

Multiple PhD Positions (Fall 2026) in Sediment Transport & River Morphodynamics, Environmental Fluid Mechanics, and Hydraulic Engineering at CEE, UIUC

Professor Hongbo Ma's research group in the Department of Civil & Environmental Engineering (CEE) at the University of Illinois Urbana-Champaign (UIUC) is recruiting:

- **1–2 fully funded PhD students (tuition + stipend), regular Fall 2026 semester start.**

All applications will be reviewed on a rolling basis until filled. UIUC PhD application deadline: December 1, 2025 (University deadline). Interested applicants are strongly encouraged to contact the advisor in advance of application submission.

About the PI and Research Group

Prof. Hongbo Ma joined UIUC CEE as an Assistant Professor in June 2025. His research investigates sediment-laden flows and their geomorphic consequences, integrating:

- sediment transport physics and fluid mechanics
- morphodynamics of river–delta–submarine systems,
- and river hazards & management.

Prof. Ma has published as first/corresponding author in *Science Advances*, *PNAS*, *Nature Communications*, and over 40+ papers in leading journals. His work has been recognized by the AGU Luna B. Leopold Early Career Award and the AGU Robert P. Sharp Lecture Honor (2023). He currently serves as Associate Editor of *JGR: Earth Surface* and on the AGU Earth & Planetary Surface Processes Honors & Awards Committee.

UIUC is a top-ranked global research institution (U.S. News: Engineering #7, Civil Engineering #1, Environmental Engineering #3). The Urbana-Champaign community is welcoming, safe, affordable, and highly supportive of academic life.

Potential Research Areas for PhD Students

(Research directions may be tailored to student interests)

- Hydraulics & River Morphodynamics
- Sediment-laden and Two-phase Environmental Fluid Mechanics
- Water Resources Systems & River Management
- Data-driven and Scientific Machine Learning in Geophysical Systems

Qualifications

Minimum Requirements:

- Strong motivation, curiosity, and commitment to research.
- B.S. or M.S. in Civil/Environmental/Water Resources Engineering, Mechanical Engineering, Earth/Geosciences, Physics (mechanics), or related fields.
- Experience in experiments, numerical modeling, and/or scientific programming.

Preferred Qualifications (one or more desirable):

- Background in fluid mechanics, sediment transport, or geomorphology.
- Experimental research experience (flume experiments, physical modeling).
- Programming proficiency (MATLAB, Python, Fortran/C++, etc.).
- Data analysis or ML-based modeling experience.

Application Instructions

PhD Applicants: Please email the following in one PDF package to hongboma@illinois.edu with subject line: "2026 PhD Application – Your Full Name": 1. CV / Resume; 2. Brief research statement (experience, skills, interests, and goals); 3 Transcripts (unofficial is acceptable initially); 4 Contact information for 3 references. Then submit the official UIUC Graduate College application by December 1, 2025.