

DIBYANSHU, PhD.

Curriculum Vitae

Name: Dibyanshu

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Research gate:

[Dibyanshu Kumari \(researchgate.net\)](https://www.researchgate.net/profile/Dibyanshu-Kumari)

Google Scholar:

<https://scholar.google.co.in/citations?hl=en&user=P4QKFEoAAA>
AJ



Area of Interest:

Emerging contaminants, groundwater remediation, fate and transport behavior of contaminant in the environment

Academic Qualification:

Name of the Institution	Name of the Examination	Board/ University	Year of Passing	% secured/ pointer out of 10
Indian Institute of Technology, Patna	PhD (Civil and Environmental Engineering)	IIT Patna	2021	7.5
Central University of Jharkhand (CUJ)	Integrated M-Tech (Water Engineering and Management) Equivalent to civil	CUJ	2016	73
DAV Alok School	Intermediate	CBSE	2011	64
St Francis School	Metric	ICSE	2009	76.4

Dissertation and Thesis:

- Submitted thesis on “Fate and Transport Behavior of Engineered Nanoparticles Through Porous media” for the partial fulfilment of the requirements for the degree of Doctor of Philosophy at IIT Patna.

- Submitted dissertation on “Spatio-temporal variability of precipitation and temperature over Godavari basin” in 2016 for the partial fulfilment of the requirements for the degree of Integrated Master of Technology at CUJ.
- Submitted dissertation on “Prioritization of Sub-watersheds by morphometric analysis using remote sensing and GIS” in 2015 for the partial fulfilment of the requirements for the degree of Bachelor of Technology at CUJ.

Publications:

Journal:

- Dibyanshu and Raychoudhury, T. (2019). Co-transport behavior of nano-ZnO particles in the presence of metal-nanoparticles through saturated porous media. *Journal of Environmental Chemical Engineering*, 7(3), 103103-103111. [IF – 5.9]
- Dibyanshu and Raychoudhury, T. (2020). Transport behavior of different metal-based nanoparticles through natural sediment in the presence of humic acid and under the groundwater condition. *Journal of Earth System Science*, 129(1), 1-12. [IF – 1.3]
- Kumar, A., Dibyanshu and Raychoudhury, T. (2020). Long-term fate of ZnO-Fe_xO_y mix-nanoparticles through the saturated porous media under constant head condition. *Science of the Total Environment*, 721, 137669-137677. [IF – 7.9]
- Dibyanshu, Pradhan, I., Nayak, A., and Raychoudhury, T. (2021). Variation in porous media compositions influences the co-transport behavior of ZnO and Fe_xO_y mix nanoparticles. *Groundwater for Sustainable Development*, 16, 100710.
- Dibyanshu, Chhaya, and Raychoudhury, T. (2021). The possibility of engineered nanoparticle of becoming an emerging contaminant in the groundwater: fate and transport behavior– A review. *International Journal of Environmental Science and Technology*, 1-24. [IF – 2.8]

Conferences:

- Dibyanshu and Raychoudhury, T. (2018). “Co-Transport of ZnO Nanoparticles in the Presence of other ENPs Through Natural Sediment” in International Conference on Water: From Pollution to Purification (ICW 2018), Kerala, December 7-10.
- Dibyanshu, Kumar, A., Joshi, P., and Raychoudhury, T. (2019). “Long-term fate of zinc oxide nanoparticles in the presence of nano-iron oxide through the natural sediment under different solution chemistry”, in American Chemical Society (ACS 2019), National Meeting, San Diego, CA, August 25-29.
- Dibyanshu and Raychoudhury, T. (2017). “Transport behavior of selected engineered nanoparticles through porous media”, 7th International Groundwater Conference on Groundwater Vision 2030, (IGWC 2017), New Delhi, December 11-13.

- Dibyanshu (2016). “Comparison between different equation and modelling for prediction of evaporation loss in the reservoir” in National seminar on Convergence of Science and Technology, (NSCST-2016), Cambridge Institute of Technology, Ranchi, February 19-20.
- Dibyanshu (2016). “Best management practices and efficient use of water in agriculture” in National Conference on Water and sustainable development (WASD 2016), Central University of Jharkhand, Ranchi, January 8-9.

Book Chapter:

- Chhaya, Dibyanshu, Singh, S., and Raychoudhury, T. (2021). Nanoparticles and Nanocomposites Materials for Water Treatment: Application in Fixed Bed Column Filter. In A. Roy, A. Mullick, & S. Moulik (Eds.), Sustainable Water Treatment (pp. 173-231) Scrivener Publishing, Wiley.

Workshops:

- Successfully completed a GIAN course on “Transport of viruses and colloids in variably-saturated soil and groundwater” on February 12-20 at IIT Roorkee.
- Successfully completed a two-day training course on ArcGIS conducted by ESRI India, in 2018 at IIT Patna.
- Successfully completed 4 weeks training on “Rainwater harvesting, water purification & water conservation techniques” on Heavy Engineering Corporation Ltd. (Govt. of India Enterprise), in 2013, Ranchi.
- Successfully completed a 1-month internship on “Estimation of Evaporation loss in the reservoir using WEKA software” under Dr Arun Goel, in 2015 at NIT Kurukshetra.

Membership in Scientific and Professional Societies:

- ACS student membership (Membership no-31901432).

Subjects Taught during PhD:

Teaching Assistant at IIT Patna

- Environmental engineering (Practical) (CE391)
- Water resource engineering (Practical) (CE291)

Research Experience:

- Research Assistant - 30th August 2021 - 29th November 2021 in Indian Institute of Technology Patna

Instrument Handled:

Atomic Mass Spectrophotometer (AAS), UV-visible spectrophotometer (UV-visible), Nanoparticle Tracking Analyzer (NTA), Dynamic Light Scattering (DLS), Ion Chromatography-Mass Spectrophotometer (IC-MS), Zetasizer, Microwave digester, Induced Coupled Plasma-Mass Spectrophotometer (ICP-MS), CHNS

Programming and Software Knowledge:

C++, JAVA, ERDAS imagine 9.2 & Arc GIS 10 (Basics), Auto CAD-2010, ANN Model, WEKA 3.6, MATLAB (Basics).

Extra-Curricular Activities:

Badminton playing, Crafts, Dance and Music Listening.

Contact References:

- 1) Dr Trishikhi Raychoudhury,
Assistant Professor,
Department of Civil and Environmental Engineering,
Indian Institute of Technology Patna,
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- 2) Dr Ramakrishna Bag,
Assistant Professor,
Department of Civil and Environmental Engineering,
Indian Institute of Technology Patna,
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- 3) Dr Vinod Kumar Tripathi,
Assistant Professor,
Department of Farm Engineering,
Banaras Hindu University,
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Declaration:

I hereby declare that all statements made above are true, complete and correct to the best of my knowledge and belief.

Place- IIT Patna, Patna

Date- 12/11/2021



Dibyanshu