, Department of Chemical and Materials Engineering
Project: Integrated Solid-Fluid Interaction Potential for Modeling Gas Adsorption in Templated Mesoporous Carbons

Jorim Morainvil
Major: Electronic and Computer Engineering Technology
Faculty Adviser: Pramod Abichandani, Department of Engineering Technology
Project: A Low-Cost Electro-Mechanical System to create 3D scans using 2D LIDARs

Zoraiz Naeem
Major: Computer Science
Faculty Adviser: Ken Ahn, Department of Physics
Project: Exploration of Possible Topological Semimetal states in a 2-Dimensional Su-Schrieffer-Heeger Systems

James Nanchanatt
Major: Biomedical Engineering
Faculty Adviser: Treena Arinzeh, Department of Biomedical Engineering
Project: Producing Well-Defined Fibrous Structures in Tissue Engineering Scaffolds Using an Adaptable Collector for Electrospinning

Randy Nutakor
Major: Civil and Environmental Engieering
Faculty Adviser: Lucia Rodriguez-Freire, Department of Civil and Environmental Engineering
Project: Accessing the extent and fate of legacy contaminant mixtures in sediments

Ishani Patel
Major: Biology
Faculty Adviser: Gal Haspel, Department of Biology
Project: The Role of Neural Activity and Semaphorin Signaling in Neural Repair

Raghav Patel
Major: Computer Science
Faculty Adviser: Horacio Rotstein, Department of Biological Sciences
Project: Understanding Unidentifiability in Dynamic Models from Ground Truth Data

Navya Pendyala
Major: Biology
Faculty Adviser: Namas Chandra, Venkata Kakulavarapu, Department of Biomedical Engineering

Project: Central Auditory Pathology in Blast Induced Tinnitus/Hearing Loss

Andre Pugliese
Major: Computer Science
Faculty Adviser: Philip Barden, Department of Biological Sciences
Project: Satellite Imagery of Insect Structures: Insights into Global Ecological Declines

Lindsey Riggs
Major: Biophysics
Faculty Adviser: Cristiano Dias, Department of Physics
Project: Apolipoprotein E4 and Cholesterol Packaging in Alzheimer's Disease

Ian Rosenberg
Major: Information Technology
Faculty Adviser: Margarita Vinnikov, Department of Informatics
Project: Virtual Design Theatre (VDT): Multi-User Iterative Production Design Tool

Ayushi Sangoi
Major: Biomedical Engineering and Computer Engineering
Faculty Adviser: Tara Alvarez, Department of Biomedical Engineering
Project: Assessing the Underlying Neural Mechanism of Vision Therapy Through Phoria Adaptation

Sreya Sanyal
Major: Biology & History
Faculty Adviser: Vivek Kumar, Department of Biomedical Engineering
Project: Novel Approach Towards Cholesterol Management Using Hydrogel for PCSK9 Inhibition

Jinay Shah
Major: Chemical Engineering

Faculty Adviser: Dibakar Datta, Department of Mechanical Engineering
Project: Computational Modeling of Two-Dimensional Nanomaterials for Water Desalination

Rahul Shah
Major: Biomedical Engineering
Faculty Adviser: Molly Townsend, Department of Biomedical Engineering
Project: Evaluating the Effect of Skull and Brain Stiffness on Shock Wave Propagation in a Rodent Finite Element Model

Mahenoor Shaikh
Major: Mechanical Engineering
Faculty Adviser: Carlotta Mummolo, Department of Biomedical Engineering
Project: Robotic Leg Prototype for Balance Stability Analysis and Control - PART I: The “Body” System

Divjyot Singh
Major: Applied Physics and Applied Math
Faculty Adviser: Alexei Khalizov, Department of Chemistry and Environmental Science
Project: Numerical Models for Morphology and Optics of Soot Nanoparticles

Donna Sunny
Major: Chemical Engineering
Faculty Adviser: Kathleen McEnnis, Department of Chemical Engineering
Project: Investigation of Particle Noise Produced by Tip Sonication

Neha Thati
Major: Biology
Faculty Adviser: Yong I. Kim, Department of Chemistry and Environmental Science
Project: Molecular Mechanism of the Circadian clock in Cyanobacteria

Joseph Torsiello
Major: Applied Physics and Math
Faculty Adviser: Dibakar Datta, Department of Mechanical and Industrial Engineering
Project: Computational Modeling of Friction between Two-Dimensional Materials

Nirali Trivedi
Major: Biology
Faculty Adviser: Joshua Berlin and Bryan Pfister, Department of Biomedical Engineering
Project: In Vitro Modeling of Traumatic Brain Injury

Arif Uddin
Major: History
Faculty Adviser: Kyle Riismandel, Department of History
Project: The Knighting of Fighter Pilots: Print Media Representation of the Weaponization of Airplanes

Shruti Varshney
Major: Biomedical Engineering
Faculty Adviser: Bharat Biswal, Department of Biomedical Engineering
Project: Brain Function and Neuroplasticity with TBI

Abigail Varughese
Major: Biology
Faculty Adviser: Dirk Bucher, Department of Biology
Project: Neuromodulation of Sensory Encoding

Geetasravya Vegunta
Major: Biology
Faculty Adviser: Madhuvika Murugan, Namas Chandra, Department of Biomedical Engineering

Project: Measuring the dynamic properties of microglial cells after blast induced traumatic brain injury

Rashmi Venkatarama
Major: Biomedical Engineering
Faculty Adviser: Venkatesan Perumal, Department of Biomedical Engineering
Project: Minocycline Loaded Albumin Nanoparticle (myn-ANP) Synthesis and

Characterization: Potential Nanomedicine Approach to Traumatic Brain Injury by Targeting Microglial Cells Activation

Anuj Verma
Major: Mechanical Engineering
Faculty Adviser: Wen Zhang, Department of Civil Engineering
Project: In Situ Ozone Nanobubble Technology for Water Disinfection and Pollutant Degradation

Michael Vitti
Major: Biomedical Engineering
Faculty Adviser: Camelia Prodan, Department of Physics
Project: Magnetic Spinner Model Provides a Material's Phonon Spectrum

Juliana Yang
Major: Biomedical Engineering
Faculty Adviser: Sagnik Basuray, Otto H. York Department of Chemical and Materials Engineering
Project: Fabrication of Microfluidic Cell Culture Systems for Bacteria and Eukaryotic Cells

Philip Zaleski
Major: Applied Mathematics
Faculty Adviser: Shahriar Afkhami, Department of Math
Project: Dynamics of cone-shaped meniscus on a substrate-supported drop in electric fields