

Research Faculty I

The National High Magnetic Field Laboratory (MagLab) is seeking a research faculty member to undertake research and development (R&D) of high strength conductors and reinforcement materials for building the next generation of ultrahigh field magnets.

The MagLab is the world's premier magnet laboratory with state-of-the-art high magnetic field facilities and has a history in development and application of high strength materials for high field magnets. This new faculty member will enhance the efforts on high strength material development activities in the MagLab so that new generation of ultrahigh field magnets can be built for users. The work scope includes development of high strength copper-alloy conductors, development of fabrication procedures for pre-industrial manufacturing of these conductors, development of testing methods related to mechanical strength and electrical conductivity, characterization and theoretical modeling of these materials. This person will conduct in-depth research on strengthening mechanisms of high strength materials and address the need for next generation of pulsed, resistive and superconducting magnets. Initially the primary focus will be on high strength materials for pulsed magnets. This can be later extended to other types of conductors for high field magnets. The scope of this position can also include development of high strength fibers and high strength structural materials, research for in-house R&D programs, as well as research in cooperation with other research and industrial partners.

The candidate must have Ph.D degree in materials science or related fields, and must have at least 2 years' experience relevant to high strength composite conductors. Some international travel may be required. The candidate is expected to have knowledge on high strength materials, and have hands-on experience in material characterization, conductor fabrication, material property modeling. The characterization includes mechanical property tests (tensile, fatigue, and fracture toughness tests), electrical conductivity characterization as a function of testing temperature and fabrication parameters, and transmission and scanning electron microscopy. Experience in material deformation at cryogenic condition and in high magnetic fields is a plus. The fabrication includes alloy casting, deformation, and heat-treatments. The candidates should have an excellent tracking record of high quality research as shown by high quality scientific publications in the field.

Interested candidates can apply to Florida State University at <https://jobs.fsu.edu> and reference Job Opening ID 44603. Please attach your curriculum vitae, cover letter describing your research experience, and names and contact information of at least three references. The position will close on February 28, 2019. The Florida State University is an Equal Opportunity, Affirmative Action employer, committed to diversity in hiring, and a Public Records Agency. For additional information, please contact Ms. Bettina Roberson, National High Magnetic Field Laboratory, Florida State University, 1800 E. Paul Dirac Drive, Tallahassee, FL 32310-2740, 850-644-0855.