

**PREP Research Associate
CHIPS Funded Project.**

This position is part of the National Institute of Standards and Technology (NIST) Professional Research Experience Program (PREP). NIST recognizes that its research staff may want to collaborate with researchers at academic institutions on specific projects of mutual interest and, therefore, requires those institutions to be recipients of a PREP award. The PREP program involves staff from a wide range of backgrounds conducting scientific research across various fields. Individuals in this position will perform technical work supporting the collaboration's scientific research.

Research Title:

Metrology for Integration of New Magnetic Materials

The work will entail:

Development and evaluation of models of magnetic material behavior in microelectronic applications at frequencies from 1MHz to 100 GHz, with applications in power electronics and communications.

U.S. Citizen Preferred

Key responsibilities will include but are not limited to:

- Develop methods linking micromagnetic models to device scale experimental measurements.
- Implement these methods in computer code.
- Present results at internal meetings and occasional meetings with external stakeholders.
- Ensure results, protocols, software, and documentation are archived or otherwise transmitted to the larger organization.

Qualifications

- A PhD in Applied Mathematics, Physics, or a related field.
- Familiarity with ODEs, PDEs, stiff systems, Maxwell's equations.
- Experience coding in C++, MATLAB, Python.
- Ability to work with experimentalists.
- Strong oral and written communication skills.

Privacy Act Statement

Authority: 15 U.S.C. § 278g-1(e)(1) and (e)(3) and 15 U.S.C. § 272(b) and (c)

Purpose: The National Institute for Standards and Technology (NIST) hosts the [Professional Research Experience Program \(PREP\)](#) which is designed to provide valuable laboratory experience and financial

assistance to undergraduates, post-bachelor's degree holders, graduate students, master's degree holders, postdocs, and faculty.

PREP is a 5-year cooperative agreement between NIST laboratories and participating PREP Universities to establish a collaborative research relationship between NIST and U.S. institutions of higher education in the following disciplines including (but may not be limited to) biochemistry, biological sciences, chemistry, computer science, engineering, electronics, materials science, mathematics, nanoscale science, neutron science, physical science, physics, and statistics. This collection of information is needed to facilitate the administrative functions of the PREP Program.

Routine Uses: NIST will use the information collected to perform the requisite reviews of the applications to determine eligibility, and to meet programmatic requirements. Disclosure of this information is also subject to all the published routine uses as identified in the Privacy Act System of Records Notices: NIST-1: NIST Associates.

Disclosure: Furnishing this information is voluntary. When you submit the form, you are indicating your voluntary consent for NIST to use of the information you submit for the purpose stated. By applying to a CHIPS-funded PREP opportunity, you also acknowledge that participation in the project requires signing a Non-Disclosure Agreement (NDA) prior to beginning any work.