

Undergraduate Research Projects AY21-22

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

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