RENEW INSTITUTE

MULTIPLE FACULTY POSITIONS IN ENERGY, ENVIRONMENT & WATER SUSTAINABILITY

The Institute on Research and Education in Energy, Environment and Water (RENEW) at the University at Buffalo (UB) aims to advance Energy, Water and Environmental Sustainability as a foundation for a regenerative economy through interdisciplinary research cutting across UB’s academic organizations. The institute’s interdisciplinary focus — involving the faculties of the School of Architecture and Planning, College of Arts and Sciences, School of Engineering and Applied Sciences, Law School, School of Management, School of Public Health and Health Professions and the School of Medicine and Biomedical Sciences — is designed to foster new collaborations and innovative ideas. The initiative taps the leadership and vision of deans and faculty at these seven schools and colleges. The institute engages over 100 faculty in these seven schools and aims to hire 19 additional faculty. Further details can be found in http://www.buffalo.edu/renew/Employment-Opportunities.html.

The Institute seeks to hire outstanding new faculty in five focus areas that crosscut Energy, Environment, & Water: (1) Next-Generation Materials and Technologies for Energy, Environment & Water Sustainability; (2) Sustainable Urban Environments; (3) Freshwater Coastal Ecosystems and Blue Economy; (4) Environmental Exposures, Genomes and Health; and (5) Climate Change & Socio-Economic Impacts. Successful candidates will be “T-shaped” researchers, defined as those who have not only the required “depth” to be able to obtain tenure in their home departments, but also “breadth” and a strong desire for engaging in interdisciplinary work, clearly advancing the mission of the institute. In addition, candidates should bring interesting innovative ideas that allow the focus areas to move in new directions. Applications are solicited for tenure track faculty positions at the Assistant, Associate, or Full Professor levels. We are particularly looking for candidates who can operate effectively in a diverse community of students and faculty, and share our vision of helping all constituents reach their full potential. At present, the institute is particularly interested in searching for outstanding faculty in the following focus areas:

Next-Generation Materials and Technologies for Energy, Environment & Water Sustainability: In this focus area we seek outstanding candidates with expertise in theory and modeling, directed synthesis or combinatorial characterization of next-generation materials and devices related to energy, environment and water. Creating novel materials with tailored combinations of properties that meet targeted functional needs, is a multi-disciplinary challenge that involves rational design, directed synthesis, characterization, and ultimately materials integration and device fabrication. A domain of interest includes first principles-based multiscale, multi-physics modeling that bridge the gap between atomistic material modeling and device modeling. Another domain of strong interest includes high-throughput or combinatorial characterization of materials as well as directed combinatorial synthesis of materials.

Freshwater Coastal Ecosystems and the Blue Economy: In this focus area we seek outstanding candidates who can work on transformative solutions to problems in sustainable water quality
and quantity. Candidates who can work in interdisciplinary settings that span freshwater science, engineering, economics, and management are particularly encouraged. Specific areas of interest include expertise in aquatic ecology, natural resource economics, and freshwater ecosystem modeling.

**Environmental Exposures, Genomes and Health:** This technical focus area addresses the impact of a life-time of environmental stressors (chemical, biological, physical) and genomes on health outcomes across multiple generations, with the ultimate goal to promote health and prevent disease, locally, nationally, and globally. We seek outstanding candidates in the areas of basic and translational molecular and genetic epidemiology or toxicology focused on environmental health concerns and candidates with expertise in chemical and physical air pollution modeling, with direct applications to human exposure assessment.

**Climate Change & Socio-Economic Impacts:** This technical focus area includes strong programs in ice sheet research and dynamics, high-latitude climate and glacier records, as well as quantitative hazards and risk analysis, ecological impacts of global environmental change, and how shifting interpretations of the law affect environmental values and regulation. We seek applications in the area of climate change modeling including application to ice-sheet modeling and atmosphere/ocean/ice multi-physics geophysical modeling.

Applicants must have a creative vision for original research and will be expected to establish an externally funded and internationally recognized research program, mentor and supervise graduate students, and teach undergraduate and graduate classes. Possible faculty appointments will be in the appropriate departments comprising the seven schools and colleges which are part of the RENEW institute.

**Minimum qualifications:** Ph.D. required by time of appointment; postdoctoral experience and/or national laboratory or industry experience desired. All candidates must have a proven record or strong drive toward team research, a strong record of research publication, the ability to attract funding, along with a demonstrated commitment to effective teaching. Applicants should submit a CV, statement of teaching and research plans, and names of at least three references via the UBJobs system (https://www.ubjobs.buffalo.edu/), posting number 1600447. For additional information, please email renew@buffalo.edu.

**About UB:** The University at Buffalo is the largest and most comprehensive university in The State University of New York (SUNY) system, with about 19,000 undergraduates, 10,000 graduate students, and 1600 full-time faculty (which is expected to grow by 300 faculty over the next five years). Buffalo is located in New York State's second-largest metropolitan area, known for its friendly residents, world-class cultural institutions, and international flavor. RENEW faculty are located on the UB North and South Campuses, in or adjacent to suburban Amherst, an area that combines outstanding public schools and services with a surprisingly low cost-of-living. Downtown Buffalo, with eclectic neighborhoods, the Lake Erie waterfront, and vast cultural resources, is 15 minutes away by car. The awe-inspiring Niagara Falls is also just 20 minutes away.

*The University at Buffalo is an Equal Opportunity/Affirmative Action Employer/Recruiter.*