

Dr. Bandita Barman

CONTACT INFORMATION	Assistant Professor Department of Civil Engineering IIT (ISM), Dhanbad, INDIA	<i>Email:</i> bandita@iitism.ac.in 0326-223-5398 (O); 9085778672 (M)
RESEARCH INTERESTS	Sediment Transport and Fluvial Hydrodynamics, Turbulent Flow, Modeling and Simulation of Fluvial Processes.	
EDUCATION	PhD, August 2018 Indian Institute of Technology Guwahati, India <ul style="list-style-type: none">Thesis title: Turbulent flow structures and morphological characteristics of mining affected alluvial channel.Advisors: Prof. Arup Kumar Sarma and Prof. Bimlesh Kumar M.Tech., June 2015 Indian Institute of Technology Guwahati, India <ul style="list-style-type: none">Thesis title: Morphological modeling of alluvial channel with aggregate mining.CGPI: 9.78/10 B.E. in Civil Engineering, 2011 Assam Engineering College, Jalukbari, India <ul style="list-style-type: none">Percentage: 84.47%	
AWARDS	Key funded Post-Doctoral Research Fellowship, Wuhan University, China, 2019 MHRD PhD scholarship, IIT Guwahati, 2015 MHRD MTech scholarship, IIT Guwahati, 2013 3 rd Rank in BE, 2011 Engineering Merit Scholarship in B.E. from Govt. of Assam	
RESEARCH EXPERIENCE	Post-Doctoral Research Fellow, Feb 2019 – Sept 2019 Wuhan University, China <ul style="list-style-type: none">Project title: Experimental investigations of channel thalweg profile of Jingjiang reach (Middle Yangtze River)Advisor: Prof. Junqiang Xia	
TEACHING EXPERIENCE	Assistant Professor Department of Civil Engineering, IIT (ISM) Dhanbad	July, 2021-present
	Assistant Professor Department of Civil Engineering, SVNIT Surat	October, 2019-July, 2021
	Assistant Professor (Adhoc) Department of Civil Engineering, NIT Meghalaya	August, 2018- December, 2018
	Assistant Lecturer Jigme Namgyel Polytechnic, Bhutan	August, 2011- July, 2013

PUBLICATIONS

1. **Bandita Barman**, Bimlesh Kumar, and Arup Kumar Sarma. Impact of sand mining on alluvial channel flow characteristics. *Ecological Engineering*, 135, 36-44, 2019. (Q1, IF 4.035)
2. **Bandita Barman**, Bimlesh Kumar, and Arup Kumar Sarma, Dynamic characterization of migration of a mining pit in an alluvial channel. *International Journal of Sediment Research*, 34, 155-165, 2019. (Q1, IF 2.902)
3. **Bandita Barman**, Bimlesh Kumar, and Arup Kumar Sarma, Turbulent flow structures and geomorphic characteristics of mining affected alluvial channel. *Earth Surface Processes and Landforms*, 43, 1811-1824, 2018. (Q1, IF 4.133)
4. **Bandita Barman**, Anurag Sharma, Bimlesh Kumar, and Arup Kumar Sarma, Multiscale characterization of migrating sand wave in mining induced alluvial channel. *Ecological Engineering*, 102, 199-206, 2017. (Q1, IF 4.035)
5. **Bandita Barman**, Arup Kumar Sarma, and Bimlesh Kumar, Mining Pit Migration of an Alluvial Channel: Experimental and Numerical Investigations. *ISH Journal of Hydraulic Engineering*, Online ISBN 978-3-319-55125-8, 2018. (Q2, IF 0.451)

BOOK CHAPTER

Bandita Barman, Bimlesh Kumar, and Arup Kumar Sarma. Experimental study on mining pit migration. Book Title: *Development of water resources in India*, Series Title: Water Science Technology Library Series, Springer, Vol. 84, Chapter 26, ISBN: 978-3-319-55124-1.

CONFERENCE PAPERS

1. Laxman V Rathod, **Bandita Barman**, Bimlesh Kumar. Estimation of Bed Material Load using Artificial Intelligence Techniques, EGU General Assembly 2021. (Online)
2. Koradia Ashishkumar K, **Bandita Barman**. MacCormack Finite-Difference Scheme for Simulation of Flood Hydrograph, International Conference (Online) on Water and Environment (ICWE- 2021) March 22-23, 2021 (Best paper award)
3. Jyotiprakash Tarei, **Bandita Barman**. Performance of Mac-Cormack finite difference scheme with TVD and Artificial Viscosity, Water Resources and Coastal Engineering (HYDRO), NIT Rourkela, 2020. (Online)
4. **Bandita Barman**, Bimlesh Kumar, Arup Kumar Sarma, Junqiang Xia. Turbulent flow characteristics in a mining pit: an experimental investigation. International Symposium on River Sedimentation, Chengdu, China, 16th -20th September, 2019.
5. Jyotirmoy Barman, Jyotismita Taye, **Bandita Barman**, and Bimlesh Kumar. Turbulent Characteristics of Sinuous River System. International Symposium on River Sedimentation, Chengdu, China, 16th -20th September, 2019.
6. **Bandita Barman**, Abhishek Dixit, Arnab Kumar Pal, Bimlesh Kumar and Arup Kumar Sarma. Characteristics of bed load in a mined alluvial channel. 22nd International Conference on Hydraulics, Water Resources and Coastal Engineering (HYDRO), L. D. College of Engineering, Ahmedabad, 21st -23rd December, 2017.
7. **Bandita Barman**, Shivam Singh, Shankar Dev Gour, Subhashish Chamua, Bimlesh Kumar and Arup Kumar Sarma. Review on adverse impact of river sand mining. 22nd International Conference on Hydraulics, Water Resources and Coastal Engineering (Hydro), L. D. College of Engineering, Ahmedabad, 21st -23rd December, 2017.

8. **Bandita Barman**, Bimlesh Kumar and Arup Kumar Sarma. Statistical analysis of bed feature of an alluvial channel at upstream and downstream of mining pit. 44th National Conference on Fluid Mechanics and Fluid Power, Amrita University, Amritapuri Campus, Kollam, Kerala, 14th -16th December, 2017.
9. **Bandita Barman**, Bimlesh Kumar, and Arup Kumar Sarma, What follows after sediment mining- a preliminary investigation. 6th International and 43rd National Conference on Fluid Mechanics and Fluid Power, MNNIT Allahabad, ISBN 978-93-5267-408-4, 15th -17th December, 2016.
10. **Bandita Barman** and Arup Kumar Sarma. A study on river bed degradation due to mining of coarser top sediment layer. 6th International Conference on Computational Mechanics and Simulation, IIT Bombay, 27th June- 1st July 2016.

TEACHING
RESPONSIBILITIES

Theory

Fluid Mechanics (UG)

Hydraulic Engineering(UG)

Energy and Environmental Engineering(UG)

SVNIT Surat

Hydrology and Water Resources Engineering (UG)

Solid Mechanics (UG)

NIT Meghalaya

Practical

Hydraulic Engineering (UG)

Hydraulic and Hydraulic Machine (UG)

Water Resources Engineering-II (UG)

Hydraulic Engineering Laboratory (PG)

SVNIT Surat

MTECH STUDENTS
GUIDED
(Completed)

1. Koradia Ashishkumar K (P19WR005)
Dissertation Title: Numerical modelling of 2-D shallow water flow with finite difference scheme.
2. Saundarya Narayan Kashyap (P19WR006)
Dissertation Title: Flow prediction in vegetative channel using machine learning techniques.
3. Kranthi Teja Potnuri (P19WR010)
Dissertation Title: Hydrodynamic Parameters in an Alluvial Channel.
4. Laxman V Rathod(P18WR015)
Dissertation Title: Estimation of bed material load using artificial intelligence techniques
5. Jyotiprakash Tarei(P18WR017)
Dissertation Title: Performance of MacCormack finite difference scheme with TVD and artificial viscosity

MTECH
PROFESSIONAL
PROJECT GUIDED

Sayed Farhan Ali (P19WR004), Palai Manoj Kumar (P19WR014), Hridhya A (P19WR015)
Project Title: Study of width and braiding index of the Brahmaputra river in Assam

ADMINISTRATIVE

Departmental Training and Placement Coordinator, SVNIT Surat (Feb

RESPONSIBILITIES

2020-July 2021)

Warden of Mother Teresa Bhavan, SVNIT Surat (March 2021-July 2021)

Co-chairperson of CES (Civil Engineering Student Chapter), SVNIT Surat (September 2020-July 2021)

OTHERS

- Conducted One-week short term training program on ‘Design of Storm Water Drainage Systems as per CPHEEO-2019’ at Civil Engineering Department, Sardar Vallabhbhai National Institute of Technology – Surat
- Reviewed technical articles for Natural Hazards; Progress in Computational Fluid Dynamics, an International Journal; ISH Journal of Hydraulic Engineering