Undergraduate Research Projects AY21-22

Faculty / Staff Name	Student Name and Project
Candido	
DeRoo	• Jeff Leiberton – "A Spatially Resolved Spectral Study of the LMC Supernova Remnant J0541-6659"
Folland	• Siddharth Nandanwar – "Fabrication and Characterization of 2D Material heterostructures" • Tristan McMillan – "Construction of a Cryogenic Infrared Microscope" • Aditya Desai – "Characterizing the Optical Constants of Polar Semiconductors Using Transfer Matrix Simulations" • Emerson Peters (with David Miles) – "Magnetic Force Microscopy of Magnetometer Core Materials" • Nathan Torvik (X-Force program) – "Infrared Spectroscopy of Topological Materials"
Flatté	
Fu	
Gayley	
Girazian	• Adrian Acosta – "Determining how the chemical composition of the ionosphere of Mars is Affected by Solar Rotation" • Susanne Byrd – "Comparing Induced Magnetic Fields in the Upper Atmospheres of Venus and Mars"
Goree	• Nitin Nagarkar (Mechanical Engineering) – "Laser-sheet Optical System"
Halekas	• Melissa Peters – "Plasma Waves at Harmonics of the Electron Cyclotron Frequency Observed Near the Moon" • Scott Donnellan – "Development of Prototype Mechanisms for Lunar Surface Plasma Investigations" • Ian Silva – "Development of Prototype Mechanisms for Lunar Surface Plasma Investigations"
Hoadley	• John Momberg – "Classifying Behaviors of Candidate Stellar Merger Remnants with TESS"
Howes	
Jaynes	
Kaaret	• Joseph Schopen – "CMOS X-Ray Detectors" • Andrew Milne – "Camera System for Earth Observation at Night" • Will Meiners – "Camera System for Earth Observation at Night" • Tessa Schmidts (ECE) – "Control System for Earth Observation Camera" • Kyle Lastine (ECE) – "Control System for Earth Observation Camera"
Kletzing	
Lang	
Mallik	• Joshua Doucette – "Work on the ATLAS ITk-strip Upgrade Detector"
Meurice	
Miles	
Nachtman	• Max Herrmann – "CMS Outer Tracker Gantry Programming and Operations" • Ryan Parian – "Cosmic Ray Detector Circuit Design" • Mary Haag – "CMS Outer Tracker Module Testing and BTL Prototype Cooling System and Fluid Simulation" • Tom Bruner – "CMS Outer Tracker Module Testing"

Onel	• Max Herrmann – "CMS Outer Tracker Gantry Programming and Operations" • Ryan Parian – "CMS BTL Testing Barrel Timing Layer" and he is also working with Jane Nachtman on cosmic ray detector circuit design • Mary Haag – "CMS Outer Tracker Module Testing and BTL Prototype Cooling System and Fluid Simulation" • Tom Bruner – "CMS Outer Tracker Module Testing"
Polyzou	
Prineas	
Pryor	
Reno	
Rodgers	• Salvatore Quaid – "Geodesics from Thomas – Whitehead Connections" • Nicholas Harshman – "Black Holes from Thomas-Whitehead Gravity"
Skiff	
Uppu	• Henry Hammer – "Wavefront Shaping of Telecom Light in a Multimode Fiber" • Wasil Elsafi – "Transmission Matrix of a Non-Circular Core Multimode Fiber" • Aden Hageman – "Single-Photon Emission from Droplet-Etched Quantum Dots" • Joseph Schopen – "Telecom and Short-Wave Infrared Heralded Single-Photon Sources"
Wohlgenannt	