

# TRIDENT SCHOLARS



## WED APRIL 28

0755 OPENING REMARKS BY VADM SEAN BUCK

0800 MIDN 1/C ELANA P. KOZAK

Analyzing Behaviors of Artificial Intelligence Methods for a Search Game

0835 MIDN 1/C LILLIAN NGO USADI

Acoustic Manipulation of Microrobots Using Chladni Plates and Multimode Membrane Resonators

0910 MIDN 1/C SARAH M. NGUYEN

Parametric Analysis and Optimization of an Elastocaloric Refrigeration Cycle

0945 MIDN 1/C ALEC J. ENGL

Photorealistic Image Generation for Satellite Pose Estimation Using Generative Adversarial Networks

1020 MIDN 1/C HARRISON D. FOLEY

Deceiving Neural Networks in Common Applications

1055 MIDN 1/C DANIEL J. BUTCHKO

Cyber-Physical System Security of Surface Ships Using Intelligent Constraints

1300 MIDN 1/C JOSEPH B. WIEDEMANN

Superradiance of Few Driven Two-Level Quantum Dot Emitters in the Bad Cavity Limit

1335 MIDN 1/C PHILIP B. SMITH

Predicting Naval Academy Performance Using Holistic Personality Analysis in Multidimensional Space

1410 MIDN 1/C PHILIP C. GATBONTON

A Framework to Evaluate Embedded Security Implementations on the Basis of Common Implementation Mistakes and Vulnerabilities

1445 MIDN 1/C LOGAN R. WILLIAMS

Characterizing the Economic Abundance of Water Through a Theoretical and Empirical Framework

## THUR APRIL 29

0800 MIDN 1/C LENNING A. DAVIS

Tracking Additive Manufacturing Using Machine Vision

0835 MIDN 1/C NATALIE A. SCHIEUER

Wireless Electromechanical Power Transfer Using Piezoelectric Materials

0910 MIDN 1/C ZACHARY D. NYGAARD

Near-Body Velocity and Turbulence Measurements in the Lee of an Inclined 6:1 Prolate Spheroid

0945 MIDN 1/C ELIZABETH K. GERGAL

Drone Swarming Tactics using Reinforcement Learning and Policy Optimization

1020 MIDN 1/C MATTHEW C. GILLCRIST

Freestream Deceleration Effects on Film Cooling Over a Flat Plate

1055 TRIBUTE TO MIDN 1/C JOHN M. JOHNSON

# 2021 PRESENTATIONS APRIL 28-29, 2021

Volgenau Conference Center, 5th floor Hopper Hall, or Virtual (see [www.usna.edu/TridentProgram/](http://www.usna.edu/TridentProgram/) for link)