Tanya Shukla

February 2022

Room 1056 (C), Dept. of Geography and GIS,
University of Illinois at Urbana Champaign,
Urbana-Champaign, IL,
USA, 61801.

tshukla2@illinois.edu
personal.tanyashukla@gmail.com
https://sites.google.com/iitgn.ac.in/t-s
(+1) 2178191884

Research interests

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

Education

August 2019 - Present	**Ph.D.** (*in progress*) Geography and Geographic Information Science, University of Illnois at Urbana Champaign Tentative title: Dynamics of anabranching rivers juxtaposed with lowland meandering rivers in intensively managed landscapes Advisor: Prof. Bruce Rhoads
July 2018	**Masters of Technology** 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** Civil Engineering, Govind Ballabh Pant University of Agriculture and Technology, Pantnagar, India

Experience

Fall 2020 and Spring 2021	Research assistant, Critical Interfaces Network Department of Geography, University of Illinois
Spring 2020	Teaching assistant, GEOG/ESE 103: Earth's Physical Systems (In-person) Department of Geography, University of Illinois
Fall 2019	Teaching assistant, GEOG/ESE 103: Earth's Physical Systems (Online) Department of Geography, University of Illinois
Spring 2018	Junior Research Fellow River Health Assessment for the Ramganga River, India. Discipline of Earth Science, Indian Institute of Technology Gandhinagar
Fall 2017	Teaching assistant, EH 601: Earth Surface Processes in the Anthropocene Discipline of Earth Science, Indian Institute of Technology Gandhinagar

Publications

2018 | Devi, U; Taki, K; **Shukla, T**; Sharma, K.P.; Hoque, R.R.; Kumar, M. Microzonation, 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 2022 | **Tanya Shukla**, Bruce Rhoads. Prevalence of juxtaposed anabranching-meandering channel planform in Midwestern US: morphological characteristics and power regimes. American Association of Geographers Annual Meeting, February 25-March 1.

Fall 2021 | **Tanya Shukla**, Bruce Rhoads. Anabranching reaches juxtaposed with lowland meandering rivers in the midwestern United States: morphological characteristics and power regimes. American Geophysical Union (AGU) Fall Meeting, December 12-17.

Spring 2021 | **Tanya Shukla**, Bruce Rhoads. Dynamics of anabranching rivers juxtaposed within lowland meandering rivers in intensively managed landscapes. American Association of Geographers (AAG) Annual Meeting, April 7-11.

Fall 2020 | **Tanya Shukla**, Quinn Lewis, Bruce Rhoads. Stage-related changes in flow structure at three small confluences. American Geophysical Union (AGU) Fall Meeting, December 1-17.

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 (WLDAAG) 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.

Funded projects

2021-2022	Co-investigator, "Floodplain morphology, floodplain inundation, and riparian ecology in the context of the changing hydrology of rivers in Illinois". (with Principal investigators Dr. Bruce Rhoads and Dr. Praveen Kumar), Illinois Water Resources Center (IWRC), $11,504

Fellowships and awards

- Summer research grant, 2021
- Block Grant fellowship for 2021-22 academic year
- Second runner up, SESE Research Review Outstanding Poster Award, 2022
- Supplementary Summer Block Grant (SSBG), Graduate College, University of Illinois
- 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

Relevant coursework

Fluvial Geomorphology | Sediment Transport | Humans and Rivers | Open channel Hydraulics | Sedimentology and Stratigraphy | 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

Side projects

Summer 2021	Updating the Eastern Illinois Foodbank (EIF) service area map
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

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:** LaTeX

Professional affiliations

- American Association of Geographers, November 2019-2021
- American Geophysical Union (AGU), August 2018-19, 2020-21

Synergistic activities

- Chair, SESE Research Review organizing committee, 2022
- Faculty Representative, Geography Graduate Student Association (GGSA), 2021-2022
- Conference session organizer and chair 'River Dynamics - Forms, Processes and Observations', American Association of Geographers (AAG) Annual Meeting 2022
- Panelist, Annual Ethics Discussion, Department of Geography and GIS, University of Illinois, 2021
- Conference session organizer and chair 'River Dynamics - Forms, Processes and Observations', American Association of Geographers (AAG) Annual Meeting 2021
- Moderator, Virtual networking event 'Meetup for International Graduate Students and Early Career Geographers', AAG Annual Meeting 2021