

## Dr. Prabhakar Singh, Associate Professor, Dept. of Agril Engg, Nagaland University

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### Profile Summary

Experienced academic and researcher with **13+ years as Associate Professor** and **extensive postdoctoral research** in Water Resources, Hydrology, and Agricultural Engineering. Proven expertise in **hydrological modeling, flood risk assessment, and climate change impacts**. Recognized record of academic leadership as **Head of Department (Civil Engineering, Mahindra University)** and publications in Scopus-indexed journals.

### Education

**Ph.D., Land & Water Engineering** – Washington State University, USA (2008)  
*Thesis: Modelling effects of contrasting tillage and management on hydrological process in selected soils of the Pacific Northwest US*

**M.Tech., Water Resources Development & Management** – IIT Kharagpur (2002) – 8.7/10

**B.Tech., Agricultural Engineering** – RAU Pusa, Bihar (2000) – 8.04/10

### Academic Experience

#### **Nagaland University, Medziphema Campus**

Associate Professor, *Agricultural Engineering* | Apr 2025 – Present

#### **Mahindra University, Hyderabad**

*Associate Professor, Civil Engineering* | Feb 2014 – Apr 2025

- Served as **Head of Department (2014–2024)** – initiated 3 PG programs, student chapters (ASCE, IGS), and organized national conference (FACE).

#### **Galgotias University, Greater Noida**

*Associate Professor, Civil Engineering* | Jul 2012 – Feb 2014

### Research / Industry Experience

- **Postdoctoral Research Associate** – Washington State University, USA (2008–2012)
  - Projects on **dust emissions, PM10 studies, soil moisture assessment and vadose zone modeling.**
- **Research Associate** – IIT Kharagpur (2002–2003)
  - Field experiments on **erosion and sediment transport in irrigation systems.**

### Academic Leadership & Service

- Member, School Board SAS NU (2025-27)
- Invited member, Board of Studies, Dept of Agril Engg, SAS NU, 2025
- Head of Department (Civil Engineering), Mahindra University (2014–2024).
- Member of Board of Studies, Mahindra University
- Academic Council Member, MU, Hyderabad (2020–2025).
- Reviewer: *Journal of Irrigation & Drainage Engineering, Journal of Water & Climate Change, Groundwater for Sustainable Development.*
- Provided over a hundred detailed academic references/recommendations for graduate-level admissions.

### Skills & Expertise

- Hydrological Modeling (WEPP, SHAW, GIS, AI/ML in water resources).
- Flood Risk Assessment & Climate Extremes Analysis.
- Groundwater & Watershed Management.
- Academic Leadership & Curriculum Development.

## Peer-Reviewed Journal Articles

1. Pratyusha Tatavarthi; **Prabhakar Singh**; Vignesh Gandu; Dewanshi Dahake; Adarsh Reddy Vangala; Keerthi Katam. 2025. Spatiotemporal Variations in Water Quality of the Lower Godavari Basin and Their Agricultural and Health Implications. *International Journal of Environmental Pollution and Remediation (IJEPR)*. (DOI: [10.11159/ijepr.2025.007](https://doi.org/10.11159/ijepr.2025.007))
2. Pratyusha Tatavarthi, Keerthi Katam, Prabhakar Sharma and **Prabhakar Singh**. 2025. Assessing Downstream Heavy Metal Contamination and Risks in the Godavari River Basin: Implications for Irrigation and Water Quality Management. *Journal of Irrigation and Drainage Engineering* 151(3) ([10.1061/JIDEDH.IRENG-10484](https://doi.org/10.1061/JIDEDH.IRENG-10484)) [Q2, IF – 2.1, Cite score – 3.2]
3. Pratyusha Tatavarthi, Jayaprakash Vemuri and **Prabhakar Singh**. Reservoir Outflow Prediction using Adaptive Neuro-Fuzzy Interference System. *International Journal of System Assurance and Management*. (DOI: <https://doi.org/10.1007/s13198-024-02602-6>) [Q2, IF – 1.4, Cite score – 2.4]
4. Kara Reshma and **Prabhakar Singh**. Flood Assessment for Lower Godavari Basin by using the application of GIS-based Analytical Hierarchy Process. *International Journal of System Assurance and Management*. (DOI: <https://doi.org/10.21203/rs.3.rs-4279909/v1>) [Q2, IF – 1.4, Cite score – 2.4]
5. Kumar, R.; Sharma, P.; Verma, A.; Jha, P.K.; **Singh, P.**; Gupta, P.K.; Chandra, R.; Prasad, P.V.V. Effect of Physical Characteristics and Hydrodynamic Conditions on Transport and Deposition of Microplastics in Riverine Ecosystem. *Water* 2021, 13, 2710. (<https://doi.org/10.3390/w13192710>) [Q1, IF – 3.0, Cite Score – 6.0]
6. **Singh, P.**, H.M. Ibrahim, M. Flury, W.F. Schillinger and T. Knappenberger. 2013. Critical water potentials for germination of wheat cultivars in the dryland Northwest USA. *Seed Science Research*. (DOI: <https://doi.org/10.1017/S0960258513000172>) [Q2, IF – 1.9, Cite Score – 4.4]
7. **Singh, P.**, B. Sharratt and W.F. Schillinger. 2012. Wind erosion and PM10 emission affected by tillage systems in the world's driest rainfed wheat region. *Soil Tillage Res.* 124:219–225. (<https://doi.org/10.1016/j.still.2012.06.009>) [Q1, IF – 6.8, Cite Score – 13.6]
8. **Singh, P.**, M. Flury and W.F. Schillinger. 2011. Predicting seed-zone water content for summer fallow in the Inland Pacific Northwest, USA. *Soil Tillage Res.* 115–116:94–104. (<https://doi.org/10.1016/j.still.2011.07.005>) [Q1, IF – 6.8, Cite Score – 13.6]
9. **Singh, P.**, J.Q. Wu, D.K. McCool, S. Dun, C. Lin, and J.R. Morse. 2009. Winter Hydrologic and Erosion Processes in the U.S. Palouse Region: Field Experimentation and WEPP Simulation. *Vadose Zone J.* 8:426–436. (<https://doi.org/10.2136/vzj2008.0061>) [Q1, IF – 2.8, Cite Score – 5.1]
10. Al-Mulla, Y., J.Q. Wu, **P. Singh**, M. Flury, W.F. Schillinger, D.R. Huggins, and C.O. Stöckle. 2009. Soil water and temperature in chemical versus reduced tillage fallow in a Mediterranean climate. *Appl. Eng. Agric.* 25(1): 45–54. (doi: 10.13031/2013.25432) [Q3, IF – 1.1, Cite Score – 2.2]
11. Greer, R.C., J.Q. Wu, **P. Singh**, and D.K. McCool. 2006. WEPP simulation of observed winter runoff and erosion in the U.S. Pacific Northwest. *Vadose Zone J.* 5:261–272. (<https://doi.org/10.2136/vzj2005.0055>) [Q1, IF – 2.8, Cite Score – 5.1]

## Non-Peer Reviewed Publications and Conference Presentations

- Tatavarthi. P, **Singh P**, Vignesh G, Dewanshi D, Adarsh Reddy V, Katam. K. Seasonal Assessment of Water Quality in the Godavari River Basin: Implications for Agriculture and Public Health. ICEPR 2025 - 15th International Conference on Environmental Pollution and Remediation (Aug-21-23, Paris, France, Oral presentation and Publication-New Tech Congress; Scopus Indexed, DOI: [10.11159/icepr25.165](https://doi.org/10.11159/icepr25.165)).
- Kara Reshma and **Prabhakar Singh**. Flood Assessment for Lower Godavari Basin by using the application of GIS- based Analytical Hierarchy Process. presented in 3rd International Conference on Recent Trends in Engineering, Technology and Business Management (ICRTETBM-2024) organized by Amity University during 21-23 February, 2024. (Oral Presentation)
- Pratyusha Tatavarthi, Jayaprakash Vemuri and **Prabhakar Singh**. “Reservoir Outflow Prediction using Adaptive Neuro-Fuzzy Interference System”. Presented in 3rd International Conference on Recent

Trends in Engineering, Technology and Business Management (ICRTETBM-2024) organized by Amity University during 21-23 February, 2024. (Oral Presentation)

- Kondam, N.R., Poddar, B.K., Pasupuleti, V.D.K., **Singh, P.** (2018). Three Dimensional Modeling and Analysis of Ancient Indian Structures. In: Ioannides, M., et al. Digital Heritage. Progress in Cultural Heritage: Documentation, Preservation, and Protection. EuroMed 2018. Lecture Notes in Computer Science, vol 11197. Springer, Cham. ([https://doi.org/10.1007/978-3-030-01765-1\\_2](https://doi.org/10.1007/978-3-030-01765-1_2))
- **Singh, P.**, M. Flury and W.F. Schillinger. 2010. Simulation of seed zone water content and potential in the Horse Heaven Hills, USA. AGU Fall Meeting.
- McCool, D.K., J.Q. Wu, R.C. Greer, S. Dun, and **P. Singh**. 2008. Current water erosion studies at Pullman, WA, USA. 15th international congress of the ISCO (International Soil Conservation Organization), 18–23 May, Budapest, Hungary.
- **Singh, P.**, C.H. Lin, S. Dun, R.C. Greer, J.Q. Wu, and D.K. McCool. 2007. Performance of WEPP energy-based routine for simulating snow and soil frost in the Pacific Northwest, USA. PNW ASABE/CSBE Meeting, Moscow, Idaho. (Oral Presentation)
- **Singh, P.**, C.H. Lin, R.C. Greer, S. Dun, J.Q. Wu, and D.K. McCool. 2007. WEPP Energy-Based Winter Routine for Simulating Winter Hydrologic Processes in the Pacific Northwest, USA. Annual International Meeting, ASABE, Minneapolis, MN. (Oral Presentation)
- **Singh, P.**, C.H. Lin, S. Dun, R.C. Greer, J.Q. Wu, and D.K. McCool. 2006. WEPP With an Energy-Based Winter Routine for Simulating Winter Hydrologic Processes in the Pacific Northwest, USA. AGU Fall Meeting, San Francisco, CA. (Poster Presentation)