

**Alok Kumar**  
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#### ACADEMIC DETAILS

Examination	Subject	Board/University	Year	CPI/%
Ph.D.	Civil Engineering (HWRE)	Indian Institute of Technology Kanpur	2020-Ongoing	10.0/10.0
M.Tech.	Civil Engineering (HWRE)	Indian Institute of Technology Kanpur	2018-2020	9.26/10.0
B.Tech.	Civil Engineering	Rajkiya Engineering College Azamgarh	2014-2018	82.38%

#### RESEARCH INTERESTS

- Flood modelling, Computational Hydraulics, Surface and Groundwater interactions.

#### TECHNICAL SKILLS

- **Languages** (FORTRAN, Python, MATLAB), **Software** (HEC-RAS, QGIS), **Tools** (Tecplot,  $\LaTeX$ ).

#### AWARDS & MEMBERSHIP

- **Best M.Tech Thesis Award** , Indian Society for Hydraulics, 2020
- Membership of *American Society of Civil Engineers (ASCE)*
- Membership of *International Association for Hydro-Environment Engineering and Research (IAHR)*

#### TEACHING ASSIGNMENTS

- **At IIT Kanpur** (Engineering Hydrology ([CE361A](#)), Engineering Hydraulics ([CE261A](#)), Hydraulic and Hydrologic Design ([CE462A](#)), Advanced Hydrology ([CE610A](#)), Numerical Methods for Civil Engineers ([CE604A](#)), Computational Methods in Engineering ([ESO208A](#)))
- **At HBTU Kanpur** ( Hydraulics and Hydraulic Machines ([ECE-301](#)))

#### ACADEMIC PROJECT/ THESIS

- **BTech Project**  
Design and analysis of the framed structure of G+2 residential building.
- **MTech Thesis**  
A Unified Depth-Averaged Approach for Integrated Modeling of Surface and Subsurface Flow Systems.

#### PUBLICATIONS

- **Kumar, A., Pahar, G.** A Unified Depth-averaged Approach for Integrated Modeling of Surface and Subsurface Flow Systems. *Journal of Hydrology*, 591, 125339, 2020. doi: <https://doi.org/10.1016/j.jhydrol.2020.125339>
- **Kumar, A., Pahar, G.** On Applicability of Dynamic, Local, And Diffusive Wave Models for Unified Depth-Averaged Fluid Flow Interaction With Porous Media *Journal of Hydrologic Engineering*, 2023. doi: <https://doi.org/10.1061/JHYEFF.HEENG-5888>

#### CONFERENCES

- **23rd IAHR-APD Congress 2022, IIT Madras, India**  
**Kumar, A., Pahar, G.** On Applicability of Local Inertia Model for Integrated Surface-subsurface Flow Systems.
- **HYDRO 2022: Punjab Engineering College Chandigarh, India**  
**Kumar, A., Pahar, G.** Local Inertia Framework for Macroscopic Urban Flood Modeling.
- **40th IAHR World Congress in Vienna, Austria, 2023**  
**Kumar, A., Pahar, G.** On applicability of Dynamic and Local Porous-SWEs in Urban Flood.