# PENN STATE

## Engineering Science and Mechanics & Biomedical Engineering

# New Faculty Opportunity

The Departments of Engineering Science and Mechanics (ESM) and Biomedical Engineering (BME) at Penn State seek applicants for a tenure-track/tenured faculty position with expertise at the forefront of development of **data sciences or machine learning and application to biological or health sciences**.

This position is a co-hire between ESM and BME. Engineering science (esm.psu.edu) fosters a highly interdisciplinary environment, promoting collaborations across the engineering disciplines, materials sciences, mechanics, chemistry, physics, mathematics, and biological sciences. Biomedical engineering (bme.psu.edu) combines traditional engineering principles with medicine and technology for the betterment of human health and society.

Candidates who enrich our diversity are strongly encouraged to apply.

**Research Expectations:** The successful candidates will have demonstrated expertise in the development of modern machine learning and data sciences approaches and expertise and applications to biological and health sciences. Research synergy with faculty of ESM and BME will be viewed positively, especially in the areas of neural engineering, cancer, and cardiovascular disease research. Example topics of interest include but are not limited to: development of novel modeling and analysis of circuit wide electrophysiological recording; advanced acquisition and processing in neural prosthetics, reverse engineering of brain networks for design of new computing structures; identification of new treatment approaches to diseases including pharmaceutical interventions, development and validation of models to understand complex physiological and pathophysiological phenomena; and development of precision personalized medicine through modeling of electronic health records.

**Teaching Expectations:** The successful candidate will be expected to support the educational efforts in ESM and BME, to develop coursework to enhance data sciences training in our engineering education and data sciences practice in our research.

**Institutes and Centers:** Cross-disciplinary and cross-departmental collaborations are encouraged at Penn State and are facilitated through a range of institutes and research centers. This position is envisioned to particularly leverage the resources of the Huck Institutes of the Life Sciences (huck.psu.edu), Materials Research Institute (mri.psu.edu), the Institute for Computational and Data Sciences (icds.psu.edu), and the Center for Neural Engineering (cne.psu.edu).

**Penn State:** Penn State's College of Engineering strives to build a welcoming, inclusive, and supportive environment for students, staff, and faculty. We rely on the expertise, sensitivity, and commitment of an inclusive faculty to enhance diversity, seek equity, and create a welcoming environment within our community.

We are committed to nurturing a learning and working environment that respects differences in culture, age, gender, race, ethnicity, physical ability, sexual orientation, and religious affiliation. In welcoming every candidate, we strive to meet the needs of professional families by actively assisting with partner-placement needs.

**Qualifications:** Required qualifications include a Ph.D. in an engineering-science or biomedical-related discipline, and a track record of accomplishments in both research and teaching. Nominations and applications will be screened immediately and considered until the position is filled.

**Application Process:** Applicants should submit, in one PDF file:

1. A cover letter summarizing impact in advancing data sciences/machine learning methods, impact in biological/health sciences, and synergies within the ESM and/or BME departments
2. Curriculum vitae
3. Statements of contributions and plans on (a) research, (b) teaching, and (c) diversity and inclusion
4. Three relevant publications
5. Names and addresses of four references

**Apply online**

Application review will begin immediately and will continue until the position is filled. The expected start date is Aug. 15, 2021.

**Inquiries:** Inquiries can be directed to either of the search co-chairs Bruce Gluckman or Keefe Manning, esm_bme_datasciencesearch@engr.psu.edu

PennState College of Engineering