NRL
NAVAL RESEARCH LABORATORY

ENGINEERING/COMPUTER SCIENCES/PHYSICS/ATMOSPHERIC STUDIES/INFORMATION TECHNOLOGY

FREESPACE PHOTONICS COMMUNICATION OFFICE, CODE 5505

Code 5505 is the Freespace Photonics Communications Office of the Information Technology Division. Our group works on special projects that involve photonics, RF-photonic hybrids and dielectric signatures. An intern will support senior scientist and engineers in projects that may involve design, build, and testing of one-of-a-kind components and systems which ultimately support investigating scientific phenomenology and/or potential operations for the Navy. Intern should be fundamentally curious.

Free space optical communication has emerged in recent years as an alternative to the conventional Radio Frequency (RF) approach. This emergence is due to the increasing maturity of lasers and compact optical systems that enable exploitation of the inherent advantages of the much shorter wavelengths characteristic of optical and near-infrared carriers.

Inherent advantages of optical communications:

- Large bandwidth
- Low probability of intercept
- Immunity from interference or jamming
- Frequency allocation relief
- Smaller, lighter payloads

For a conventional optical link, a good to high quality telescope that provides relatively accurate pointing and tracking capability and a robust laser with sufficient power, temperature stabilization, and requisite electronics are needed in addition to the usual modulation/demodulation and control and acquisition instrumentation and software.

ABOUT THE JOB

Code 5500 is currently seeking capable and motivated undergraduate and graduate students with focused interests in electrical or optical engineering, computer sciences, physics, atmospheric studies or information technology. Student co-op and summer student positions are available. NRL offers tuition reimbursement as well as salary for qualified individuals.

MINIMUM REQUIREMENTS

Eligibility for a SECRET clearance
U.S. Citizenship required for entry level positions
Ability to program in Matlab, LabVIEW or C++
Basic scientific, mathematical, and technical competence
Major in Engineering, Mathematics, Computer Science or Physics
Minimum 3.0 GPA

JOB BENEFITS

The Department of the Navy offers a comprehensive benefits package that includes, in part, paid vacation, sick leave, holidays and a 401K-type retirement plan. For additional details visit http://www.public.navy.mil/donhr/benefits/Pages/Default.aspx.

HOW TO APPLY

Point of Contact: Carlos Font – carlos.font@nrl.navy.mil