



PhD Position in Civil and Environmental Engineering at Colorado State University

We (Dr. Antonio Meira and Dr. Ryan Morrison) are seeking a motivated PhD candidate to join an exciting USFS-sponsored research project in the Colorado Rocky Mountains in the Spring of 2025. This project aims to explore the hydrologic and hydraulic impacts of process-based restoration on headwater streams. We aim to understand the effects of common process-based restoration techniques on subsurface flow paths, groundwater levels, and floodplain connectivity. The successful candidate will work on-site, utilizing advanced geophysical methods, including seismic refraction and electrical resistivity tomography (ERT) surveys, to monitor changes before and after implementation. Knowledge of geophysical methods and shallow subsurface hydrology is essential. Experience with modeling tools like Modflow or Parflow might be advantageous. This research offers a unique opportunity to contribute to innovative floodplain management strategies with significant ecological benefits.

Required qualifications are:

- (1) MS (for PhD position at CSU) in Civil and Environmental Engineering or related discipline.
- (2) Clear research interest in subsurface hydrology, floodplain services, and natural water resources.
- (3) Proficiency in oral and written English communication.

Preferred qualifications for this position are:

- (1) Experience with coding in R, Python, Matlab, or another programming language.
- (2) Experience with hydrologic field data collection.
- (3) Experience with Geophysical methods such as seismic refraction and ERT.
- (4) Experience with Parflow, or Modflow.
- (5) Research experience in water resources science or engineering.
- (6) Demonstrated ability to work effectively in teams.
- (7) Demonstrated ability to write and publish original research.
- (8) Interest in integrating equity into graduate research

If interested, contact Prof. Antonio Meira ameira@colostate.edu with the following materials as a single PDF attachment and email subject line "Application for Posted PhD Position":

- (1) A 1–2-page cover letter with your interest in the position and research topics, and how you meet the required and preferred qualifications, and
- (2) A current resume or CV.

Applications will be accepted until September 15th. You may simultaneously or soon afterwards apply to CSU. Information about applying to the Department of Civil and Environmental Engineering at Colorado State University can be found here: <https://www.engr.colostate.edu/ce/graduate-application-information/>.