

Nischal Kafle
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Objective

Civil engineer specializing in hydrology and water policy, with expertise in statistical modeling, simulation, and experimental research. Focused on advancing hydrological modeling, climate impact assessment, and water resource management to support flood resilience and sustainable water infrastructure.

Education

- **Doctor of Philosophy in Engineering Science**
University of Memphis, Memphis, Tennessee | Expected: May 2026
- **Master of Science in Civil Engineering** (Water Resource Concentration)
University of Memphis, Memphis, Tennessee | Graduation: Dec 2024 | GPA: 3.95
- **Bachelor of Engineering in Civil Engineering**
Tribhuvan University, Pulchowk Campus, Kathmandu, Nepal | Dec 2014 | GPA Equivalent: 3.92

Professional Experience

Graduate Research Assistant & Teaching Assistant

University of Memphis, Memphis, TN | Aug 2021 – Present

- Proposed four novel research ideas on hydroclimatic extremes, hydrological modeling, and the use of ML/DL to hydrologic predictions (3 manuscripts under review; 2 additional in preparation).
- Assisted in teaching undergraduate courses and labs; graded assignments and exams, and supported students with course material
- Contributed to the preparation of two research grant proposals: one funded by TDEC (\$500k) and one submitted to NASA NSPIRES

Water Resource Engineer

Government of Province-05, Ministry of Physical Infrastructure Development | August 2019 - August 2021

- Reviewed feasibility reports for 30+ irrigation and disaster mitigation projects, improving design efficiency and optimizing project costs
- Collaborated with Asian Development Bank and World Bank to draft procurement guidelines for 7 irrigation projects
- Conducted groundwater research to support state-level water resource planning

Engineer/Head of Technical Branch

Ministry of Irrigation, Department of Irrigation, Nepal | August 2015 - July 2019

- Managed technical operations for 150+ irrigation and disaster mitigation projects by working closely with local farmers and convincing them for active participation and contributions
- Conducted environmental impact assessments and hazard mapping to support sustainable irrigation development
- Provided training to local farmers and 20+ user committees, enhancing their knowledge and skills

GIS Expert and Project Manager

Bright Future International Pvt. Ltd. | Dec 2014 - July 2015

- Prepared transportation master plan for 5 rural municipalities in hilly region of Nepal
- Integrated local ward committee feedback into municipal planning processes

Publications

Kafle, N., & Meier, C. (2025). nsEVDx: A Python Library for Modeling Non-Stationary Extreme Value Distributions (v0.1.0). *Zenodo*. [Manuscript submitted for publication]. <https://doi.org/10.5281/zenodo.15850043>

Kafle, N., Peleg, N., & Meier, C. I. (2025). A neighborhood-based method to detect spatially consistent trend. [Manuscript submitted for publication]

Kafle, N., Dell'Aira, F., Chadwick, C., & Meier, C. I. (2025). Does the choice of minimum interevent time affect regionally derived DDF values for short durations when using partial duration? [Manuscript submitted for publication]

Meier, C.I., Dell'Aira, F., **Kafle, N.**, Burnette, D.J. (2024). Updating Equations for Peak Flow Estimation in Urban Creeks and Streams of Tennessee (Part 1). Research final report from the University of Memphis, sponsored by the Tennessee Department of Transportation Long Range Planning Research Office & Federal Highway Administration

Skills

Softwares: GIS(ArcGIS Pro, QGIS), SWMM, PCSWMM, AutoCAD, Civil 3D, HEC-RAS, HEC-HMS, OpenFOAM & ParaView

Programming Languages: Python (pytorch, numpy, JAX, ML/DL), C/C++, R, Matlab, Bash scripting, HTML, CSS, JavaScript

Computation: High Performance Computing (HPC), MCMC simulations

Honors and Awards

Recognized as **World-Class Achiever** by Division of International Affairs, University of Memphis

Graduate School **Dissertation Completion Research Grants** (5000\$) for summer (2025)

Graduate Assistantship, Department of Civil Engineering, University of Memphis (August 2021- Present)

Award of Appreciation for outstanding performance as a Water resource Engineer, Department of Irrigation 2018.

Award of Appreciation for outstanding performance and conflict resolution works as an Election Officer, District Administration Office, Sindhupalchowk 2018.

Merit Based Scholarship to pursue bachelor's in civil engineering, Tribhuvan University, Institute of Engineering (Dec 2010-Dec 2014)

Leadership

President, Nepalese Student Association at the University of Memphis (NSAUM), Oct 2023 – Oct 2024

-Organized five cultural events and a Level 1 event with over 350 participants

General Assembly Representative, Graduate Student Association (GSA), Herff College of Engineering, University of Memphis, Mar 2022 – Aug 2023

-Facilitated GSA services to the Departments of Herff College of Engineering, UofM

-Reviewed travel grant applications of 10 applicants

Election Officer, Sindhupalchowk, Nepal

-Conducted the general election at an electoral booth with over 4000 voters (Nov 2017)

-Conducted the local-level election at an electoral booth with over 2000 voters (May 2017)

Volunteering

Open source developer and contributor, Created an opensource Python library nsEVDx for modeling non-stationary extreme value distributions

Judge, Helen Hardin Honors College Symposium, University of Memphis | Nov 2024

Reviewer: Journal of Open-Source Software and Global Climate Observing System (GCOS)

Disaster Relief Programs on Earthquake affected 14 Districts after devastating Earthquake of April-25 (May 2015), NEA

Memberships

- Tau Beta Pi – The Engineering Honor Society

- American Society of Civil Engineering (Membership Number – 000012320435)

- American Geophysical Union (Member ID – 1533077)

- Nepal Engineers Association (Registration number - 26158)

- Nepal Engineering Council (Category 'A' Civil Engineer, registration Number - 11800)

References

- **Dr. Claudio I. Meier** - Advisor, The University of Memphis | cimeier@memphis.edu | +1-9012978855,
- **Dr. Daniel Wright** - Dissertation committee member, University of Wisconsin-Madison | danielb.wright@wisc.edu | +1-6082621978
- **Dr. Dorian J. Burnette** - Dissertation committee member, The University of Memphis | djbrntte@memphis.edu | +1- 9016784452