



Job Title	UNDERGRADUATE OR GRADUATE RESEARCH ASSISTANT
PVN ID	RC-1710-002168
Category	Research
Location	CUNY-ADVANCED SCIENCE RESEARCH CENTER
Department	GC-ASRC-Environmental Sciences Initiativ
Status	Part Time
Salary	Depends on qualifications
Hour(s) a Week	8.00-10.00
Closing Date	Dec 25, 2017 (Or Until Filled)

General Description

This work is part of an NSF-funded multi-institutional project (#1360445, https://nsf.gov/awardsearch/showAward?AWD_ID=1360445) led by Prof. Charles Vorosmarty at CUNY-Advanced Science Research Center (ASRC), entitled *A National Energy-Water System Assessment Framework (NEWS)*.

This is a great opportunity for anyone wanting to develop skills in the software development lifecycle within the context of a complex, multidisciplinary, multi-models science project. Bringing together scientists from different disciplines and located in various research centers around the Country, the NEWS project aims at coupling complex models from diverse research fields into an integrated analytical and management tool.

On the CUNY-ASRC side, the main model used in the project is WBM (Water Balance Model) developed by Prof. Balazs Fekete in C++, while the post analysis and the coupling between models are being developed in Python. For this sub-project, the prospective student will be working with Dr. Fabio Corsi to support the software development required by the project.

Currently we have an advanced prototype of the coupling software. The prototype, which uses a simple http transport protocol and integrates a Python wrapper to the WBM environment, is written in Python. The prospective student will help advance the existing code and support the final integration of the software:

- Support the maintenance of the WBM code
- Work on the WBM Python wrapper
- Contribute to the final engineering and deployment of the Python code for the models coupling link

Furthermore we are also in need of summarizing the Terabytes of results generated by the model. Post processing is achieved with analytical code developed to aggregate and slice the data to answer specific research questions. The prospective student will assist the researchers working on the project with ad-hoc code (mostly Python) for the post processing analyses.

For additional questions, please contact:

Dr. Fabio Corsi: fcorsi@ccny.cuny.edu

Other Duties

Qualifications

Required Skills:

- Proficient in Python
- Good knowledge of C++
- Web development