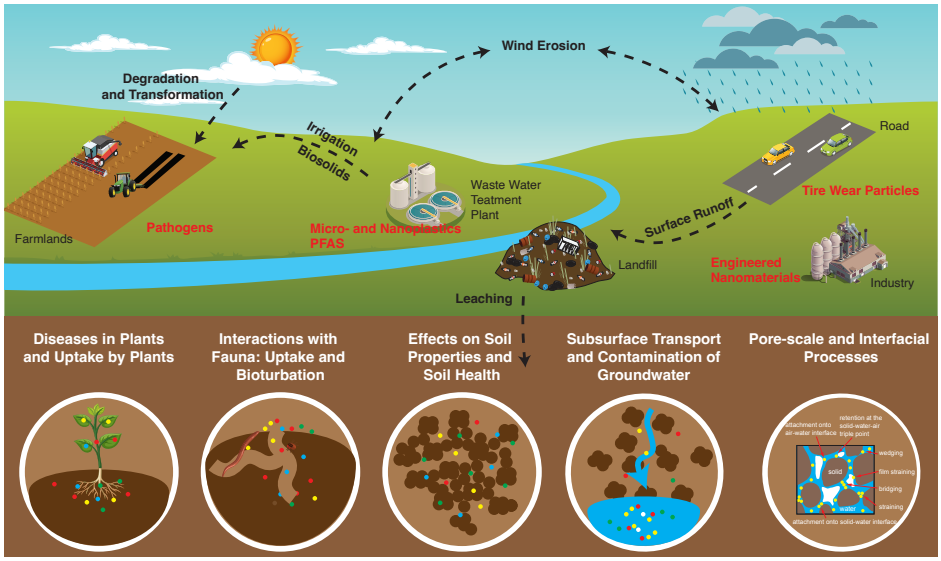
Department of Ecosystem Science and Management
The Pennsylvania State University
University Park, PA 16802, USA
https://ecosystems.psu.edu

PhD Student Position in Environmental Soil Physics

A fully funded PhD position is available in the Environmental Soil Physics Lab at The Pennsylvania State University, led by Dr. Yingxue Yu, beginning in Fall 2026. Our research focuses on the fate, transport, and transformation of emerging contaminants through experimental, modeling, and field-based approaches. We aim to elucidate how physicochemical interactions and environmental conditions govern contaminant behavior across soil and water systems.



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 aquatic and soil 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 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.

Dr. Yingxue Yu 417 Agricultural Science Building yqy5525@psu.edu

Eligibility & Priority:

- Master's degree in Environmental Science, Environmental Engineering, Environmental Physics, Hydrology, Soil Science, or a closely related field at the time of appointment.
- Priority will be given to applicants who have:
  - Prior first-author, peer-reviewed publications in related research areas;
  - Conceptual understanding and methodological experience in soil-water-plant interactions;
  - 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 position is supported through the Soil Science Graduate Program in the Department of Ecosystem Science and Management. The application deadline is **February 1, 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.