Curriculum Vitae

Dr Anita Nag

Assistant Professor, Civil Engineering Department
G H Raisoni University
Email – anita.nag05@gmail.com
Mobile: +918917466702

Profile Summary

Professional with over 3+ years of experience in research and teaching related to remote sensing and GIS., hydraulic and water resource modelling, flood forecasting, and statistical data analysis. Familiar with several programming languages, including Python and MatLab. Hands-on experience with several hydraulic and hydrologic software, including HEC-RAS, HEC-HMS, ArcGIS, and QGIS. Proven experience in guiding and handling a research team, Ability to take the lead in work to bring innovative solutions to the table. Competent to work individually as well as in a team. I believe my up-to-date problem-solving skills, critical thinking, teamwork and communication skills will support and drive your continued organizational success.

Education

Jan 2014 – Sept 2020	**PhD in Water Resources Engineering,** Indian Institute of Technology Hyderabad, (*IIT Hyderabad*) India.
Jun 2010 - May 2012	**M Tech in Land and Water Resources Engineering**, Indian Institute of Technology Kharagpur, (*IIT Kharagpur*) India. *CGPA 7.11/10*
Jun 2006 – May 2010	**B Tech in Agricultural Engineering**, Odisha University of Agriculture and Technology, (*OUAT*) Bhubaneswar. *CGPA 7.01/10*

Professional Experience

Sept 2020 - to date	**Assistant Professor in Civil Engineering Department,** *G H Raisoni University, Amravati, Maharashtra.* **Subject taught:** Remote Sensing and GIS, Watershed Management, GIS for Environmental Planning and Management, Environmental Engineering, Water Resources Engineering.
Dec 2012 – Dec 2013	**Assistant Professor in Civil Engineering Department**, *KL University, Vijayawada.* **Subject taught:** Remote Sensing and GIS, Water Resources Engineering, Groundwater Hydrology.
Jun 2012 – Dec 2012	**Young Professional in Hydrological Modeling**, *Andhra Pradesh State Disaster Mitigation Society, Hyderabad.* **Job Profile:** To prepare a catchment-wise volume estimation map using AWS Rainfall data and simulations of hydrologic models.

Academic Excellence/ Awards/ Scholarships

Jan 2014 – Jan 2018	**Awarded scholarship** from the *Ministry of Human Resource and Development (MHRD),* New Delhi, for pursuing my PhD
March 2018	**Certificate of Research Excellence award** from *IIT Hyderabad*
Dec 2017	**Student Travel Grant Winning** Award to facilitate participation in *AGU Fall Meeting*, International Conference, New Orleans, USA.
July 2014	**Best paper award** for oral presentation in NCWES conference, *JNTU. Hyderabad*
Jun 2010 - May 2012	**Awarded scholarship** from *Ministry of Human Resource and Development (MHRD),* New Delhi, for pursuing my M Tech
2010	**All India Rank-178** in GATE-2010

Computer Skills/Software's

Programming language	MATLAB, Python, R, C
Familiar with Python Libraries	Numpy, Geopandas, Pandas, Scipy, Matlpotlib, and Seaborn
Hydraulic-Hydrologic tools	HEC-RAS 1D/2D, LISFLOOD-FP, HEC-HMS, SWAT, Visual MODFLOW.
Remote sensing and GIS tools	ERDAS, ArcGIS, QGIS, Map Window GIS.
Other packages	MS Office (Excel, PowerPoint, Word, Outlook)), Latex, Inkscape

Scientific Community

- Student Member: American Society of Civil Engineers (ASCE)
- American Geophysical Union (AGU)
- American Society of Agricultural and Biological Engineers (ASABE.)

Project Description

PhD, IIT Hyderabad — Application of a calibration-free dynamic hydrologic model for flow duration curve modelling in data-scarce regions.

Objectives:

- Prediction of Flow Duration Curve (FDC) in the data-scarce region of India using a calibration-free dynamic rainfall-runoff model.
- Testing a stochastic water balance model for FDC prediction in ungauged basins.
- Comparative assessment of calibration-free models for FDC prediction in ungauged basins.

M Tech,
I.I.T. Kharagpur

Reference Evapotranspiration estimation and ranking for different spatial scales in India.

Objectives:

- To estimate reference evapotranspiration by all applicable methods for 167 climatic stations using DSS-ET.
- To rank applicable methods for each climatic station.
- To obtain mean and variability of monthly reference evapotranspiration values for different spatial scales, e.g., states and river basins.

Workshop/Seminar/FDP

- Two days workshop on ARC GIS 10 was conducted by ESRI. India, at K L University, Vijayawada.
- Attended a series of seminars on 'Hydraulic of Sediment Transport' delivered by Prof. Graf, Switzerland (2011), IIT Kharagpur.
- Successfully completed the NPTEL-AICTE Faculty Development Programme (4 weeks) on Water, Society and Sustainability course.

Journal/Conference papers

2019 **Anita Nag** and Basudev Biswal (2019) "Can a calibration-free Dynamic Rainfall-Runoff Model Predict FDCs in Data-Scarce Regions? Comparing the IDW model with Dynamic Budyko Model in South India" *Hydrology* https://doi.org/10.3390/hydrology6020032

2018 **Anita Nag** and Basudev Biswal (2018) "Flow duration curve prediction using a physical deterministic model for Indian catchments" *ASCE Library*, https://doi.org/10.1061/9780784482025.018

2017 **Anita Nag** and Basudev Biswal (2017) "Prediction of flow duration curves in ungauged catchments: Testing a physics based framework in four Indian catchments" *Proceedings of HYDRO-2017 conference*.

2014 **Anita Nag,** Sirisha Adamala, N.S. Raghuwanshi, R. Singh and Arnab Bandyopadhyay (2014)"Estimation and Ranking of reference evapotranspiration for different spatial scales in India" *Journal of Indian Water Resources Society*.

2014 P.V.N., **Anita Nag**, and Phanindra KBVN "Estimation of Confined Aquifer Parameters from Residual Drawdowns. A Genetic Algorithm Approach" *NCWES-2014, JNTUH*, Kukatpally.

Conference Paper Presentations

2019 **Anita Nag** and Basudev Biswal "A calibration-free dynamic Budyko model and its application to predict FDC in ungauged basins of South India" *ASABE/ISAE Global Water Security Conference*-2019 Hyderabad.

2018 **Anita Nag** and Basudev Biswal "Application of a Calibration-free Dynamic Budyko model for Prediction duration curve in ungauged catchments of India" *AOGS 15th Annual Meeting- 2018*, Honolulu, Hawaii.

2018 **Anita Nag** and Basudev Biswal "Prediction of Flow duration curve for ungauged catchments in South India with calibration-free dynamic Budyko model" *SWAT model conference-2018*, IIT Madras

2017 **Anita Nag** and Basudev Biswal "A Dynamic Zero Parameter Budyko Model for Prediction of FDC in ungauged catchments: Model validation against a Regionalization based model" *AGU Fall Meeting- 2017*, New Orleans, USA.

References

- **Dr. Basudev Biswal,** Associate Professor, Department of Civil Engineering, *Indian Institute of Technology, Bombay*, Email – basudev@civil.iitb.ac.in
- **Prof. Narendra Singh Raghuwanshi,** Director, *Maulana Azad National Institute of Technology Bhopal*, Email – nsr@agfel.iitkgp.ernet.in/ nsr@manit.ac.in

Declaration

I hereby declare that the information furnished above is accurate to the best of my knowledge.

Date: 20/06/2022
Place: Amravati, Maharashtra Dr *Anita Nag*