
Dr. Jumrik Taipodia

Assistant Professor

Department of Civil Engineering

Ph. D. (Geotechnical Engineering), IIT Guwahati

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**A. EDUCATION**

2009 - **B.Tech.** Civil Engineering, North Eastern Regional institute of science and Technology (NERIST), Nirjuli, India

2011 **M. Tech.** Geotechnical Engineering, National Institute of Technology, Silchar, (NITs) India

2018 **Ph. D.** Geotechnical Engineering, Indian Institute of Technology, Guwahati (IITG), India

B. DESSERTATION

Ph. D. Thesis: Subsurface investigation using active MASW Survey

M. Tech. Project: Effect of Nanoparticles in behaviour of cohesion less soil

B. Tech. Project: 1. Rainwater harvesting in NERIST Campus
2. Design of NH-52A pavement using fibre reinforced soil

C. TEACHING (Dec 2013 till date)

Courses handled at undergraduate level: Geotechnical Engineering-I, Geotechnical Engineering-II, Engineering Geology, Foundation Engineering, Slope stability Analysis, Surveying

Courses handled at postgraduate level: Advanced soil mechanics, Subsurface investigations, Ground improvement technique etc.

D. Research Guidance

B. tech

1. Deepak Kumar Gond (2017)-Design of flexible pavement reinforced with Jute geotextile
2. Deependra Choudhury (2017)- Design of flexible pavement reinforced with Jute geotextile
3. Ashish Kumar (2017)- Study of soil stabilization using waste plastics
4. Sri Om (2017)- Study of soil stabilization using waste plastics

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5. Nang Narika Namchoom (2017) - Study of soil stabilization using waste plastics
 6. Biswajit Das (2018) - Use of reclaimed asphalt pavement (rap) aggregates as construction material in pavement
 7. Dawa Dolma Sherpa (2018)- Use of reclaimed asphalt pavement (rap) aggregates as construction material in pavement
 8. Keny Wangmu Karma(2018)- Use of reclaimed asphalt pavement (rap) aggregates as construction material in pavement
 9. Arvind Kumar Meena(2018)- Use of reclaimed asphalt pavement (rap) aggregates as construction material in pavement
 10. Jairam Kumar (2018)- Effect of salt on swelling, hydraulic conductivity and consolidation behaviour of bentonite
 11. Techi Tade Tara(2018)- Effect of salt on swelling, hydraulic conductivity and consolidation behaviour of bentonite
 12. Suraj Jaiswal (2018)- Effect of salt on swelling, hydraulic conductivity and consolidation behaviour of bentonite
 13. Mibom Yirang(2018)- Effect of salt on swelling, hydraulic conductivity and consolidation behaviour of bentonite
 14. Rajnish (2018)- Effect of salt on swelling, hydraulic conductivity and consolidation behaviour of bentonite
 15. Miding Libang (2019)- Site investigation report of W.R.D campus (yupia)
 16. Arun Biswas (2019)- Site investigation report of W.R.D campus (yupia)
 17. Ganesh Mallah(2019)- Site investigation report of W.R.D campus (yupia)
 18. Vibhuti Kumar (2019)- Site investigation report of W.R.D campus (yupia)
 19. Mido Gannoh (2019)- Study of Cement-Bentonite Slurry as Engineering Material
 20. Limi Kamki (2019)- Study of Cement-Bentonite Slurry as Engineering Material
 21. Hage Sunya (2019)- Study of Cement-Bentonite Slurry as Engineering Material
 22. Khyoda Mamu (2019)- Study of Cement-Bentonite Slurry as Engineering Material

PhD

1. Phurba Dorjee Philley (2019-till date)-Site Investigation Using MASW Survey (tentative)
 2. Tassar Pana (2020-till date)- Subsurface Characterization of Landslide prone zone of Itanagar
 3. Aditya Anshu (2020-till date)-Seismic Microzonation (tentative)
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D. PUBLICATIONS

Book sections:

Taipodia, J. and Dey, A. (2018) Impact of strike energy on the resolution of dispersion images in active MASW survey in Multi-physics Processes in Soil Mechanics and Advances in Geotechnical Testing , Proceedings of the Geo Sanghai 2018, Sanghai, China, Ed.L.Hu.X.Gu.J. Tao and A. Zhao, Springer, Singapore,pp.419-427: ISBN No. 978-981-13-0094-3

Peer reviewed international journals:

1. **Taipodia, J.**, Madhulatha, B., Dey, A., Acharyya, R. and Sarma, C. P. (2020) “1-D and 2-D active MASW survey for subsurface profiling of Jia Bharali river bed, Assam, India, for a proposed 1.2 km road bridge” Practice Periodical in Structural Design and Construction (ASCE), Vol. 25, Iss. 3, pp. 05020008-1-15 (DOI: 10.1061/(ASCE)SC.1943-5576.0000495)
2. **Taipodia, J.**, Dey, A., Gaj, S. and Baglari, D. (2020) “Quantification of the resolution of dispersion image in active MASW survey and automated extraction of dispersion curve” *Computers and Geosciences (Elsevier)* Vol. 135,pp. 1-19
Doi: <https://doi.org/10.1016/j.cageo.2019.104360>
3. **Taipodia, J.**, Baglari, D. and Dey, A.(2018) “Effect of source characteristics on the resolution of dispersion image from active MASW survey” **Indian Geotechnical Journal** (DOI: 1007/s40098-018-0335-1)
4. Baglari, D., Dey, A.and **Taipodia, J.** (2018) “A state-of-the-art on passive MASW survey for subsurface profiling” Innovative Infrastructure Solutions, Vol. 3, Paper No. 66, pp. 1-13. (DOI: 1007/s41062-018-0171-2)
5. **Taipodia, J.**, Dey, A.and Baglari, D. (2018) “Influence of signal preprocessing parameters on the resolution of dispersion image in active MASW survey” Journal of Geophysics and Engineering, Vol. 15, No. 4, pp. 1310-1326. (DOI: 1088/1742-2140/aaaf4c)

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6. **Taipodia, J.**, Baglari, D. and Dey, A.(2018) “Recommendations for generating dispersion images of optimal resolution from Active MASW survey” Innovative Infrastructure Solutions, Vol. 3, Article 14, pp. 1-19. (DOI:1007/s41062-017-0120-5)
 7. **Taipodia, J.**, Baglari, D. and Dey, A.(2017) “Resolution of dispersion image obtained from active MASW survey” Disaster Advances, Vol. 10, Iss. 11, pp. 34-45.
 8. **Taipodia, J.**, Prakash Babu, K., Kiran, B. and Dey, A.(2014) “Subsurface Characterization using MASW: Preliminary Experimentation and Analysis” International Journal of Innovative Research in Science, Engineering and Technology (IJIRSET), Special Issue on National Conference on Recent Advances in Civil Engineering: NCRACE-2013, Vol. 3, Spl. Iss. 4, pp. 129-138.

International Conference proceedings: published

9. **Taipodia, J.** and Dey, A.(2017) “Impact of data preprocessing parameters on the accuracy of the inverted Vs profile in MASW” International Conference on Advances in Concrete, Structural & Geotechnical Engineering (ACSGE – 2018), BITS Pilani, India, pp. 1-6.
10. Baglari, D., **Taipodia, J.** and Dey, A.(2017) “Critical analysis of traffic origin wavefields for optimum utilization in passive roadside MASW survey” International Conference on Advances in Concrete, Structural & Geotechnical Engineering (ACSGE – 2018), BITS Pilani, India, pp. 1-6.
11. **Taipodia, J.** and Dey, A.(2017) “Impact of frequency filtering and temporal muting on the resolution of dispersion image” 13th International Conference on Vibration Problems (13ICOVP), Guwahati, India, pp. 1-11.

National Conference Proceedings: Published

12. **Taipodia, J.**, Madhulatha, B. and Dey, A.(2018) “Influence of stacking on the resolution of the dispersion image in Active MASW survey” Indian Geotechnical Conference (IGC-2018), Bangalore, India, pp. 1-8.
13. **Taipodia, J.** and Dey, A.(2017) “Impact of offset on the resolution of dispersion image in active MASW survey” Geotechnics for Natural and Engineered Sustainable Technologies: Indian Geotechnical Conference (GeoNEst: IGC-2017), Guwahati, India, pp. 1-4.
14. Baglari, D., Biswas, S., **Taipodia, J.** and Dey, A.(2015) “Aspects of dispersion imaging scheme of passive MASW survey for subsurface characterization” Indian Geotechnical Conference: IGC 2015, Pune, India, pp. 1-8.
15. **Taipodia, J.**, Baglari, D., Biswas, S. and Dey, A.(2015) “Dispersion analysis using active MASW survey data” Indian Geotechnical Conference: IGC 2015, Pune, India, pp. 1-9
16. **Taipodia, J.**, Bishnoi, B. R., Baglari, D., Murali Krishna, A. and Dey, A.(2014)“Geophysical investigations for identification of subsurface stratigraphy at IIT Guwahati” Indian Geotechnical Conference (IGC-2014), Kakinada, India, pp. 219-226.
17. **Taipodia, J.**, Prakash Babu, K., Kiran, B. and Dey, A.(2013) “Subsurface Characterization using MASW: Preliminary Experimentation and Analysis” National Conference on Recent Advances in Civil Engineering: NCRACE-2013, NERIST, Nirjuli, India, pp. 1-7.
18. **Taipodia, J.**, Dutta, J. and Dey, A. K (2011). Effect of Nano particles on properties of soil. Proc. of Indian Geotechnical Conference, Vol I, Kochi, Kerala, 15-17 December, pp 105 – 108.

E. DETAILS OF SPONSORED RESEARCH PROJECT

Ongoing Projects:

1. Subsurface profiling using MASW survey at landslide prone area of Itanagar, Arunachal Pradesh, SERB, Department of Science & Technology, Rs. 49.07 Lakhs (March 2019 – March 2022), Principal Investigator
2. Mapping of Landslide prone zone in Itanagar, TEQIP-III Rs 2 lakhs

F. CONSULTANCY

1. Laboratory test of aggregates-M/s Y2 Enterprise-Rs 0.68 Lakh