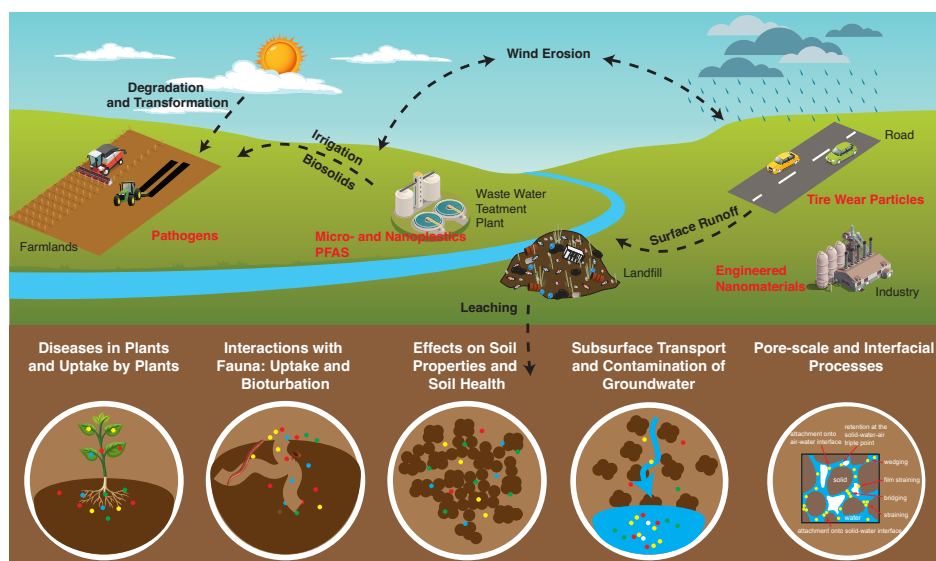


PhD Student Position in Environmental Soil Physics

The Environmental Soil Physics Lab led by Dr. Yingxue Yu at Penn State invites applications for a PhD position beginning in Fall 2026. The successful candidate will be housed in the Department of Ecosystem Science and Management and may enroll through the Soil Science Graduate Program or the Inter-college Graduate Degree Program in Ecology, based on research interests and professional goals. The lab focuses on understanding how physicochemical interactions and environmental factors shape contaminant behavior across terrestrial and aquatic environments.



Specific research areas include:

- Transport of emerging contaminants (e.g., micro- and nanoplastics, PFAS, engineered nanomaterials, and pathogens) in saturated and unsaturated porous media;
- Aggregation, stability, and transformation of contaminants in soil and water systems;
- Quantification of adsorption and interfacial interactions using QCM-D and related surface techniques;
- Characterization of soil hydraulic properties, water flow processes, and indicators of soil health;
- Uptake and interactions of contaminants with plants;
- Evaluation of the environmental sustainability and degradation behavior of biodegradable plastics.

Students have the flexibility to pursue research topics within these areas through laboratory, field, and modeling approaches using computational tools such as HYDRUS and R. The lab fosters a collaborative and supportive environment that encourages creative, rigorous, and independent inquiry into the environmental

behavior of contaminants. Motivated students passionate about soil-water-plant interactions, contaminant transport, and environmental sustainability are welcome to join our growing team at Penn State.

Eligibility & Priority:

- Master's degree in Hydrology, Civil Engineering, Environmental Science, Environmental Engineering, Soil Science, or a closely related field at the time of appointment.
- Priority will be given to applicants who have:
 - Engineering background with solid training in mathematics and physics;
 - Prior first-author, peer-reviewed publications in related research areas;
 - Research experience in computational modeling (e.g., HYDRUS, R, or similar) and/or field-based investigations.
- Exceptional applicants holding a bachelor's degree may be considered and offered a pathway consisting of a 2-year master's program followed by a 3-year PhD program.
- For details on English proficiency, minimum GPA, and other requirements, please refer to Penn State Graduate School (<https://gradschool.psu.edu/>).

The application deadline is **January 3, 2026**, and review of applications will begin immediately. Informal inquiries are welcome and can be directed to Dr. Yu (email: yqy5525@psu.edu).

How to Apply:

Prospective students are encouraged to email Dr. Yu (email: yqy5525@psu.edu) a single PDF file that includes the following documents:

1. Cover letter describing qualifications, research experience, and future research goals, including how these align with the above-mentioned research areas (max. 3 pages);
2. Curriculum vitae;
3. Up to three representative publications (full text, if available);
4. Academic transcript (unofficial copies are acceptable for initial review);
5. Names and contact information of three references.

Living at Penn State

Nestled in State College, the University Park campus blends a tight-knit college-town vibe with the resources of a flagship research university ranked 82nd globally in the 2026 QS World University Rankings. Students enjoy a walkable community with cafés, arts venues, and quick access to trails and parks across central Pennsylvania. You will find modern housing options, abundant study spaces, and comprehensive recreation and wellness facilities that support a balanced, healthy lifestyle. With 1,000+ student organizations spanning engineering, the arts, culture, and service, it is easy to find your people and your passion. From day one, you can plug into hands-on research and real-world projects alongside world-class faculty, building skills, networks, and momentum for your future.