

**2022 CLASS POSTER WINNERS**  
 5th Annual NDSEG Conference, New Orleans Marriott, New Orleans, Louisiana

DISCIPLINE & AWARD	FELLOW NAME	SPONSORNG AGENCY	UNIVERSITY	POSTER TITLE
<b>Aeronautical and Astronautical Engineering</b>	<b>Name</b>	<b>Sponsoring Agency</b>	<b>University</b>	<b>Poster Title</b>
Exemplary (1)	Maison Clouatre	ONR	Massachusetts Institute of Technology	Controlling quantum information in open quantum systems: A foundation for quantum inference
Honorable (2)	Jennifer Horing	AFOSR	University of Colorado, Boulder	Aero-thermo-elastic Analysis and Optimization of a Scramjet Inlet
<b>Astrodynamics</b>	<b>Name</b>		<b>University</b>	
Exemplary (1)	W. Garrett Levine	AFOSR	Yale University	Detection of Elongated Near-Earth Objects
Honorable (2)	Renee Spear	AFOSR	University of Colorado Boulder	Collision-Free Spacecraft Trajectory Design in Multi-Body Systems
<b>Biomedical Engineering</b>	<b>Name</b>		<b>University</b>	
Exemplary (1)	Carolyn Marar	ARO	Boston University	Wireless Neuromodulation at Submillimeter Precision via a Microwave Splitting Resonator
Honorable (2)	Tanner Henson	ARO	University of California, Davis	Precise and Robust Cell-free Synthesis of Artificial Extracellular Vesicles
<b>Biosciences</b>	<b>Name</b>		<b>University</b>	
Exemplary (1)	Meenakshi Chakraborty	AFOSR	Stanford University	Systematic identification of gut microbial molecules that impact the function of the blood-brain barrier
Honorable (2)	Lynn Sidor	ONR	University of Rochester	Opticoli : Engineered bacteria that self-assemble a "bioglass" polysilicate coating and display enhanced light focusing abilities
<b>Chemical Engineering</b>	<b>Name</b>		<b>University</b>	
Exemplary (1)	Alexis Phillips	AFOSR	University of Colorado Boulder	Engineering Stimuli-Responsive Optical Elements: Synthesis, Processing, and Optical Characterization
Honorable (2)	Lindsey Parsons	ONR	University of California, Los Angeles	Elucidating Extraordinary Optical Properties of Inorganic Lead Halide Perovskites for Photonic Devices
<b>Chemistry</b>	<b>Name</b>		<b>University</b>	
Exemplary (1)	Nathan Harper	AFOSR	California Institute of Technology	Toward On-Chip Multiphoton Quantum Spectrometers
Honorable (2)	Abigail Linhart	ONR	University of Tennessee - Knoxville	Structure-Property Relationships in Conjugated Thiophene-based Copolymers with an Emphasis on Doping Method
<b>Civil Engineering</b>	<b>Name</b>		<b>University</b>	
Exemplary (1)	Sarah Torhan	ARO	Pennsylvania State University	Mapping Intersections of Water Security, Socioeconomics, and Infrastructure
Honorable (2)	James Bantis	ARO	Stanford University	Framework for Regional Seismic Risk Assessments for Groups of Tall Buildings
<b>Cognitive, Neural, and Behavioral Sciences</b>	<b>Name</b>		<b>University</b>	
Exemplary (1)	Alexis Torres	ONR	Arizona State University	A Machine Learning Approach for Predicting Single Subject Performance from Eye Metrics
Honorable (2)	Alexa Bushinski	ONR	Purdue University	Remembering the Way
<b>Computer &amp; Computational Sciences</b>	<b>Name</b>		<b>University</b>	
Exemplary (1)	Saranya Vijayakumar	ARO	Carnegie Mellon University	Embedding Logic into Machine Learning
Honorable (2)	Joseph Reeves	AFOSR	Carnegie Mellon University	Cardinality Constraints in Automated Reasoning

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<b>Electrical Engineering</b>	Name		<b>University</b>	
Exemplary (1)	Sydney Sofronici	ONR	University of Pennsylvania	MagneticSensing at 500C
Honorable (2)	Zephan Enciso	ONR	University of Notre Dame du Lac	Accelerating Bayesian Inference
<b>Geosciences</b>	Name		<b>University</b>	
Exemplary (1)	Satya Kent	ARO	Northern Arizona University	Wetland Methane Dynamics: a Meta-analysis
Honorable (2)	Nathan Hadland	ARO	University of Arizona	Evaluating the survival and spread of microbes in deserts amid soil atmosphere interactions
<b>Materials Science and Engineering</b>	Name		<b>University</b>	
Exemplary (1)	Daniel Ranke	ONR	Carnegie Mellon University	Tunable Semiconducting Nitrogen-Doped Graphene Nanosheets for Near-Infrared Neuro-Optoelectronics
Honorable (2)	Luke Langford		University of California, Berkeley	Multiscale Theory of Active Colloid Assembly
<b>Mathematics</b>	Name		<b>University</b>	
Exemplary (1)	Dane Grundvig	ARO	Rice University	Optimization with Inexactness
Honorable (2)	Jonah Botvinick-Greenhou	ARO	Cornell University	Learning Dynamics on Invariant Measures Using PDE-Constrained Optimization
<b>Mechanical Engineering</b>	Name		<b>University</b>	
Exemplary (1)	Eric Stewart	ARO	Massachusetts Institute of Technology	Magneto-viscoelasticity of hard-magnetic soft-elastomers
Honorable (2)	Bryan Habas	ARO	The Pennsylvania State University	Quadrotor Perching on Complex Surfaces - Leveraging Mechanical Design for Robust Landings on Ceilings
<b>Naval Architecture and Ocean Engineering</b>	Name		<b>University</b>	
Exemplary (1)	Galen Ng	ONR	The University of Michigan, Ann Arbor	Hydroelastic Tailoring of Composite Structures for High-speed Vessels
<b>Oceanography</b>	Name		<b>University</b>	
Exemplary (1)	Joseph Gradone	ONR	Rutgers University	Exploratory Glider Deployments Reveal Changes in the Upper Oceanic Water Masses of the Caribbean Through-Flow
Honorable (2)	Jessica Wan	ONR	University of California, San Diego	Diminished efficacy of regional marine cloud brightening in a warmer world
<b>Physics</b>	Name		<b>University</b>	
Exemplary (1)	Jacquelyn Ho	AFOSR	University of California, Berkeley	Optomechanical phase transition in a mesoscopic atom array
Honorable (2)	Eric Wolf	ARO	Massachusetts Institute of Technology	First Sound Damping in the Imbalanced Unitary Fermi Gas
<b>Space Physics</b>	Name		<b>University</b>	
Exemplary (1)	Malik Walker	AFOSR	Johns Hopkins University	Radial Evolution of CME-associated Particle Acceleration Observed by Solar Orbiter and the Advanced Composition Explorer
Honorable (2)	Liam Smith	AFOSR	Georgia Institute of Technology	Improving Ionospheric Predictions and Modeling Storm Activity Using Machine Learning