



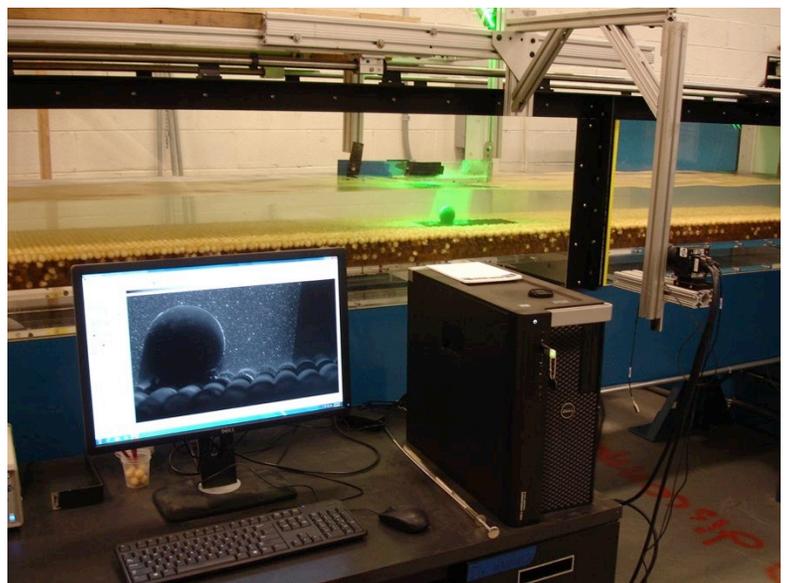
“Rocky Top” Fellowship
Civil & Environmental Engineering –
Water Resources
University of Tennessee, Knoxville
USA
<http://hsl.engr.utk.edu/>



**River mechanics
& water-sediment
interactions at critical infrastructure**

We are seeking highly-motivated and enthusiastic Master’s or PhD candidates to work with our team to examine the interactions of water and sediment at critical infrastructure, such as dams, bridges and riverbank protection structures.

Natural processes at the water-sediment interface are complex and impact the management of infrastructure in multiple ways. Behind dams, it is important to understand sedimentation characteristics in order to appropriately predict flow conductivity of settled sediments, reservoir capacity and overall life expectancy of this critical infrastructure. Around in-stream structures, such as bridge piers and bank protection dikes, the scour phenomenon occurs due to local flow acceleration and is important to predict in order to ensure structural stability is maintained and



foundations are not undermined. We are utilizing cutting edge technology and numerical modeling to answer crucial remaining questions in order to improve management practices.

The work will involve the design and implementation of detailed laboratory experiments and possibly the development of physical and numerical models for understanding and predicting the impacts of water-sediment interactions. Students will work within a dynamic research team, will be exposed to interdisciplinary research topics and will be expected to present yearly in national and international conferences. The successful candidates will be part of the UTK Hydraulics & Sedimentation Lab (HSL) - <http://hsl.engr.utk.edu/>

Requirements

- Background in civil engineering, water resources, physical geography, earth sciences and/or a related discipline.
- An excellent academic record.
- High level of motivation, enthusiasm to learn, and the ability to work in a team.
- Proficient technical, oral, written, and interpersonal communication skills. The applicant should have taken, or be in the process of taking, the GRE (and TOEFL, if necessary).
- Prior hands-on experience in the laboratory and/or the field is preferable.
- Numerical modeling experience is also a plus.
- Eager to work in the Smoky Mountains gravel bed station.

Start Term

The position is available starting Fall (or Summer) 2018.

Benefits

Support will be provided in the form a competitive stipend and fully-paid tuition plus health care coverage. Plus travel to conferences and other bonuses based on performance. Evaluation will be based on annual assessment. Extra bonus will be provided for books and media tool development.

To apply for this position, please send a cover letter, resume, and the names of three professional references to: Prof. Thanos Papanicolaou, Department of Civil & Environmental Engineering, The University of Tennessee, 325 John D. Tickle Building, Knoxville, Tennessee 37996-2313 or via email tpapanic@utk.edu.

The University of Tennessee does not discriminate on the basis of race, color, age, religion, national origin, sexual orientation, gender identity, sex, marital status, disability, or status as a US veteran. Inquiries can be directed to the Office of Equity and Diversity at the University of Tennessee, (865) 974-2498.