Naveed Ul Hassan Bhat

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BRIEF

I am a Graduate Student at Hydraulics and Water Resources Group, Department of Civil Engineering IIT Kanpur. My work revolves around computational Hydraulics and modeling of fluid-flow interaction with porous media.

EDUCATION

MTech & Ph.D., Hydraulics and Water Resources Engineering
Indian Institute of Technology Kanpur, U.P., India
CPI-*9.75/10*   2019-Ongoing

BTech Civil Engineering
National Institute of Technology, Srinagar, J & K, India
CPI-*8.22/10*   2014-18

RESEARCH INTERESTS

Computational Fluid Dynamics
Sediment Transport Modeling
Fluid-Porous media interaction

TEACHING ASSIGNMENTS

IIT Kanpur

- Engineering Hydraulics (CE262A)

- Computational Methods in Engineering (ESO208A)

- Engineering Hydrology (CE361A)

HBTU Kanpur

- Hydraulics and Hydraulic Machines (ECE-301)

- Engineering fluid mechanics (ECE-202)(Ongoing)

ACADEMIC PROJECTS

Undergraduate Project
Seismic characterization of soils in Srinagar city using geophysical tests (Multichannel Analysis of Surface waves), and provide database about dynamic properties of soils

Ongoing Project
A Unified Depth-Averaged Coupled Framework for Modeling Flow Interaction with Deformable Porous Media

PUBLICATIONS

[1] **Bhat, N.U.H.**, Pahar, G. Diffusion wave approximation of depth-averaged flow interaction with porous media. *Journal of Hydrologic Engineering*, 26(2), 04020064, 2021.
doi: 10.1061/(ASCE)HE.1943-5584.0002028

[2] **Bhat, N.U.H.**, Pahar, G. Euler–Lagrange framework for deformation of granular media coupled with the ambient fluid flow. *Applied Ocean Research*, 116, 102857, 2021.
doi: 10.1016/j.apor.2021.102857

[3] **Bhat, N.U.H.**, Pahar, G. Depth-averaged coupling of submerged granular deformation with fluid flow: An augmented HLL scheme. *Journal of Hydrology* 606,127364, 2022.
doi: 10.1016/j.jhydrol.2021.127364