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College of Engineering

Civil and Environmental Engineering

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Multiple Ph.D./Postdoc positions in Environmental Engineering/Chemistry – McKenzie group at Temple University

The McKenzie Environmental Engineering Research Group (MEERG) at Temple University is seeking multiple highly motivated people at either Ph.D. or Postdoctoral level. MEERG has multiple ongoing projects that principle consider chemical contaminant fate and transport for the following two themes: 1) stormwater (ranges of contaminants), and 2) poly and perfluoroalkyl substances (PFAS) in a range of media and reaction mechanisms.

Applicants should be enthusiastic and motivated, interested in collaborative work, and should have strong verbal and written communication skills. Additionally, laboratory or analytical chemistry experience is highly valued. For applicants to the graduate program, preference will be given to people who already have an M.S. in a relevant field. Potential projects are shown below:

- Contaminants in infiltration-based green stormwater infrastructure (GSI) including nutrients, metals, and polycyclic aromatic hydrocarbons (PennDOT/AECOM funded; in collaboration with a larger Temple and Villanova team). The research will include field, laboratory, and modeling efforts, and will focus on likely focus on one of the following: 1) contaminant transport in lateral and vertical directions, including particle-facilitated transport, or 2) cost-effective application of sorbent materials to immobilize contaminants. This position is most appropriate for a Ph.D.-seeking applicant.
- PFAS interaction with organic matter and its impacts of transport in porous media. This NSF-supported project will consider accumulation at the air-water and solid-water interfaces. The laboratory-based project (batch systems and flow through columns) will include collaboration with another MEERG graduate student. This project will include innovative application of analytical tools and is most appropriate for a Ph.D.-seeking applicant.
- PFAS degradation through non-thermal plasma treatment. This project is in collaboration with Drexel University and the Nyheim Plasma Institute, and will investigate treatment of PFAS in aqueous and solid matrices (SERDP funded). This effort will rely heavy on high resolution mass spectrometry for identification of degradation products; both Ph.D. and Postdoctoral applications will be considered (postdoc timing has more flexibility).

Postdoctoral applicants should contact Dr. McKenzie directly to inquire (ermckenzie@temple.edu).

For *Ph.D. applicants*, generally a fall 2021 start date is preferred, but other start dates (i.e., spring 2021 or spring 2022) will be considered for very strong applicants. Applicants for *spring 2021 should submit all materials as soon as possible* and will be reviewed on a rolling basis; *fall 20201 applications will be reviewed starting in mid-November* and applicants are encouraged to have all materials submitted by that time. For consideration, graduate applicants should:

- Complete the Temple University application for graduate admission and submit all required supplemental documents. More information on the graduate admissions process is available at: https://engineering.temple.edu/admissions/graduate-admissions. Questions regarding the admissions process should be directed to gradengr@temple.edu.
- Only fully completed applications will be considered. Applicants are encouraged to plan ahead to ensure that all materials are received in a timely manner.

Philadelphia has been ranked among the top cities in which to reside or visit, and the McKenzie Environmental Engineering Research Group is happy to be nestled in Philadelphia with opportunities to conduct research on urban contaminant dynamics and to collaborate with partners in nearby institutions. The Temple University Department of Civil and Environmental Engineering includes approximately forty graduate students engaged in research on a variety of topics.