Congratulations to the recipients of the 2021 Undergraduate Summer Research Fellowships!

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

Arun Aryal  
Academic Standing: Sophomore  
Major: Biomedical Engineering  
Project Title: Effect of Training on neuronal responses in auditory cortex in presence of background sound.  
Faculty Advisor: Antje Ihlefeld

Hao Massimo Chen  
Academic Standing: Sophomore  
Major: Computer Science  
Project Title: Study of Global-Scale Surface Flows of the Sun in Past 10 Solar Cycles  
Faculty Advisor: Mentor: Yan Xu; Co-mentor: Haimin Wang

Lazar Agoev  
Academic Standing: Sophomore  
Major: Computer Engineering  
Project Title: Long-Term Evolution of A Flare-Productive Active Region  
Faculty Advisor: Haimin Wang

Michaela Dungan  
Academic Standing: Junior  
Major: Biology  
Project Title: Proposal to Collect Normative Data on Concussed Pediatric Patients Using the Oculomotor and Vestibular Endurance Screening (Moves) Protocol  
Faculty Advisor: Chang Yaramothu

John Tobia  
Academic Standing: Junior  
Major: Biology (B.A)  
Project Title: Using BODIPY-based Photobase Generators to Create Physiologically-Compatible Hydrogel Photopolymerization Systems  
Faculty Advisor: Yuanwei Zhang, PhD

Rui Zhang  
Academic Standing: Junior  
Major: Computer Science  
Project Title: Building an Enhanced Infrastructure for Understanding and Predicting the Onset of Solar Eruptions  
Faculty Advisor: Ju Jing

Bhumi Patel  
Academic Standing: Senior  
Major: Industrial Engineering
Project Title: Determining Conditions for the Optimal Immunization Strategy: Ring or Mass Vaccination
Faculty Advisor: Esra Büyütahtakin Toy

Sean Larmore
Academic Standing: Sophomore
Major: Chemistry
Project Title: Computational Study of Substituted Chiral Nonclassical Carbocations
Faculty Advisor: Pier Alexandre Champagne

Christopher Henni
Academic Standing: Freshman
Major: Biomedical Engineering
Project Title: Forensic Pain Biosensors
Faculty Advisor: Omowunmi A Sadik

Jason Ong
Academic Standing: Sophomore
Major: Chemistry
Project Title: Bacterial Inactivation by Ultranarrow Spectrum LEDs
Faculty Advisor: Mengyan Li

Bilal Adra
Academic Standing: Junior
Major: Mechanical Engineering
Project Title: Dual-Layer, Millimeter-Core, Coil Wrapping Machine
Faculty Advisor: Balraj Mani and Ravindra Nuggehalli

Vishva Rana
Academic Standing: Sophomore
Major: Mechanical Engineering
Project Title: Ultrasound to Determine the Ultrafine Pores of Softened Shale
Faculty Advisor: Jay N. Meegoda

Rebecca Zaki
Academic Standing: Sophomore
Major: Biology
Project Title: Evaluation of a Phase-Transfer Catalyst Toward the Synthesis of Chiral Alkylboronic Esters
Faculty Advisor: Pier Alexandre Champagne

Joseph Schaedler
Academic Standing: Freshman
Major: Computer Science
Project Title: Blockchain-enabled System Design for Standardized Testing Process
Faculty Advisor: Jasmine Chang

Mirna Cheikhali
Academic Standing: Sophomore
Major: Chemical Engineering
Project Title: The Impact of Agglomeration and Surface Hydrophobicity on the Dissolution Rate of Dry Coated Poorly Water Soluble and Cohesive Drugs
Faculty Advisor: Rajesh Davé
Jason Ogbebor  
Academic Standing: Junior  
Major: Chemical Engineering  
Project Title: Compressibility of Nanoconfined Water From Molecular Dynamics Simulations  
Faculty Advisor: Gennady Gor

Manal Desai  
Academic Standing: Freshman  
Major: Computer Science & Applied Mathematics  
Project Title: Analysis of Flux Rope Events & Their Effect on Earth’s Magnetosphere  
Faculty Advisor: Hyomin Kim

Egor Demidov  
Academic Standing: Sophomore  
Major: Chemical Engineering  
Project Title: Enhanced Light Scattering and Absorption by Processed Soot Aerosols  
Faculty Advisor: Alexei Khalizov

Ashish Kokkula  
Academic Standing: Freshman  
Major: Biomedical Engineering  
Project Title: Study of Targeted Platinum Nanoparticles as Treatment for Triple-Negative Breast Cancer  
Faculty Advisor: Kathleen McEnnis

Sahitya Kulkarni  
Academic Standing: Sophomore  
Major: Biology BS  
Project Title: Temperature Entrainment of Cyanobacterial Circadian Clocks  
Faculty Advisor: Yong-Ick Kim

Pranati Ambati  
Academic Standing: Junior  
Major: Biology  
Project Title: Investigating the Role of Developmental Environment and Mauthner Cell Morphology on Neuronal Plasticity and Escape Behavior  
Faculty Advisor: Kristen Severi

Sreya Sanyal  
Academic Standing: Junior  
Major: Biology & History  
Project Title: Opsonization of SARS-CoV-2 to develop a COVID-19 antiviral  
Faculty Advisor: Vivek Kumar

Anoushka Karnad  
Academic Standing: Junior  
Major: Biomedical Engineering  
Project Title: DanceForRehab: Dancing Pad for Movement and Balance Rehabilitation  
Faculty Advisor: Alev Erdi

Elizabeth Kowalchuk  
Academic Standing: Junior
Camilo Martinez  
Academic Standing: Senior  
Major: Biomedical Engineering  
Project Title: Integration of Cloud Storage Data Services in Health Care Devices  
Faculty Advisor: Carlotta Mummolo

Edgar Canario  
Academic Standing: Junior  
Major: Biomedical Engineering  
Project Title: Exploring the Impact of Covid-19 on Brain Function Using fNIRS  
Faculty Advisor: Bharat Biswal

Disha Panchal  
Academic Standing: Junior  
Major: Biology  
Project Title: Peptide-based Nucleic Acid Delivery Vehicle as COVID-19 Therapeutic  
Faculty Advisor: Vivek A. Kumar

Ian Horstkamp-Vinekar  
Academic Standing: Freshman  
Major: Chemical Engineering  
Project Title: Synthesizing Biomimetic Water Splitting Catalysts  
Faculty Advisor: Michael Eberhart

Jeffrey Luk  
Academic Standing: Sophomore  
Major: Biology BA  
Project Title: Inactivation of MS2 Bacteriophage for Water Disinfection via Microwave Irradiation in the presence of Microwave-Adsorbing Catalysts  
Faculty Advisor: Wen Zhang

Pedro D'Avila  
Academic Standing: Junior  
Major: Business  
Project Title: Attention induced bias: a measurement of the strength of the contrast effect at different levels of equity investor’s attention  
Faculty Advisor: Zhipeng Yan

Shaikh Hassan  
Academic Standing: Sophomore  
Major: Biomedical Engineering  
Project Title: Modeling Spinal Cord Injury and Repair with Nidogen-1  
Faculty Advisor: Jonathan Grasman

Vincent Tews  
Academic Standing: Junior
Major: Chemical Engineering
Project Title: Hybrid Monte Carlo-Molecular Dynamics Scheme for Simulating Adsorption-Induced Deformation in Spherical Pores
Faculty Advisor: Gennady Gor

Alicja Bil
Academic Standing: Junior
Major: Biomedical Engineering
Project Title: Utilizing DTI to Examine Structural Brain Changes in COVID Patients
Faculty Advisor: Bharat Biswal

Esha Shah
Academic Standing: Sophomore
Major: Biology (BA)
Project Title: Can Cold Atmospheric Plasma Improve Neural Regeneration?
Faculty Advisor: Gal Haspel

Alexander Hanna
Academic Standing: Freshman
Major: Chemistry
Project Title: Photosensitizers for Multi-Step Excited-State Electron Transfer Reactions
Faculty Advisor: Michael S. Eberhart

Dhruvi Rajpopat
Academic Standing: Sophomore
Major: Architecture
Project Title: Visualizing Space and Place: Lessons for the Young Architect
Faculty Advisor: Gabrielle Esperdy

Maria Pepper
Academic Standing: Junior
Major: Biomedical Engineering
Project Title: Quantifying Overpronation Risk Factors in High Jump and Analyzation of Existing Preventative Devices
Faculty Advisor: Xianlian (Alex) Zhou

Sheetal Padhi
Academic Standing: Freshman
Major: Biomedical Engineering
Project Title: Neuronal Cell Death in Repeated Low-Level Blast Induced Traumatic Brain Injury
Faculty Advisor: Ying Li

Samuel Solomon
Academic Standing: Junior
Major: Civil Engineering
Project Title: Polymer Engineering and Mechanisms in Template Assisted Crystallization for Hardness Removal
Faculty Advisor: Wen Zhang

Justin Pace
Academic Standing: Junior
Major: Chemical Engineering
Project Title: Experimental Determination of Mixing Time in the USP Dissolution Apparatus
Faculty Advisor: Piero Armenante

Allison Wong
Academic Standing: Junior
Major: Digital Design
Project Title: Developing Interactive Educational Animation to Visualize Financial Concepts for Students
Faculty Advisor: Hyejin Hannah Kum-Biocca

Jacob Swanson
Academic Standing: Sophomore
Major: Architecture
Project Title: The Challenges of Cohousing from the Architect’s Perspective
Faculty Advisor: Maurie Cohen

Shiva Senthilkumar
Academic Standing: Junior
Major: Biology B.A.
Project Title: Dynamics of Generalized Half-Center Oscillator Neuronal Networks
Faculty Advisor: Horacio Rotstein

Ruchi Shah
Academic Standing: Freshman
Major: Biomedical Engineering
Project Title: Visual Memory and Shifting Ability in Chess Players
Faculty Advisor: Yelda Semizer

Dylan Lederman
Academic Standing: Sophomore
Major: Biology (B.S.)
Project Title: Examining Parameter Estimation Unidentifiability in Oscillatory Systems
Faculty Advisor: Horacio Rotstein

Seejal Padhi
Academic Standing: Freshman
Major: Biomedical Engineering
Project Title: The effect of microglial NLRP3 inflammasome upregulation on astrocyte Piezo1 dysfunction and the release of pro-inflammatory cytokine, IL-1β
Faculty Advisor: Bryan Pfister

Abdul-Rahman Azizogli
Academic Standing: Sophomore
Major: B.S. Biology
Project Title: Computational Design of Anti-Inflammatory Hydrogels
Faculty Advisor: Vivek Kumar

Rohan Harish
Academic Standing: Sophomore
Major: Electrical Engineering
Project Title: Improving the Efficiency of an Electric Scooter using a Continuously Variable Transmission
Faculty Advisor: Zhiming Ji and Dina Ayman

Lara Rios
Academic Standing: Junior
Major: Civil Engineering
Project Title: Open Source Lead Sensor Development
Faculty Advisor: William Pennock

Gabriela De Carvalho
Academic Standing: Junior
Major: Biomedical Engineering
Project Title: Quantifying Gait Abnormalities in Children with Cerebral Palsy through 3-D Motion Analysis Techniques
Faculty Advisor: Saikat Pal