

Tanya Shukla

February 2020

Room 1056 (C), Dept. of Geography and GIS, tshukla2@illinois.edu
University of Illinois at Urbana Champaign, personal.tanyashukla@gmail.com
Urbana-Champaign, IL, https://sites.google.com/iitgn.ac.in/t-s
USA, 61801. (+1) 2178191884

Research interests

Fluvial geomorphology | Earth surface processes | Remote sensing | Sustainable river management | River health | Geospatial analysis

Education and research experience

August 2019 - Present	Ph.D. (<i>in progress</i>) Geography and Geographic Information Science, University of Illinois at Urbana Champaign Advisor: Prof. Bruce Rhoads
May 2019	Junior Research Fellow Project: River Health Assessment for the Ramganga River, India. Funded by the Ministry of Environment and Forest, Government of India PI: Prof. Pranab Mohapatra, Discipline of Civil engineering CoPI: Dr. Vikrant Jain, Discipline of Earth Science Indian Institute of Technology Gandhinagar
July 2018	Masters of Technology (CPI: 9.1/10) Earth Science, Indian Institute of Technology Gandhinagar Thesis: Sediment budgeting of the Narmada River basin as a tool for sustainable sediment mining and river management Advisor: Dr. Vikrant Jain
May 2016	Bachelors of Technology (CPI: 7.5/10) Civil Engineering, Govind Ballabh Pant University of Agriculture and Technology, Pantnagar, India

Publications

- 2018 | Devi, U; Taki, K; **Shukla, T**; Sharma, K.P.; Hoque, R.R.; Kumar, M. Micro-zonation, ecological risk and attributes of metals in highway road dust traversing through the (Kaziranga) National Park, Northeast India: Implication for confining metal pollution in the national forest, *Environmental Geochemistry and Health*. doi: 10.1007/s10653-018-0219-4.

Conference presentations

Spring 2020	Tanya Shukla , Quinn Lewis, Bruce Rhoads. Flow Structure at three small confluences during transport-effective flow stages. American Association of Geographers (AAG) 2020 Annual Meeting, Denver, CO. April 6-10.
Fall 2019	Tanya Shukla , Quinn Lewis, Bruce Rhoads. Three-dimensional flow structure at three confluences with different planform configurations at high flow stages. West Lakes Division of the American Association of Geographers (WLDAAAG) 2019 Annual Meeting, University of Northern Iowa. October 24-26.
Spring 2019	Tanya Shukla , Divya Chaudhari and Vikrant Jain. River health analysis of a Himalayan river: A hydrogeomorphic approach. European Geosciences Union (EGU) General Assembly 2019, Vienna, Austria, April 7-12.
Fall 2018	Tanya Shukla and Vikrant Jain. Sediment Budgeting as a Tool for Sustainable Sediment Mining: Case Study from a Bedrock River in Peninsular India, Abstract EP33C-2354, American Geophysical Union (AGU) Fall Meeting 2018, Washington, D.C. December 10-14.
Spring 2018	Tanya Shukla , Sonam and Vikrant Jain. Spatial variability in channel processes and its applications for river management. The 6th International Symposium on Advances in Civil and Environmental Engineering Practices, for Sustainable Development (ACEPS-2018). Galle, Sri Lanka.

Teaching experience

Fall 2019	Teaching assistant, Earth's Physical Systems (Online) Instructor: Prof. Bruce Rhoads Graded assignments and lab quizzes, held virtual office hours and review sessions.
Fall 2017	Teaching assistant, Earth Surface Processes in the Anthropocene Instructor: Dr. Vikrant Jain Led weekly labs; developed and graded assignments and lab quizzes, held weekly office hours and review sessions.

Relevant coursework

Humans and Rivers | Open channel Hydraulics | Earth surface processes in the Anthropocene | Modeling of earth system and sustainability | Critical zone system science | Remote sensing of the land and environment | Advanced hydraulic engineering | River processes | Quantitative geomorphology

Languages and software skills

- **Data analysis tools:** ArcGIS | ENVI | ERDAS-IMAGINE
- **Modeling tools:** SWAT | SWAT-CUP | HEC-RAS | ANSYS-Fluent
- **Programming languages:** MATLAB | R | Python

- Markup languages: L^AT_EX

Fellowships and awards

- Messina Stanley Graduate Scholarship
- Winner, Doctoral or Master's poster competition at West Lakes AAG conference
- Foster fellowship
- Lloyd V. Berkner Travel Fellowship for AGU Fall Meeting 2018, Washington D.C.
- Junior Research Fellowship, granted by the Ministry of Environment and Forest, Government of India

Professional affiliations

- American Association of Geographers, November 2019- 2020
- American Geophysical Union (AGU), August 2018-19
- European Geosciences Union (EGU), November 2018-19

Other projects

Summer 2019	Flow dynamics at three confluence settings using ADCP data. Guide: Prof. Bruce Rhoads
Spring 2018	Environmental flows: The geomorphic context and applications. Guide: Dr. Vikrant Jain
Spring 2018	Study of connectivity and steady state transport in delta channel networks using Graph Theory. Guide: Prof. Rishi Singh
Fall 2017	Geology field visit: Study of Neotectonic activities in the Kutch-Dholavira region, Western India through identification of tectonic geomorphological attributes. Guide: Dr. Saptarshi Dey

Relevant training and internships

Spring 2018	Short course: Scientific writing for beginners. Instructor: Maria João Amante (ISCTE, Lisbon, Portugal)
Fall 2017	Short course: DEM analysis in Earth Sciences. Instructor: Prof. Bodo Bookhagen, Potsdam University

Outreach

- Mentoring girl students under National Service Scheme (NSS). Fall 2015