NSWCPD Internships & Capstones Overview

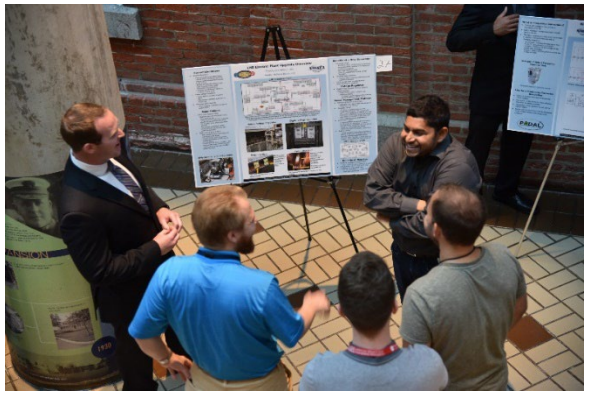
8/23/2023

Tristan Wolfe

NSWCPD STEM Outreach Program Manager

Methods

- Summer Internships
- Short-term school year projects
- Long-term capstone projects
- Co-ops
- Scholarships
- Undergraduate / Graduate research

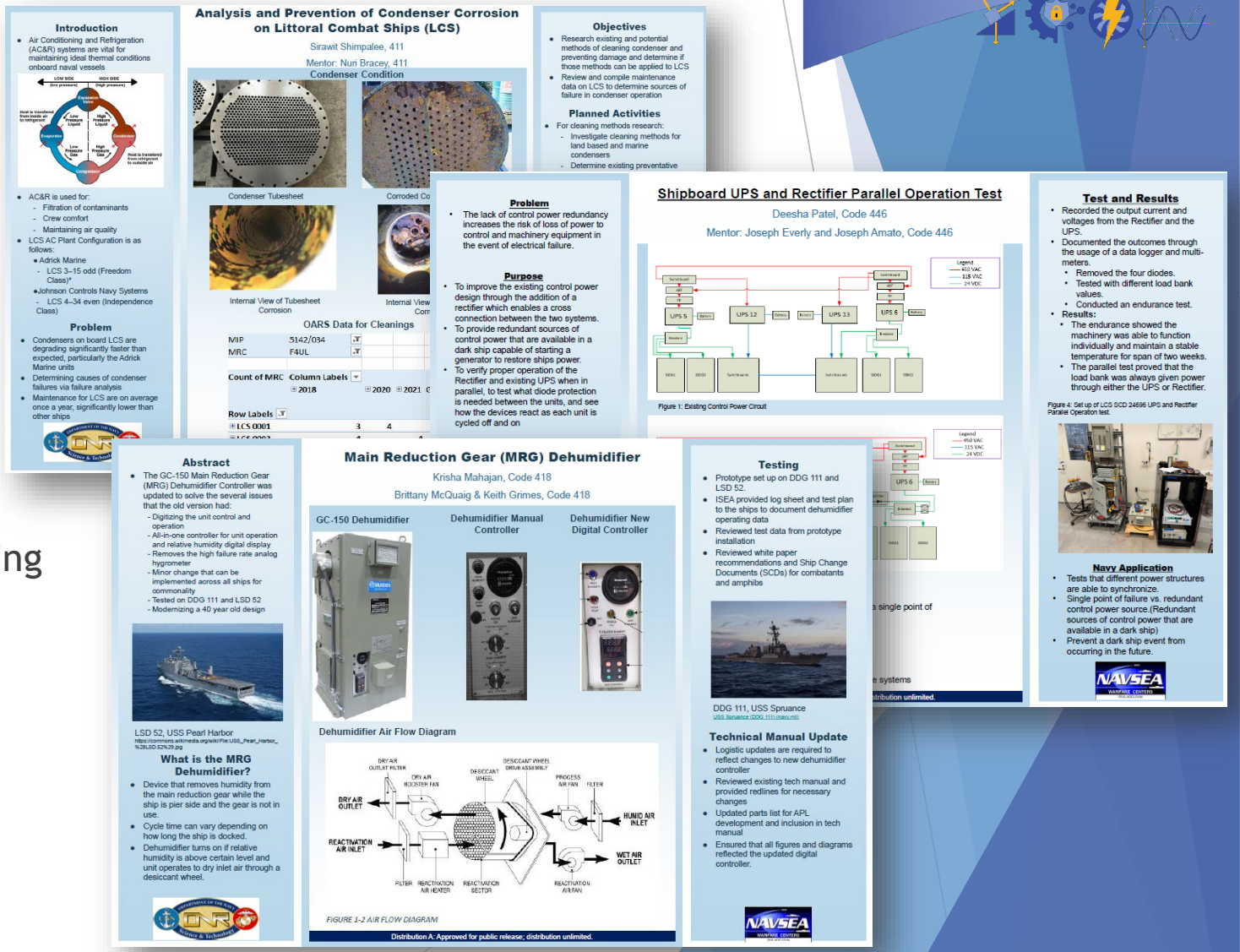


NAVSEA WARFARE CENTERS PHILADELPHIA

NSWCPD STEM OUTREACH

Intern Project Examples

- Modeling & Simulation Support / MBSE
- Testing & Evaluation Support
- Work Package Development
- Test Site Support
- Computer Programming Support
- Hardware System Upgrades
- Research & Development Support
- Control System Upgrades
- Cybersecurity, DevSecOps, & Ethical Hacking
- Engineering System Design
- Engineering Analysis & Data Analytics
- and much more…



Links

- Internships
  - Naval Research Enterprise Internship Program (NREIP)
  - Science and Engineering Apprenticeship Program (SEAP)
  - Veterans to Energy Careers (VTEC)
  - National Security Innovation Network (NSIN) X-Force
  - DoD College Acquisition Internship Program (DCAIP)
  - DoD Cyber Scholarship Program (DoD CySP) – DoD Cyber Exchange
  - Pathways
- Scholarships / Fellowships
  - Science, Mathematics, and Research for Transformation (SMART)
  - National Defense Science and Engineering Graduate Fellowship Program (NDSEG)
- Capstones / Research / Projects
  - National Security Innovation Network (NSIN) Capstone
  - Naval Engineering Education Consortium (NEEC)
  - Capstones, co-ops, and other summer hire opportunities: Please contact us directly!

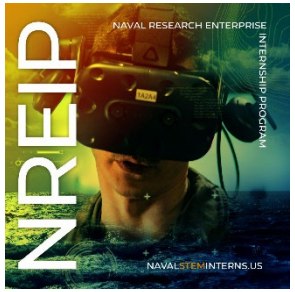
Closes Nov 1

Closes Feb 10

Closes Oct 11

Closes Dec 1

Closes Oct 31



QUESTIONS

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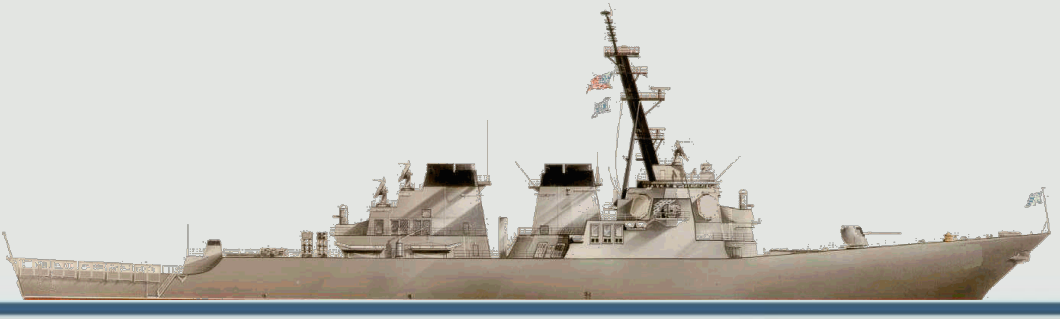

Sample Summer Intern Projects

HFC 134a high global warming potential replacement refrigerant: Intern assists with the identification of low global warming potential refrigerants including testing AC chiller components with drop-in replacements, AC plant test site installation, and start-up testing.

Propulsion shafting alignment training and requirements development: Intern assists the propulsion shafting team in supporting the research and testing of advanced bearing materials to develop Stribeck curves for different paired materials. Stribeck curves help predict bearing wear and service life. The intern also assists in developing shafting alignment standards and products to support the in-service engineering agents in updating the training class materials and Fleet standards.

Salinity monitoring system testing: Intern assists in aspects of mechanical, electrical, and control systems testing related to control panels and other equipment supporting salinity monitoring. Activities include computer programming and cybersecurity as well as hands-on testing & evaluation.

Research & development in superconductivity: Intern assists in testing & evaluation activities related to studying the magnetic effects on pneumatic motor operations as well as studying current state of high-temperature superconducting wire performance and cost.

Machinery plant control and monitoring systems: Intern assists in new software design and development for shipboard machinery plant control and monitoring systems. Intern uses a combination of virtual machine, java script, visual basic, Arduino, and C programming languages and develops a better understanding of requirements testing.