

Curriculum Vitae



1. Name (Block Letters) : **Dr. ARUP BHATTACHARJEE**
2. Father's/Mother's/ Husband's Name : **Late Arabinda Bhattacharjee**
3. Current Designation : **Professor**
4. Department : **Civil Engineering**
5. Institute : **Jorhat Engineering College**
6. Address for correspondence (with pin code) : **Department of Civil Engineering
Jorhat Engineering College
Jorhat -785007 (Assam)**
7. Permanent address(with pin code) : **Naina Apartment, Doha Bora Road
Jorhat – 785001 (Assam)**
- Telephone No : **9435514576**
E –mail : **bhatta_arup@yahoo.com**

8. Educational qualification (HSLC onwards)

| Qualification | Board/University | Year of obtaining degree | Specialization |
|---------------|--|--------------------------|--------------------------|
| HSLC | SEBA | 1987 | NA |
| Diploma | State Council for Technical Education, Assam | 1991 | Civil Engineering |
| B.Tech | NERIST, NEHU | 1994 | Civil Engineering |
| M.Tech | IIT Roorkee | 2006 | Geotechnical Engineering |

9. Research Degree(s):

| Degree | Name of the University | Date of award | Title |
|--------|------------------------|---------------|---|
| Ph.D | IIT Guwahati | 09.01.2015 | Numerical modeling of reinforced soil walls subjected to dynamic excitation |

10. Details of Teaching/Research/Academic experience:

| Designation | Employer | Period of Service | | Scale of Pay |
|--|--|-------------------|-------------|--|
| | | From | To | |
| Lecturer | Commissioner Education , Govt of Assam | 08.11.1994 | -18.08.2008 | Rs. 8000.00 |
| Sr. Lecturer/ Assistant Professor(GP= 7000/-) | Commissioner Education , Govt of Assam | 18.08.2008- | 16.03.2018 | Rs. 15600.00 + Rs.7000.00 (AGP) |
| Associate Professor | Commissioner Education , Govt of Assam | 17.03.2017- | 26.01.2020 | Rs. 37400.00 + Rs. 9000.00 (AGP) |
| Professor | Commissioner Education , Govt of Assam | 27.01.2020- | Till date | Rs. 1,44,000/- (Payband 14) |

11. Details of publication

Journals

1. **Bhattacharjee, A** and Masud, U. A (2019). Behaviour of Two Tiered Geosynthetics Reinforced Soil Walls, *INAE Letters*, 4, 91-100
2. Krishna, A. M. and **Bhattacharjee, A.** (2016). Behavior of Rigid Faced Reinforced Soil Retaining Walls Subjected to Different Earthquake Ground Motions, *ASCE International Journal of Geomechanics*, 10.1061/(ASCE)GM.1943-5622.0000668 , 06016007.
3. **Bhattacharjee, A.**, and Krishna, A. M., (2015). Strain Behavior of Backfill Soil in Rigid Faced Reinforced Soil Walls Subjected to Seismic Excitation, *International Journal of Geosynthetics and Ground Engineering*, DOI: 10.1007/s40891-015-0016-4.
4. **Bhattacharjee, A.**, and Krishna, A. M., (2015). Strain Behavior of Soil and Reinforcement in Wrap Faced Reinforced Soil Walls Subjected to Seismic Excitation”, *Indian Geotechnical Journal*, Vol. 45, No. 3, pp. 318-331. DOI: 10.1007/s40098-014-0139-x.
5. **Bhattacharjee, A.** and Krishna, A.M., (2014). “Effect of backfill on wrap faced reinforced soil wall subjected to seismic excitation”, *International Journal of Innovative Research in Science, Engineering and Technology*, Vol. 3(4), pp. 37-42.
6. **Bhattacharjee, A.**, and Krishna, A.M., (2012). Development of numerical model of wrap faced walls subjected to seismic excitation. *Geosynthetics International*, Vol. 19, No. 5, pp. 354-369. DOI: 10.1680/gein.12.00022
7. **Bhattacharjee, A.**, and Krishna, A.M., (2012). Seismic response of rigid faced reinforced soil retaining walls. *International Journal of Geotechnical Earthquake Engineering*, Vol. 3, N o. 2, pp. 1-14. doi:10.4018/jgee.2012070101.
8. **Bhattacharjee, A.** and Krishna, A.M. (2011), Behavior of gravity retaining wall subjected to seismic excitation using FLAC 3D, *International Journal of Earth Science and Engineering*, Vol. 04, No 06 SPL, pp 71-74.

9. **Bhattacharjee, A.**, Mittal, S. and Krishna, A.M. (2011). Bearing capacity improvement of square footing by micropiles, *International Journal of Geotechnical Engineering*, Vol. 5, pp 113-118, DOI 10.3328/IJGE.2011.05.01.113-118.

Book/e-book/book Chapter :

1. **Bhattacharjee, A.** and Krishna A.M. (2013). Strain behaviour of backfill soil of wrap faced reinforced soil walls: A numerical Study. *Advances in Geotechnical Infrastructure*, Leung et. al eds, ISBN: 978-981-07-4948-4 :: doi:10.3850/978-981-07-4948-4_104
2. Ajom, Begum Emte and **Bhattacharjee, A.** (2018). Seismic Re-qualification of Caisson Supported Dhansiri River Bridge, *Tunnelling in Soft Ground, Ground Conditioning and Modification Techniques – Part of Sustainable Civil Infrastructure Springer book series*, pp 187-203, doi.org/10.1007/978-3-319-95783-8_16
3. Krishna, A.M. and **Bhattacharjee A.** (2018). Seismic Analysis of Reinforced Soil Retaining Walls, *Geotechnical Design and Practice, Springer Book Series*, pp. 159-171, doi.org/10.1007/978-981-13-0505-4_14
4. Saikia, S. S. and **Bhattacharjee, A.** (2020). Effect of Offset Distance on Tiered Reinforced Soil Retaining Wall Subjected to Dynamic Excitation, *Innovative Infrastructure Solution Using Geosynthetics, Tatsuoka et al. Eds. Sustainable Civil Infrastructure, Springer*, pp 95-107, doi.org/10.1007/97-3-030-34242-5_9
5. **Bhattacharjee, A.**, Ajom, B.E. and Baruah, P.P. (2021). Stress-Strain Behaviour of Liquefied and Non-liquefied Soil, *T.G.Sitharam et al. (eds.), Soil Dynamics, Lecture Notes in Civil Engineering*, pp.121- , doi.org/10.1007/978-981-33-0041-5_12
6. Kumari, S., Yadav, P.K., **Bhattacharjee, A.** (2021). Parametric Studies on Dynamic Properties of Backfill Material and Numerical Modelling of Reinforced Earth Wall for Outward Flow Condition, *T.G.Sitharam et al. (eds.), Soil Dynamics, Lecture Notes in Civil Engineering*, pp.353- , doi.org/10.1007/978-981-33-0041-5_31.
7. Saikia, S.S. and **Bhattacharjee, A.** (2021). Numerical Modelling of Three-Tiered Reinforced Soil Wall with Different Offset Distances Subjected to Dynamic Excitation, *T.G.Sitharam et al. (eds.), Local Site Effects and Ground Failures, Lecture Notes in Civil Engineering*, pp. 345-353, doi.org/10.1007/978-981-15-9984-2_30.
8. Borthakur, B. and **Bhattacharjee, A.** (2021). Comparison of response of pushover analysis and dynamic analysis of pile foundation. *T.G.Sitharam et al. (eds.), Earthquakes and Structures, Lecture Notes in Civil Engineering* pp. 367-380, doi.org/10.1007/978-981-16-5673-6_30
9. Saikia S.S., **Bhattacharjee A.** (2021) Numerical Model Study of Two-Tiered Reinforced Soil Retaining Wall Subjected to Dynamic Excitation. *Patel S., Solanki C.H., Reddy K.R., Shukla S.K. (eds) Proceedings of the Indian Geotechnical Conference 2019. Lecture Notes in Civil Engineering, vol 138. Springer, Singapore.*
10. Kumari S., **Bhattacharjee A.** (2021) Numerical Simulation of Tiered Reinforced Soil Retaining Wall Subjected to Dynamic Excitations. *In: Latha Gali M., Raghuvveer Rao P. (eds) Geohazards. Lecture Notes in Civil Engineering, vol 86. Springer, Singapore. doi.org/10.1007/978-981-15-6233-4_53*

11. Gogoi, A. and **Bhattacharjee, A.** (2022). Effect of frequency content of earthquake ground motions on dynamic behaviour of tiered geosynthetic reinforced soil walls. *T.G.Sitharam et al. (eds.), Earthquakes Geotechnics, Lecture Notes in Civil Engineering pp 293-306*, doi: 10.1007/978-981-16-5669-9_25
12. **Bhattacharjee, A.** and Borthakur, B. (2022). Influence of Soil Structure Interaction on Yielding of Pile Embedded in Stratified Soil. *T.G.Sitharam et al. (eds.), Theory and Practice in Earthquake Engineering and Technology, Springer Tracts in Civil Engineering*, doi.org/10.1007/978-981-19-2324-1_5.

Conferences

1. Gogoi, A. and **Bhattacharjee, A.** (2020). Comparative analysis of Single and Two-tiered Geosynthetic Reinforced soil walls subjected to dynamic excitation, *Proc. Of IGC 2020, Visakhapatnam*.
2. Borthakur, B. And **Bhattacharjee, A.** (2020). Behavior of Single Pile embedded in Multi-layered soil subjected to Dynamic Excitation, *Proc. Of IGC 2020, Visakhapatnam*.
3. Ajom, B.E. and **Bhattacharjee, A.** (2018). Seismic requalification of caisson supported Dhansiri Rive Bridge, *Geochina2018*, (Paper id SUCI-D-17-00452).
4. Ahmed, S. and **Bhattacharjee, A.** (2017). Seismic ground response analysis and pore pressure evaluation at selected locations of Jorhat city, *Proc. Indian Geotechnical Conference 2017, IIT Guwahati, Guwahati, India, 14-16th Dec. 2017* (Paper Id Th12_073)
5. Ajom, B.E. and **Bhattacharjee, A.** (2017). Advanced Non-linear finite element model for site response analysis of a saturated layered soil profile, *Proc. Indian Geotechnical Conference 2017, IIT Guwahati, Guwahati, India, 14-16th Dec. 2017* (Paper Id Th12_115)
6. Deka, K. and **Bhattacharjee, A.** (2017). Improvement of Brahmaputra silt for embankment construction, *Proc. Indian Geotechnical Conference 2017, IIT Guwahati, Guwahati, India, 14-16th Dec. 2017* (Paper Id Th09_123)
7. Sarkar, N. and **Bhattacharjee, A.** (2017). Parametric studies of soil nailing wall using FLAC 3D, *Proc. Indian Geotechnical Conference 2017, IIT Guwahati, Guwahati, India, 14-16th Dec. 2017* (Paper Id Th03_398)
8. Ajom, B.E and **Bhattacharjee, A.** (2017). Effect of earthquake on bridge foundation, *Proc. 13th International Conference on Vibration Problems, IIT Guwahati, Guwahati, India, 29th Nov.-2nd Dec. 2017* (Paper Id. 311).
9. Sarmah, N. and **Bhattacharjee, A.** (2016). Numerical model of Two Tiered Reinforced Soil Wall, *Proc. Indian Geotechnical Conference 2016, IIT Madras, Chennai, India, 15-17 Dec. 2016* (Paper Id. 204).
10. Doimary, N., **Bhattacharjee, A.** and Goswami, R. (2016). Effect of Rice Husk Ash on Shear Consolidation of lateritic Soil. *Proc. Indian Geotechnical Conference 2016, IIT Madras, Chennai, India, 15-17 Dec. 2016* (Paper Id. 203).
11. **Bhattacharjee, A.** and Borgohain, B. (2015). Improvement of California Bearing Ratio of Lateritic Soil using Rice Husk Ash. *Proc. Indian Geotechnical Conference 2015, Pune, India, 17-19 Dec. 2015* (Paper No. 417).

12. **Bhattacharjee, A.** and Masud, U.A. (2015). Numerical modeling of multi-tiered reinforced soil retaining walls. *Proc. Indian Geotechnical Conference 2015, Pune, India*, 17-19 Dec. 2015 (Paper No. 164).
13. Masud, U.A. and **Bhattacharjee, A.** (2015). Development of reinforced soil wall using finite element programme ANSYS. *Proc. of the 2015 Young Geotechnical Engineers' Symposium on Finite Element Methods*, May 17-18, IIT Bombay, Mumbai.
14. Masud, U.A. and **Bhattacharjee, A.** (2014). Numerical tools for analysis of reinforced soil walls. *Proc. of North East students geo-congress on advances in geotechnical engineering-2014(NES -Geocongress 2014)* 18th October 2014, IIT Guwahati.
15. Krihsna, A.M., **Bhattacharjee, A.**, Bali Reddy, S. (2014). Numerical modeling of geosystems: reinforced soil retaining structures. *Proc. Indian Geotechnical Conference 2014*, Kakinada, India, 18-20 December 2014, pp. 2625-2637.
16. **Bhattacharjee, A.** and Krishna, A.M. (2014). Strain localization in rigid faced walls under seismic excitation. *Proc. Indian Geotechnical Conference 2014*, Kakinada, India, 18-20 December 2014, pp. 445-452.
17. **Bhattacharjee, A.** and Krishna, A.M. (2013). Strain behavior in backfill soil of rigid faced reinforced soil walls under seismic shaking *Proc. Indian Geotechnical Conference 2013*, Roorkee, India, 22-24 December 2013.
18. **Bhattachajee, A.** and Krishna, A.M. (2013). Strain behaviour of backfill soil of wrap faced reinforced soil walls: A numerical study. *Advances in Geotechnical Infrastructure*, Edited by C. F. Leung, S. H. Goh & R. F. Shen, ISBN: 978-981-07-4948-4 :: doi:10.3850/978-981-07-4948-4 104 (accepted)
19. **Bhattacharjee, A.** and Krishna, A.M. (2012). Behaviour of rigid faced reinforced walls with strip reinforcement using 3D models. *Proc. Indian Geotechnical Conference 2012*, Delhi, India, 13-15 December 2012, Vol. 2, pp. 684-687.
20. Prashanth, V., **Bhattacharjee, A.** and Krishna, A.M. (2011). Soil-Geosynthetics Interaction Behaviour in Oblique Direction. *Proc. International Conference on Advances in Geotechnical Engineering*, 7-9 November 2011, Perth, Australia (Accepted).
21. **Bhattacharjee, A.** and Krishna, A.M. (2011). Numerical modelling of wrap faced reinforced soil walls under seismic shaking. *Proc. 14th Asian Regional Conference on Soil Mechanics and Geotechnical Engineering*, 23-27 May, 2011, Hong Kong, China.
22. **Bhattacharjee, A.**, Prashant V. and Krishna, A.M. (2011). Numerical modelling of pull out test for reinforcement in oblique direction. *Proc. of Indian geotechnical Conference*, December 15-17, Kochi (paper No. N-246), Vol.II, pp 891-894.
23. **Bhattacharjee, A.** and Krishna, A.M. (2010). Numerical modeling of rigid faced reinforced soil walls under seismic shaking. *Proc. of Indian Geotechnical Conference 2010*, Geotrendz, IIT Bombay, Dec.16-18, 2010, pp.869-872.
24. **Bhattacharjee, A.** and Krishna, A. M. (2009), "Study of seismically induced permanent displacement of gravity retaining wall", *Proc. of Indian Geotechnical Conference 2009, Geotide*, Guntur, Dec.17-19 2009, pp. 627-631.

25. Mittal, S. and **Bhattacharjee, A.** (2006), “Bearing capacity improvement using micropile” , *Proc. of Indian Geotechnical Conference 2006*, Ahmedabad, December 17-19, 2006, Vol.2.
26. **Bhattacharjee, A.** and Mittal, S. (2008), “Behaviour of eccentrically loaded square footing with micropile”, *Proc. of Indian Geotechnical Conference 2008*, IISC Bangalore, December 17-19, 2008, Vol.2, pp 374-377.

12. **Area of Specialization:** Geotechnical Engineering

13. **Research Interest :** Reinforced soil structure
Soil Dynamics
Dynamic soil-structure interaction
Seismic requalification of geotechnical structures
Numerical modelling
Ground improvement

14. M.Tech Dissertation Supervised

| Sl No. | Name of Student | Dissertation | Year |
|--------|----------------------|---|------|
| 01 | Masud Ul Amin | Numerical modelling of multi-tiered reinforced soil retaining wall | 2015 |
| 02 | Swati Teronpi | Numerical modelling of vertical pile load test | 2015 |
| 03 | Bandana Buragohain | Effect of rice husk ash on lateritic soil properties | 2015 |
| 04 | Poulomy Bhowmick | Seismic ground response analysis of Jorhat city | 2016 |
| 05 | Nayanjyoti Sarma | Numerical modelling of multi-tiered wall using finite element software Ansys | 2016 |
| 06 | Kashmiri Deka | Improvement of Brahmaputra Silt for embankment construction | 2017 |
| 07 | Sarfaraj Ahmed | Seismic ground response analysis and pore pressure evaluation at selected location of Jorhat city | 2017 |
| 08 | Begum Emte Ajom | Seismic requalification of Dhansiri river bridge | 2017 |
| 09 | Seema Kumari | Numerical model study of static and dynamic behaviour of multi-tiered reinforced soil walls | 2018 |
| 10 | Sudipta Sikha Saikia | Dynamic study of reinforced soil retaining wall: A numerical study | 2019 |
| 11 | Anindita Gogoi | Dynamic study of tiered reinforced soil wall: A numerical study | 2020 |
| 12 | Bidisha Borthakur | Pushover analysis of pile foundation in stratified soil | 2020 |
| 13 | Madhusmita Kalita | Pushover analysis of pile group in stratified soil | 2021 |
| 14 | Bristimoie Das | Dynamic study of tiered reinforced soil wall with marginal reinforcement length | 2021 |

15. PhD Thesis Supervised

| Sl No. | Name of Student | Research Topic | Year of registration | Status |
|--------|-------------------|--|----------------------|---------|
| 01 | Anurag Bora | Evaluation of PCU of vehicles in a roundabout under various flow and traffic condition | 2019 | Ongoing |
| 02 | Nabanita Doimary | Behaviour of lateritic soil mixed with rice husk ash and cement kiln dust | 2019 | Ongoing |
| 03 | Anindita Rongpipi | A study on soil reinforced with bamboo fibre | 2020 | Ongoing |
| 04 | Prashanty Bora | Behavior of soil reinforced with randomly spread plastic waste | 2020 | Ongoing |

16. Professional membership

| Sl No. | Details | Organisation | Year |
|--------|---|---|--------------------|
| 01 | Life member of Indian Society of Earthquake Technology (membership No. LM 1826) | Indian Society of Earthquake Technology | From 2021 |
| 02 | Life member of Indian Geotechnical Society (membership no. LM 2419) | Indian Geotechnical Society | From 2006 |
| 03 | Life member of Indian Road Congress (membership no. e_LM 100104) | Indian Road Congress | From December 2015 |

17. Details of participation in Faculty Development program/STTPs/Training activities

| Sl No. | Details of FDP/STTPs/Training activities attended | Organisation | No of days | Year |
|--------|--|----------------|------------|------|
| 01 | Participated in UKERI Workshop on "Seismic Requalification of Pile Supported Structures" | IIT Guwahati | 03 | 2015 |
| 02 | STTP on "Disaster Management" | JEC | 05 | 2015 |
| 03 | STTP on "Recent Advances in Civil Engineering" | JEC | 05 | 2018 |
| 04 | Induction Training | NITTR, Kolkata | 11 | 2018 |
| 05 | Faculty Development Programme | IITM | 05 | 2018 |
| 06 | Workshop on "Outcome Based Education" | JEC | 02 | 2018 |
| | | | | |

18. List of short term courses organised/Conferences arranged/Course modules developed

| Sl No. | Details of STTP/conferences organised | Venue | Date |
|--------|---|----------------------------|---|
| 01 | Joint Secretary, Indian Geotechnical Conference, 2017 | IIT Guwahati | 14-16 th Dec. 2017 |
| 02 | Coordinator, STTP on Recent Advances in Civil Engineering, Jorhat Engineering College | Jorhat Engineering College | 27 th – 31 st October 2018 |
| 03 | Jt. Secretary, International Conference on Infrastructure Development (ICID), 2018 | Jorhat Engineering College | 22 nd – 23 rd December 2018 |
| 04 | Coordinator, FDP (online) on Recent Development in Civil Engineering. | Jorhat Engineering College | 13 th – 17 th July, 2020 |

19. Chair in Conference/ Invited Lecture/ Key note speaker:

- a. Session chair in IGC 2017 for subtheme “Ground Improvement”
- b. Delivered Expert Talk in two days workshop on “Advances in Civil Engineering (ACE 2018)” at Kaziranga University
- c. Delivered invited talk in National workshop on “Importance of Accreditation for Technical Education and Development of SAR” organized Assam Science & Technology University (ASTU)

20. Details of R&D Projects

| Sl No. | Details | Organisation | Year | Status | Amount |
|--------|--|--------------|------|-----------|---------------|
| 01 | Use of bamboo as Soil Reinforcement | AICTE-TEQIP | 2019 | Completed | Rs.3.00 Lakhs |
| 02 | Seismic Requalification of bridge constructed over river Buridihing & Dikhow | AICTE-TEQIP | 2019 | Completed | Rs.3.00 Lakhs |

21. Details of Major Consultancy Projects involved

| Sl No. | Details | Organisation | Year | Amount |
|--------|---|--------------------------|--------------|--------------------------------------|
| 01 | Member of State Technical Agency (Assam, Arunachal Pradesh, Nagaland) PMGSY | NRRDA | 2016 onwards | Depending on amount of DPR evaluated |
| 02 | Member of TPQAC of Neer Nirmal Pariyojona (Rural Water Supply | World Bank & PHED, Assam | 2017-2019 | Rs. 98,00,000.00 |

| | | | | |
|----|--|------|--------------|--------------------------------------|
| | Scheme), Jorhat (World Bank Project) | | | |
| 03 | Coordinator, Principal Technical Agency (PTA), Mukhya Mantri Paki Path , Assam | APWD | 2022 onwards | Depending on amount of DPR evaluated |

22. Other information:

| Sl No. | Details | Organisation | Year |
|--------|--|---------------------------------------|------------------|
| 03 | Reviewer of book “Surveying Vol I & II” by S.K.Duggal | Tata McGraw Hill | 2012 |
| 04 | Reviewer of International Journal of Geomechanics, ASCE | ASCE | 2017, 2021, 2022 |
| 05 | Reviewer of subtheme of IGC 2017 | IGC 2017 | 2017 |
| 06 | Reviewer of subtheme of IGC 2020 | IGC 2020 | 2020 |
| 07 | Member BOS for B.Tech & M.Tech Course in Civil Engineering | Assam Science & Technology University | 2017 |
| 08 | Registered PhD guide | Dibrugarh University | From 2016 |
| 09 | Registered PhD guide | Assam Science & Technology University | From 2018 |