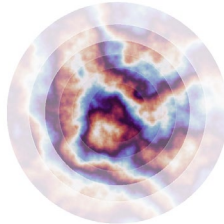# Post-Doctoral Research Opportunity

The Directed Energy Physics Branch of the Naval Research Laboratory is seeking a post-doctoral researcher. The research opportunity focuses on the fundamental nature of partially coherent optical beams interacting and propagating in nonlinear or random media. The research will sit at the intersection of nonlinear optics and statistical optics. Topics include theoretical and experimental problems in self-focusing, modulation instabilities, frequency generation, speckles and scattering invariant modes of light in random media. Theory will be advanced with ensemble simulations of the nonlinear parabolic wave equation using in-house codes. Experimental approaches include building a coherence function generator and wave statistics diagnostics. The research can lead the way to mitigating randomness and develop new modes of optical beam control.

Qualifications of a successful candidate include:

- ability to develop and maintain new modeling capabilities for high performance computing systems,
- strong publication record,
- a self-starter who is interested in taking on a leadership role in the research,
- and adaptability and versatility.

The start date for this appointment is expected to be between January 2023 and October 2023.
The program provides an annual starting stipend of $87,198, a professional travel allocation of $3,000 per tenure year, relocation reimbursement and more.
Visit https://www.nrl.navy.mil/Careers/Post-Docs/NRC/ and
https://sites.nationalacademies.org/PGA/RAP/index.htm for additional information. Further details are available here:
https://nrc58.nas.edu/RAPLab10/Opportunity/Opportunity.aspx?LabCode=64&ROPCD=641576&RONum=C0652.

For additional post-doctoral opportunities at NRL, please visit
https://www.nrl.navy.mil/Careers/Post-Docs/.

Applicants must be US citizens or US permanent residents at the time of application. NRL is an equal opportunity employer.

Please contact bahman.hafizi@nrl.navy.mil if you are interested in this position.