



Regional Analysis of Food, Energy and Water Systems under Climate Extremes: The Role of Engineered and Natural Infrastructure

Postdoctoral Research Associate position available

A Postdoctoral Research Associate is sought to join a consortium of academic partners analyzing contemporary and future challenges to food-energy-water systems (FEWS) of the Northeastern and Midwestern United States. Extreme weather will continue to challenge the performance of FEWS-related engineered and natural infrastructure, and serve as a major force shaping future decisions on environment, economy, and national security. This project responds to this imperative by creating the C-FEWS (Climate-induced extremes on the linked Food, Energy, Water System) research framework to advance modeling, data integration and assessment capabilities in support of hypothesis-based research on regional FEWS dynamics. It is also designed to support policy-making by identifying alternative management strategies under changing climate and weather extremes over multitemporal time horizons to 2100.

The project is seeking a creative, self-motivated, and energetic post-doctoral fellow assist, coordinate various aspects of, and be trained for a leadership position in the field.

Eligible fields of expertise:

Modeling, numerical methods and/or geospatial data analysis training in any of the following areas: hydrology, environmental systems analysis, environmental engineering, energy assessment, ecosystem services evaluation.

Primary responsibilities:

- Execute large-scale food-water-energy nexus modeling studies;
- Data integration from Earth System science and human dimensions perspectives;
- Analyze role of traditional engineering assets and ecosystem services in regional food-energy-water systems;
- Under the general supervision of the Senior Research Director and PIs, perform simple-to-complex research tasks, investigations, and analytical activities independently;
- Formulate scenarios of potential future trajectories of FEWS conditions and management responses;
- Integrate across individual project elements (models, data) by helping to create and apply a holistic analysis framework.

Qualifications and skills sought:

- Strong numerical skills;
- Modeling, data visualization geospatial analysis (GIS);
- Ability to write clearly, including technical reports & peer-reviewed scientific publications;
- Presentation skills for internal team meetings and scientific conferences;

- Capacity to participate in team-based research and lead various aspects of the work, including project management.

Other duties:

- In coordination with project lead, execute project management on various aspects of project;
- Interdisciplinary interactions with a modeling team;
- Consultation with other researchers and authorities in the field as appropriate;
- Interact and help mentor graduate and undergraduate students who are affiliated with the project;
- Ability to travel domestically;
- Work well in team environment but with ability to perform research independently;
- Preparation of annual and other administrative reports;
- Organize planning meetings and events, web-based communications as necessary.

Starting salary: \$58,000

Core competencies/qualifications:

Candidate should have completed a Ph.D. by the time of appointment in an appropriate field of study, or specialty, from an accredited institution in project-related fields.

How to apply:

Please submit as separate documents your CV, a statement of research interests, two recent reprints, and contact information for three references here: <https://www.rfcuny.org/careers/postings?pvnID=RC-1909-003296>.

For further information and questions, please contact Prof. Charles J. Vörösmarty (cvorosmarty@gc.cuny.edu, 212-413-3142).