

**Virginia Space Grant Consortium  
Student Research Conference Agenda  
April 22, 2022**

8:00-8:30	<b>Registration in Lobby</b>					
8:30-8:45	<b>Mary Sandy, VSGC Director, Chris Carter, Deputy Director, and Joyce Kuberek, STEM Education Specialist Ballroom A Welcome</b>					
Where	Newport Room	Newport Room	Ballroom D	Ballroom D	Amphitheater	Amphitheater
Who	Presenter	Session Chair	Presenter	Session Chair	Presenter	Session Chair
8:50 a.m.	<b>Yogesh Aradhey</b> Virginia Tech <b>Aerospace</b> Investigation of NASA Combustion Schemem Under Thermoacutic Instability	<b>Colin Britcher</b> Old Dominion University <b>Professor of Aerospace</b>	<b>Sara Benham</b> Old Dominion University <b>Applied Science</b> Mapping the Spread of the Pathogen Rickettsia Parkeri Through Landscape Genetic Analysis of the Primary Vector, the Gulf Coast Tick (Amblyomma maculatum)	<b>Venkat Maruthamuthu</b> Old Dominion University <b>Asso. Professor of Mechanical and Aerospace Engineering</b>	<b>Joshua Fitzgerald</b> Virginia Tech <b>Astrophysics</b> Optimizing Spacecraft Trajectory Design in Perturbed Restricted Three-Body Models	<b>William Moore</b> Hampton University <b>Professor of Atmospheric and Planetary Sciences</b>
9:05 a.m.	<b>Kristen Carey</b> Old Dominion University <b>Aerospace</b> Implementation to Free Oscillate Dynamic Stability Test Method Using MSBS		<b>Nathan Cooper</b> William & Mary <b>Applied Science</b> Athena: Towards Moving Semantic Code Search with Causal Reasoningand Kknowledge Graphs		<b>Abigail Waggoner</b> University of Virginia <b>Astrophysics</b> Time Variable Chemistry in Protoplanetary Disks	
9:20 a.m.	<b>Julie Duetsch-Patel</b> Virginia Tech <b>Aerospace</b> Smooth Wall Separation Over Bumps: Benchmark Experiments for CFD Validation		<b>Hannah Richstein</b> University of Virginia <b>Astrophysics</b> Ultra Faint Dwarf Galaxies: Shedding Light on Dark Matter			

9:35 a.m.	<p><b>Mark Siebert</b>  <b>University of Virginia</b>  <b>Aerospace</b>  A Rigorous Molecular Survey of Stellar Graveyards</p>		<p><b>Elizabeth Prior</b>  <b>Virginia Tech</b>  <b>Applied Science</b>  Investigating Food-Vegetation Interactions Through Remote Sensing and Modeling</p>		<p><b>Doyee Byun</b>  <b>Virginia Tech</b>  <b>Astrophysics</b>  Quasar Outflows: Analysis of Data from the Very Large Telescope</p>	
9:50 a.m.	<p><b>Emma Hepworth</b>  <b>William &amp; Mary</b>  <b>Applied Science</b>  Elucidating the Molecular Mechanism of MK-STYX in Stress Response Pathways</p>		<p><b>Alicia Milam</b>  <b>Old Dominion University</b>  <b>Applied Science</b>  The Influence Negative Affect Regulation on Neurophysiological Markers of Cognitive Control and Distress Tolerance</p>		<p><b>Lee Kendall</b>  <b>University of Virginia</b>  <b>Structures and Materials</b>  Integrated Nanotube/Transition Metal Dichalcogenides Nanosheets for Water Splitting Applications: Enabling Long-Term Activity on Mars</p>	
10:05 TO 10:30	<b>Undergraduate Poster Presentations in Foyer</b>					
10:30 a.m.	<p><b>Anna Schmedding</b>  <b>William &amp; Mary</b>  <b>Applied Science</b>  Analysis and Simulation of COVID -19 Disease Spread in South Korea</p>	<p><b>Colin Britcher</b>  <b>Old Dominion University</b>  <b>Professor of Aerospace</b></p>	<p><b>Ken Koltermann</b>  <b>William &amp; Mary</b>  <b>Applied Science</b>  OneZZZ: Non-Intrusive Vital Sign Monitoring Using Wearable Technology</p>	<p><b>Venkat Maruthamuthu</b>  <b>Old Dominion University</b>  <b>Asso. Professor of Mechanical and Aerospace Engineering</b></p>	<p><b>Jarod Worden</b>  <b>Virginia Tech</b>  <b>Structures and Materials</b>  DFT Simulations of SEB Resistant Metal/Semiconductor Interfaces in SiC Epi Diodes and MOSFETs</p>	<p><b>William Moore</b>  <b>Hampton University</b>  <b>Professor of Atmospheric and Planetary Sciences</b></p>
10:45 a.m.	<p><b>Ryan Zelinsky</b>  <b>University of Virginia</b>  <b>Applied Science</b>  Investigation of Metal Ion Mobility Under Exposure to Deactivating Agents</p>		<p><b>Zachary Steele</b>  <b>Old Dominion University</b>  <b>Applied Science</b>  Utilizing Triple Oxygen Isotopes for Assessing Animal Metabolism and Water Intake</p>		<p><b>Jennifer Mejia</b>  <b>Old Dominion University</b>  <b>Structures and Materials</b>  Atomic Interactions of Flexible Organic Solar Cells</p>	
11:00 a.m.	<p><b>Carly Norris</b>  <b>Virginia Tech</b>  <b>Applied Science</b>  Investigating Space Brain: How Do Brain Cells Respond to the Effects of Increased Intracranial Pressure?</p>		<p><b>Hannah Mast</b>  <b>University of Virginia</b>  <b>Applied Science</b>  Solar-Induced Chlorophyll Fluorescence: A Novel Approach to Quantify Photosynthesis in Wetland Ecosystems</p>		<p><b>M. Cecilia Mulvaney</b>  <b>University of Virginia</b>  <b>Structures and Materials</b>  Evaluating Formability of Aluminum Matrix Nanocomposite Materials for Flow Formed Aircraft Fuselages</p>	
11:15 a.m.	<p><b>Madeline Miles</b>  <b>University of Virginia</b>  <b>Applied Science</b>  Estimating NOx Emissions and NO<sub>2</sub> Lifetimes in West Africa Cities Using Satellite Observations</p>		<p><b>Eric Stone</b>  <b>University of Virginia</b>  <b>Structures and Materials</b>  Effects of Phase Mixtures on Long Tern Stability of Ytterbium Silcate Environmental Barrier Coatings</p>		<p><b>Benjamin Belfore</b>  <b>Old Dominion University</b>  <b>Structures and Materials</b>  Modeling Dynamic Recrystallization of Phase of Materials for Applications in Adaptive Optics</p>	

11:30 a.m.	<p><b>Deborah McGlynn</b>  <b>Virginia Tech</b>  <b>Applied Science</b>          Understanding Reactions of Ozone with Biogenic Volatile Organic Compounds in a Forest Canopy</p>		<p><b>Lauren Sommers</b>  <b>Old Dominion University</b>  <b>Applied Science</b>          Quantifying Shoreline Change Using Satellite Imagery</p>	<p><b>Scott Bellows, Ph. D.</b>  <b>Virginia Space Grant Consortium</b>  <b>Ecological Sciences</b></p>	<p><b>Joseph Cuzzo</b>  <b>William &amp; Mary</b>  <b>Structures and Materials</b>          Novel Josephson Junctions for Cryogenic Memory and Fault-Tolerant Quantum Computation</p>	
11:45 a.m.					<p><b>Von Clyde Jamora</b>  <b>Old Dominion University</b>  <b>Structures and Materials</b>          Understanding the Defect Formation of Thin Ply Composites During Automated Fiber Placement</p>	
12:00 - 2:00 p.m.	<p><b>Luncheon to Honor the 2021-2022 Research Scholars and Fellows</b>  <b>Sponsored by Virginia Tech</b>  <b>Dr. Scott Bailey</b>  <b>Probing the Polar Winter to Understand How Space Weather Couples the Whole Atmosphere</b>  <b>Lunch by Invitation Only</b></p>					
2:00-2:25 p.m.	<p><b>Undergraduate Poster Presentations in Foyer</b></p>					
2:25 to 2:40	<p><b>Closing Ceremony</b></p>					