

CURRICULUM VITAE

Personal Information

NAME: DR. DIPANKANA BHATTACHERJEE

Place of Birth: Kolkata, West Bengal, INDIA

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Educational background

Examination Passed	Subject / Specialization/Title of Thesis	Board / Univ.	Year of Passing	Divn / Class.	% of Marks / CGPA
*Madhyamik Pariksha	English, Bengali, Physical Sci., Life Sci., Mathematics, Geography, History, Computer Application	WBBSE, West Bengal	2005	1st	90.38%
*Awarded with Shield for securing highest total marks in aggregate in Class X Board Examination from Gokhale Memorial Girls' School, Year: 2005					
**Higher Secondary	Science [Physics, Chemistry, Mathematics, Statistics]	WBCHSE, West Bengal	2007	1st	96%
**Awarded with Dr. Monoranjan Biswas Physics Aptitude Scholarship by Nava Nalanda High School, Year: 2007					
B.C.E	Civil Engineering	Jadavpur University	2011	1st	9.11
M.Tech.	Geotechnical Engineering	IIT Bombay	2013	1st	9.86
§Ph.D.	Geotechnical Engineering	IIT Bombay	2018		9.76
§Awarded with Excellence in Ph.D. Research for the year 2017-19 by Indian Institute of Technology Bombay (IIT Bombay), Year: 2019					

Awards and Distinctions

- **Young Faculty Research Award (YFRA)-2021** bestowed by the IEST ALUMNI ASSOCIATION – WASHINGTON METROPOLITAN AREA and GAABESU SHIBPUR FOUNDATION USA – Year 2023
- **IGS-Kolkata Chapter Young Geotechnical Engineer (YGE) Award** for the best paper on “Earth Retaining Structures” for the year 2021 by the Indian Geotechnical Society. Awarded during IGC-2021 held in NIT Trichy [Awarded with plaque and certificate] – Year 2021
- **IGS Second Best Paper Prize**, sponsored by Springer Nature in Theme of "Numerical and Physical Modeling and Soil Dynamics" presented at Indian Geotechnical Conference, Visakhapatnam, 2020 [Awarded with a certificate and Special prize of book vouchers worth 100 Euros from Springer International] – Year 2020
- **Excellence in Ph.D. Research** for the year 2017-19 by Indian Institute of Technology Bombay – Year 2019
- **Young Geotechnical Engineer Award** sponsored by Centre for Geomechanics and Railway Engineering, University of Wollongong, Australia, Indian Geotechnical Society (IGS), Delhi chapter of IGS and TC 202 of ISSMGE. Awarded at IIT Delhi [Awarded with Cash prize of Australian \$300, a certificate, plaque and Special prize of book vouchers worth 200 Euros from Springer International] - Year 2018
- **IGS-Dr. B.B. Rai-S.N. Gupta Biannual Prize** for the BEST PAPER on “Earth and Earth-Retaining Structures, Including Interaction and Instrumentation” for the year 2011-2012. Awarded during IGC 2013 held in IIT Roorkee [Awarded with plaque and certificate] – Year 2013

Research Activities/Interests

- Geotechnical Engineering and Applied Soil Mechanics
- Geotechnical Physical Modelling at normal and enhanced gravity
- Rainfall induced landslides and mitigation measures
- River Bank Erosion and mitigation measures
- Unsaturated Soil Mechanics and its application
- Geosynthetics in Geotechnical Engineering

Teaching / Research experience

Organization	Type of Organization	From	Total period	Designation
Indian Institute of Engineering Science and Technology, Shibpur (IEST, Shibpur)	Central Govt. Institute	05/04/2019	Ongoing	Assistant Professor (Gr II)
Indian Institute of Technology, Bombay (IIT Bombay)	Central Govt. Institute	05/03/2018	1 year	Research Associate

Thesis Supervised

Academic Program	Responsibility	Status of thesis	Number
Ph.D.	Supervisor	Ongoing	01
	Co-supervisor	Ongoing	01
M.Tech	Supervisor	Completed	04
		In progress	05
B.Tech	Supervisor	Completed	16
		In progress	-

Courses Taught

Academic Program	Courses
UG (B.Tech) & Dual Degree	<ul style="list-style-type: none"> • Ground Improvement Methods • Geotechnical Engineering-II • Slope Stability and Underground Space Technology • Advanced Foundation Design Project • Geotechnical Engineering Laboratory • Estimation, Valuation and Project Management • Introduction to Civil Engineering • CAD in Civil Engineering • Civil Engineering Materials Laboratory • Estimation Practice Sessional • General Civil Engineering Problems (Minor Project)
M.Tech & Ph.D.	<ul style="list-style-type: none"> • Geotechnical Earthquake Engineering • Advanced Soil Mechanics • Foundation Engineering • Geotechnical Model Laboratory • Advanced Geotechnical Engineering Project

Selected Publications

(a)	Selected Paper(s) in SCI/Scopus indexed Journal(s)				
<i>Sl. No.</i>	<i>Title of Paper(s)</i>	<i>Name of the Author(s) as listed serially in the published papers</i>	<i>Name of the Journal</i>	<i>Page(s)</i>	<i>Volume & Year</i>
1	Centrifuge Model Studies on Performance of Hybrid Geosynthetic Reinforced Slopes with Poorly Draining Soil Subjected to Rainfall	D. Bhattacharjee and B.V.S Viswanadham	Journal of Geotechnical and Geoenvironmental Engineering (ASCE), United States	04019108:1-13	145(12), 2019
2	Design and Performance of an Inflight Rainfall Simulator in a Geotechnical Centrifuge	D. Bhattacharjee and B.V.S Viswanadham	Geotechnical Testing Journal, (ASTM), United States	72-91	41(1), 2018
3	Effect of geocomposite layers on slope stability under rainfall condition	D. Bhattacharjee and B.V.S Viswanadham	Indian Geotechnical Journal, Springer	316-326	48(2), 2018
4	Studies on the performance of geocomposite reinforced low-permeable slopes subjected to rainfall	B.V.S Viswanadham and D. Bhattacharjee	Japanese Geotechnical Society Special Publication	2362-2367	2(69), 2016
5	Effect of hybrid geosynthetic layers on soil walls with marginal backfill subjected to rainfall	D. Bhattacharjee and B.V.S Viswanadham	Geotechnical Special Publication, American Society of Civil Enggs. (ASCE), United States	362-371	GSP 269, 2016
6	Numerical studies on the performance of hybrid-geosynthetic-reinforced soil slopes subjected to rainfall	D. Bhattacharjee and B.V.S Viswanadham	Geosynthetics International, ICE Publishing, United Kingdom	411-427	22(6), 2015
(b)	Selected Paper(s) in SCI/Scopus/Web of Science indexed /internationally renowned Conference				
<i>Sl. No.</i>	<i>Title of Paper(s)</i>	<i>Name of the Author(s) as listed serially</i>	<i>Name of the Conference</i>	<i>Page(s)</i>	<i>Volume & Year</i>
1	Numerical Analysis on the stability of Upstream Tailings Dam under seismic loading	Rehman, Ul. M., Kundu, S., and Bhattacharjee, D	Indian Geotechnical Conference (IGC 2022), Kochi	In press	2022
2	Centrifuge model studies on geogrid and hybrid geosynthetic reinforced slopes subjected to rainfall	D. Bhattacharjee and B.V.S Viswanadham	4th European Conference on Physical Modelling in Geotechnics (ECPMG) 2020 Luleå, Sweden	221-226	Vol 1, 2020
3	Performance of Geogrid reinforced soil walls with low permeable backfill: Centrifuge Study	B.V.S Viswanadham, M. Jayanandan, D. Bhattacharjee and P. Kumar	4th European Conference on Physical Modelling in Geotechnics (ECPMG) 2020 Luleå, Sweden	213-220	Vol 1, 2020
4	Prediction of threshold curves for mitigating rainfall induced landslides in low permeable soil slopes	D. Bhattacharjee and B.V.S Viswanadham	Second ASCE India Conference (CRSIDE 2020), Kolkata	77 -78 [extended abstarct]	Vol 1, 2020
5	Development of a rainfall simulator in centrifuge using modified Mariotte's principle	D. Bhattacharjee and B.V.S Viswanadham	9th International Conference on Physical Modelling in Geotechnics (ICPMG 2018), London	337-342	Vol 1, 2018
6	Effect of geosynthetic layers on slopes subjected to rainfall	D. Bhattacharjee and B.V.S Viswanadham	Young Geotechnical Engineers' Symposium on Finite Element Method, ISSMGE, DST	1-2	Paper ID: FM 031, 2015
7	Some studies on the Performance of Geocomposite Reinforced Slopes subjected to Rainfall	D. Bhattacharjee and B.V.S Viswanadham	8th Int. Conf. on Physical Modelling in Geotechnics (ICPMG 2014), Australia	1153-1159	Vol 2, 2014
8	Centrifuge model tests on the measurement of impact energy on bridge pier foundations embedded in sand	B.V.S Viswanadham, A. Guha, B.V Sudarshan, S.Kundu and D. Bhattacharjee	8th Int. Conf. on Physical Modelling in Geotechnics (ICPMG 2014), Australia	1061-1066	Vol 2, 2014
9	Some studies on the seepage analysis of geosynthetic reinforced soil walls constructed with low-permeability backfill soils	D. Bhattacharjee, S. Balakrishnan and B.V.S Viswanadham	Indian Geotechnical Conference (IGC 2012), IIT Delhi	347-350	Vol. 1, 2012

(c)	Selected Book Chapter(s) written			
Sl. No.	Name	Name of Author(s)	Year of Publication	Publisher with address
1	Simplified Plane Strain Consolidation Modeling of Stone Column In: Soil Dynamics, Earthquake and Computational Geotechnical Engineering, Lecture notes in Civil Engineering	Puspendu Ray, Ambarish Ghosh and D. Bhattacharjee	2022, In press	Springer, Singapore (pubs.)
2	Studies on Centrifuge Modelling of Rainfall Induced Landslides, In: Dynamics of Soil and Modelling of Geotechnical Problems - (ISBN: 978-981-16-5604-0). Lecture notes in Civil Engineering, Volume 186	D. Bhattacharjee and B.V.S Viswanadham	2022, pp. 207-216	Springer, Singapore (pubs.)
3	Centrifuge Modelling of Marginal Soil Slopes under Rainfall with Hybrid Geosynthetic Inclusions, In: Ground Improvement Techniques (ISBN: 978-981-15-9987-3). Lecture notes in Civil Engineering, Volume 118	D. Bhattacharjee and B.V.S Viswanadham	2021, pp. 329-338	Springer, Singapore (pubs.)
4	Use of hybrid geosynthetics in mitigating rainfall induced slope instability, In: Geotechnics for Transportation Infrastructure (ISBN: 978-981-13-6712-0). Lecture notes in Civil Engineering, Volume 28	D. Bhattacharjee and B.V.S Viswanadham	2019, pp. 689-702	Springer, Singapore (pubs.)

Reviewer of International Journals

- Journal of Geotechnical and Geoenvironmental Engineering (ASCE)
- International Journal of Geomechanics (ASCE)
- Geotextiles and Geomembranes (Elsevier)
- Journal of Rock Mechanics and Geotechnical Engineering (Elsevier)

Innovative activities and developments

- Design and development of an **in-flight rainfall simulator at enhanced gravity levels in centrifuge**. The developed simulator is capable of inducing in-flight rainfall of various intensities (varying from 10 mm/h to 80 mm/h in prototype dimensions) and durations (over a year continuously in prototype dimensions) on geotechnical structures using specially designed pneumatic nozzles. The intensity and duration of rainfall can be regulated at any point of time in the in-flight condition to replicate prototype natural hazards, ranging from long-term medium intensity rainfall to a short spell of very high intensity rainfall.

Sponsored Research projects

Sl. No.	Sponsoring Agency	Title of the Project(s)	Period	Status	Role	Collaborating Institute
1	TEQIP-III	Construction challenges of strip footings resting on low-permeable soil slopes	1 year	Completed	PI	None
2	East Hooghly Poly Plast Pvt. Ltd.	Development of Bank Protection Methodologies for Various Vulnerable Reaches of Rivers in West Bengal through Model Studies and Preparation of Design Charts and Guidelines	2 years	Ongoing	Co-PI	Alia University and Irrigation Directorate
3	Ministry of Textiles, Government of India	Development of cost effective performance specific natural fibre and agro-waste based geotextiles and creation of design parameters for slope stabilisation and soil erosion in the North-Eastern India	4 years	Under advanced stage of scrutiny	Co-PI	Indian Jute Industries' Research Association

Consultancy projects

Sl. No.	Sponsoring Agency	Title of the Project(s)/ Patent(s)	Period	Status	Indicate role as PI/Co PI
1	ABCI Infrastructures Pvt. Ltd.	Widening and Up-gradation 2- Lane with paved shoulder configuration and geometric improvements: from km 208.00 to km 250.00 (Package 5) on Aiwawal - Tui Pang section of NH-54 in the state of Mizoram	2020-2021	Completed	Co-PI
2	ABCI Infrastructures Pvt. Ltd.	Widening and Up-gradation 2- Lane with paved shoulder configuration and geometric improvements: from km 166.00 to km 208.00 (Package 4) on Aiwawal - Tui Pang section of NH-54 in the state of Mizoram	2020-2021	Completed	Co-PI
3	BLAPPL-GPPL (Joint Venture)	Widening to 2 (Two) Lane with Paved shoulder of Imphal to Jiribam section of NH37 from Design Chainage 66.110 km to 101.280 Km (Existing Chainage km 67.496 to Km 103.557) (PKG- 4) in the State of Manipur on Engineering, Procurement & Construction (EPC) mode	2022-2023	Ongoing	Co-PI
4	Simplex Infrastructures Limited	Widening/ Improvement to 4 (Four) Lane with Paved Shoulder of existing single lane from Srirampur (near Bhairiguri village) to Kachukhana Harichara Paglagaunj Section (PKG -I) of Srirampur to Dhubri Road of newly declared NH-127B of existing KM 0.000 to KM28.050 (Design KM. 0.000 to KM. 27.650), (Design Length= 27.650km) on EPC Bas is in the state of Assam under JICA	2023-2024	Ongoing	Co-PI
5	Bharat Coking Coal Limited	Scientific Study for determining the Safe Method of Working, Ultimate Pit Slope and Dump Slope with Monitoring of Slope Stability of Basantimata- Dahibari Colliery Under CV AREA-XII	2022-2023	Completed	Co-PI
6	Minsol India Private Limited	Preparation of Geotechnical report on Highwall mining at Amalgamated Amlo Dhor	2023-2024	Ongoing	Co-PI

Seminars/Workshops Organized

Sl. No.	From	To	Name of the Course(s)	Sponsored by	Number of Participants
1	08.03.2021	12.03.21	Planning and Design of Sustainable Transportation Infrastructures [5-days Webinar]	TEQIP- Phase III	100
2	02.08.2019		Studies on the simulation of climatic events in a geotechnical centrifuge [Technical Lecture]	Department of Civil Engg, IESTS and IGS Kolkata Chapter	100

Administrative/Institute Support Work

- Faculty in Charge of Institute Works Division, 18-09-2019 – Ongoing
- Warden of Lt. Williams Hall of Residence, 03-02-2020– Ongoing
- Member of the Internal Complaints Committee (ICC) of the institute, 23-11-2020– 31-12-2022
- Member of the Grievance Redressal Cell of the institute, 22-11-2022– Ongoing
- Member of the Core Committee for preparing the Central Time Table for the Institute, 03-03-2021– Ongoing
- Faculty in Charge of "Society for Creative Arts and Green Environment (SCAGE)"- a society under the Center for Creative Expression, IESTS, 18-06-2021– Ongoing
- Member of the committee constituted for Centralized Counselling (CCMT), 14-06-2022– Ongoing
- Member of Admission Committee constituted for Enrolment Process in PhD program, 19.10.2022 -Ongoing
- Member of the committee constituted for preparation of Annual Report, 04-08-2021– Ongoing
- Member of Departmental Under-Graduate Committee (DUGC) since August 2020
- Member of Departmental Routine Committee since December 2019