

CURRICULUM-VITAE

Babloo Chaudhary

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PERSONAL DETAILS

Date of Birth: 05th January

Nationality: Indian

Languages Known: English, Hindi, and Maithili

EDUCATIONAL QUALIFICATION

PhD. 2013-2016	Kyushu University, Fukuoka, Japan Geotechnical Engineering (Civil Engineering) (Full time Japanese Govt MEXT Scholarship)
M. Tech 2008 - 2010	Indian Institute of Technology Guwahati, India Geotechnical Engineering (Civil Engineering) (Full time Indian Government Scholarship)
B.Sc (Engg) 2004 – 2008	MIT Muzaffarpur (Govt. Engineering College) Civil Engineering

PROFESSIONAL EXPERIENCE

Assistant Professor (July 2018 - Till date)	Department of Civil Engineering National Institute of Technology Karnataka (NITK), Surathkal, India
Postdoctoral Fellow (Oct. 2016 - July 2018)	Division of Environmental Science and Technology Kyoto University, Japan (QS world rank 13 in Civil & Structural Engineering)
Pre PhD 2010-2013	Industry Experience

PUBLICATIONS (BRIEF)

- 1) Patents = 05 (Published)
- 2) Book (Edited)=06 (Springer)
- 3) Journal papers = 35 (SCI-27, Scopus-08)
- 4) Technical report =01 (GEER, USA)
- 5) Book chapters = 34 (Scopus)
- 6) International conference paper= 19
- 7) National conference papers= 16
- 8) Keynote lectures delivered =09
- 9) PhD guidance=05 (02-completed, 03- ongoing)
- 10) MTech guidance =25 (22-completed, 03-ongoing)
- 11) Internation Conference & workshop organized=06

ACADEMIC PROJECTS

❑ Postdoctoral Research

Topic: Stability Analyses of River Embankments

Host Professor: Prof. Akira Murakami, Vice President, Kyoto University, Japan

❑ PhD. Thesis

Topic: Modeling the Resiliency of Breakwater Foundation against Earthquake and Tsunami

Supervisor: Prof. Hemanta Hazarika, Kyushu University, Japan

❑ M. Tech Project

Topic: Seismic Earth Pressures on Reinforced Soil Retaining Structure

Supervisor: Prof. A. Murali Krishna, IIT Tirupati, India (at that time at IIT Guwahati)

RESEARCH INTERESTS

Main Specialization: PhD in Geotechnical Engineering

- 1) Geo-disaster Prevention and Mitigation (Earthquake, Flood and Tsunami)
- 2) Offshore and Coastal Geotechnics
- 3) Offshore Renewable Energy
- 4) Computational Geomechanics
- 5) Geotechnical Earthquake Engineering
- 6) Experimental Geotechnics (1g Model Test and Centrifuge Model Test)
- 7) Ground Improvement (Geo-synthetic, Tire Chips, Slag, etc.)
- 8) Geotechnics for Climate Change Adaption and Resilience
- 9) Geo-sustainable development
- 10) Resilient Foundation (Offshore and Onshore Structures)
- 11) Liquefaction Induced by Earthquake and Tsunami
- 12) Soil-Reinforcement-Fluid-Structure Interaction

R&D SPONSORED PROJECTS

SN	Name of the project	Role	Sponsor Agency	Duration	Project Grant
1	Earthquake Resilient Novel Reinforced Foundation Techniques for XL Offshore Wind Turbines: Experimental and Numerical Investigations	PI	Anusandhan National Research Foundation (ANRF)	2026-29	91 Lakhs
2	Design, Analysis and Development of Hybrid Floating Silt Reduction Structure for Harbour, Navigation Channels and Basins.	Co-PI	Ministry of Ports, Shipping and Waterways	2026-29	78 Lakhs
3	Investigation, Evaluation and Diagnosis on Irrigation System in India	Project Collaborator	JSPS, Japan	2016-19	2.0 Crores
4	Development of Countermeasures to Mitigate Earthquake-induced Damage of RM Breakwater	PI	SERB (DST)	2020-22	31.3 Lakhs

5	New resilient breakwater of safety of Port and Harbour against Tsunami	PI	Ministry of Ports, Shipping & Waterways, India	2022-25	45 Lakhs
6	Sea Water Intake Systems of Nuclear Power Plants: Vulnerability Assessment and Countermeasures Development for Tsunami	PI	Department of Atomic Energy, Govt. of India	Under review	65 Lakhs

MAJOR CONSULTANCY WORKS (MORE THAN 5 LAKHS)

- ❖ Audit of Structural Stability of Airport Building at Mangalore Domestic & International Airport, Karnataka, 2024 (Amount- **7.5 Lakhs**, Role-CoPI)
- ❖ Audit of Structural Stability of Airport Building at Thiruvananthapuram Domestic & International Airport, Kerala, 2024 (Amount-**13.0 Lakhs**, Role-CoPI)
- ❖ Audit of Structural Stability of Airport Building at Shivamogga Airport, 2024 (Amount-**7.0 Lakhs**, Role-CoPI)
- ❖ Third party inspection of the various civil works (5 works) of New Mangalore port Authority 2026 (Amount-**51.5 Lakhs**)

ORGANIZED INTERNATIONAL CONFERENCE/WORKSHOP

Role	Conference/Workshop
Secretary	ISSMGE AsRTC1 International Workshop 2025 on Geotechnical Mitigation and Adaptation to Climate Change-induced Geo-disasters in Asia-Pacific Regions, May 30, 2025, Tokyo, Japan
Coordinator	One-day Workshop, B.Tech Civil Engineering Academic Curriculum Revision Workshop, 23rd May, 2025, NITK Surathkal, India
Secretary General	International Conference on Geo-Disaster and Construction Engineering (ICGCE2024), University of Waterloo, Ontario, Canada , 07- 08 June, 2024
Secretary General (TC)	2 nd International Conference on Construction Resources for Environmentally Sustainable Technologies (CREST 2023), Fukuoka, Japan , 20-22 Nov. 2023
Secretary	1 st International Symposium on Construction Resources for Environmentally Sustainable Technologies (CREST 2020), Fukuoka, Japan , 9-11 March, 2021.
Organizer	Nine days, Indo-Canadian Workshop on “Interactive Design in Geotechnical Engineering: Theory to Practice” (Online), 24 Sept -1 Oct, 2020 (2672 attendees from 47 countries)
Organizer	One week, 1st Indo-Japan Webinar Series on “Geotechnics for Disaster Mitigation”, 8-13 June, 2020 (1024 attendees from 36 countries)
Secretary	International Workshop on Geotechnical Natural Hazards, The Sixth Japan-Taiwan Joint Workshop on Geotechnical Hazards from Large Earthquakes and Heavy Rainfalls, 12-15 July, 2014, Kitakyushu, Japan
Org Comm Member	International Workshop on the 2016 Kumamoto Earthquake-Japan-US Joint Workshop, 6 March, 2017, Fukuoka, Japan

DEVELOPMENT OF NEW LABORATORY AT NITK SURATHKAL

1) **Geo-disaster Prevention Research Lab**

Tsunami overflow flume, Landslide testing apparatus, Data Acquisition system, earth pressure cells, laser displacement transducers, pore water pressure transducers, strain gauges, geophones, loading cells, etc.

2) **Geotechnical Earthquake Engineering Lab**

Shake Table, Physical model testing facilities, dynamic loading actuator, FLAC 3D, Data Acquisition system, dynamic analyzer, accelerometers, pore water pressure transducers, displacement transducers, strain gauges, earth pressure cells, etc.

3) **Coastal Geotechnic and Renewable Energy Lab:**

Testing facilities for offshore wind turbine foundation (small scale model test), testing apparatus, dynamic loading actuator, load cell, strain gauge, displacement transducers, high computing system, geotechnical software, accelerometers, pore water pressure transducers.

EXPERTIZE/EXPOSURE

Geotechnical Software:

FLAC, PLAXIS, MATLAB and Mathematica

Physical Model Test:

1g Model Test
Centrifuge Model Test

Field Tests:

In-situ Field Tests (MASW, SWS and Soil Sampling), Geotech Investigation

Site Investigation:

Site Investigation & Reconnaissance for Earthquake, Flood and Tsunami Affected Areas

AWARD & RECOGNITION

- ❖ **Best Paper Award-2017-Shri M.S. Jain Biennial Award-2017** for Innovation in Piling and Other Foundation Construction (*this award has been given by **Indian Geotechnical Society** during Indian Geotechnical Conference-2017 on 14th Dec 2017 at IIT Guwahati*)
- ❖ **Best Reviewer Certificate** by the International Conference on Civil Engineering Trends and Challenges for Sustainability (CTCS-2020), organized by NITTE, Karnataka
- ❖ During my postdoc tenure at Kyoto University Japan, I got offers for one faculty position and seven (7) postdoc offers from high world rank universities (e.g. ETH Zurich, Switzerland).

SCHOLARSHIP & ACADEMIC DISTINCTION

- ❖ **Postdoctoral fellowship** (2016-2018) given by Kyoto University, Japan (supported by JSPS)
- ❖ Full time prestigious **Japanese Government Scholarship (MEXT)** for pursuing PhD at Kyushu University, Japan (2013-2016).
- ❖ Full time **Indian Government Scholarship (UGC)** for M. Tech at Indian Institute of Technology Guwahati, Guwahati (2008- 2010).
- ❖ Qualified Graduate Aptitude Test (**GATE**) in Engineering in 2007 (in the time of 3rd year of B. Tech course)
- ❖ In PhD, Grade-A/A
- ❖ Distinction in UG

- ❖ **Throughout 1st division** from primary education to **PhD**.

JOURNAL EDITORIAL SHIP

- ❖ Editor, Scientific Reports, Springer Nature (Q1, IF=3.8)
- ❖ Guest Editor, Indian Geotechnical Journal, Springer Nature (Q2, I.F 1.4/2023).
- ❖ Guest Editor, Smart Construction and Sustainable Cities, Springer Nature

ISSMGE COMMITTEE

- ❖ Secretary, **ISSMGE**, Asian Regional Technical Committees (**AsRTC1**) on Geotechnical Mitigation and Adaptation to Climate Change-induced Geo-disasters in Asia-Pacific Regions.

PATENTS

1. Chaudhary, B. and Sajan, M. K. (2024) Method for developing tsunami-resilient rubble mound breakwaters with geosynthetics. *Intellectual Property India*. June 2024. Patent No. 586336 (**Granted**).
2. Chaudhary, B., Sajan, M. K. (2026) Geogrid reinforced rubble mound breakwater to mitigate tsunami induced damages and method thereof. *Intellectual Property India*. August 2024. (Patent No. 587828 (**Granted**).
3. Chaudhary, B., Sajan, M. K. (2026) Jute Geomat for River and Canal Embankment. *Intellectual Property India*. August 2024. (Design Patent Application No.: 448670-001 (**Granted**).
4. Chaudhary, B. and Akarsh, P.K. (2024) Novel Technique for Seismic Resilience Enhancement of Rubble Mound Breakwater through Reinforcing Element Integration. *Intellectual Property India*. July 2024. Application No: 202441036273 (**Published**).
5. Chaudhary, B., Sajan, M. K. (2024) Gabion reinforced rubble mound breakwater for tsunami mitigation and method thereof. *Intellectual Property India*. August 2024. (Patent Application No.: 202441058464 (**Published**).
6. Chaudhary, B. and Akarsh, P.K. (2025). Double-Wrapped Face Geogrid Reinforced Rubble Mound Breakwater to Mitigate Earthquake-Induced Damage and Method Thereof. *Intellectual Property India*. Feb 2025. (Application No: 202541014693) (**Published**).

PUBLICATIONS

❑ **BOOK (EDITED)-[06]**

1. Hazarika, H., Stuart Haigh, K., **Chaudhary, B.** and Murai, M., (2025) *Multidisciplinary Approach for Disaster Resilience and Sustainable Technologies* (Eds). Springer LNCE, Vol. 642 (ISBN 978-981-96-8618-6), pp 1-228, <https://link.springer.com/book/10.1007/978-981-99-9219-5>.
2. Hazarika, H., Stuart Haigh, K., **Chaudhary, B.**, Murai, M., and Manandhar, S (2024) *Geo-Sustainnovation for Resilient Society* (Eds). Published by Springer Singapore (ISBN 978-981-99-9218-8), pp 1-403, <https://link.springer.com/book/10.1007/978-981-99-9219-5>.
3. Hazarika, H., Stuart Haigh, K., **Chaudhary, B.**, Murai, M., and Manandhar, S (2024) *Climate Change Adaptation from Geotechnical Perspectives* (Eds). Published by Springer Singapore (ISBN: 978-981-99-9214-0), pp 1-437, <https://link.springer.com/book/10.1007/978-981-99-9215-7>.

4. Hazarika, H., Stuart Haigh, K., **Chaudhary, B.**, Murai, M., and Manandhar, S (2024) *Natural Geo-Disasters and Resiliency* (Eds). Published by Springer Singapore (ISBN: 978-981-99-9222-5), pp 1-448, <https://link.springer.com/book/10.1007/978-981-99-9223-2>
5. Hazarika, H., Stuart Haigh, K., **Chaudhary, B.**, Murai, M., and Manandhar, S (2024) *Sustainable Construction Resources in Geotechnical Engineering* (Eds). Published by Springer Singapore (ISBN: 978-981-99-9226-3), pp 1-468, <https://doi.org/10.1007/978-981-99-9227-0>
6. Hazarika, H., Stuart Haigh, K., Kanaya, H., **Chaudhary, B.**, Kochi, Y., Murai, M., Wahyudi, S. and Fujishiro T. (2022) *Sustainable Geo-Technologies for Climate Change Adaptation* (Eds). Published by Springer Singapore (ISBN: 978-981-19-4074-3), pp 1-255, <https://link.springer.com/book/10.1007/978-981-19-4074-3>.

❑ **TECHNICAL REPORT** (GEER Report, USA) [01]

1. Kayen, R., Dashti, S., Kokusho, T., Hazarika, H., Franke, K., Oettle, N., Wham, B., Calderon, J.R., Briggs, D., Guillies, S., Cheng, K., Tanoue, Y., Takematsu, K., Matsumoto, D., Morinaga, T., Furuichi, H., Kitano, Y., Tajiri, M., **Chaudhary, B.**, Nishimura, K., and Chu, C. (2016): Geotechnical aspects of the 2016 MW6.2, MW 6.0, and MW 7.0 Kumamoto Earthquakes. *University of California, Berkeley, GEER Report (GEER 048)*, pp. 1-201 (DOI: 10.18118/G6JS3M).

❑ **JOURNALS (TOTAL – 35: SCI-26 (Q1-18, Q2-9); SCOPUS-08)**

1. Akarsh, P. K., Sah, B., **Chaudhary, B.**, Sajan, M. K., and Kumar, S. (2026) Dynamic responses of rubble mound breakwaters reinforced with geogrid-wrapped slopes and sheet piles under sequential earthquake loading. *Ocean Engineering*, 367, 128179 (**Q1, Impact Factor 6.3**) <https://doi.org/10.1016/j.oceaneng.2026.128179>
2. Kumar, S., Sah, B., **Chaudhary, B.**, Akarsh, P. K. and Sajan, M. K. (2026) Experimental and computational analysis of hybrid suction caisson foundation for next-generation offshore wind turbines. *Marine Georesources & Geotechnology*, pg 1-14 (**Q2, Impact Factor 2.2/2025**). <https://doi.org/10.1080/1064119X.2025.2612335>
3. Sajan, M. K., Hema Gurappa, & **Chaudhary, B** (2026) Seismic Response Analysis of Stabilising Piles for Mitigation of Landslides. *Indian Geotechnical Journal* (accepted). (**Q2, Impact Factor 1.4/2025**).
4. Sajan, M. K., Sah, B, Kumar, S. & **Chaudhary, B** (2025) Comprehensive Analysis of Gabion Configurations for Modelling Tsunami-Resilient Rubble Mound Breakwaters. *Indian Geotechnical Journal*, pg 1-19. <https://doi.org/10.1007/s40098-025-01424-y> (**Q2, Impact Factor 1.4/2025**).
5. Kumar, S., Sah, B. & **Chaudhary, B** (2025) Response of Suction Caisson Foundations for Offshore Wind Turbines Subjected to Earthquake Loading: Numerical Simulations. *Indian Geotechnical Journal*, pg 1-26, <https://doi.org/10.1007/s40098-025-01404-2>(**Q2, Impact Factor 1.4/2025**).
6. Sajan, M. K., Sah, B, **Chaudhary, B.**, and Akarsh, P. K. (2025) Performance Assessment of Geosynthetic Reinforced Quay Walls Under Concurrent Tsunami and Earthquake Aftershocks. *ASCE Natural Hazards Review*, 26(4), 04025053 <https://doi.org/10.1061/NHREFO.NHENG-2309> (**Q1, Impact Factor 2.2/2025**).

7. Sajan, M. K., **Chaudhary, B.**, Akarsh, P. K., and Sah, B (2025). Investigations on the development of hybrid mound breakwaters for tsunami defense. *Applied Ocean Research*. 156, 104489 <https://doi.org/10.1016/j.apor.2025.104489> (Q1, Impact Factor 4.4/2025).
8. Akarsh, P. K., **Chaudhary, B.**, Sajan, M. K., and Kumar, S. (2024). Novel technique to mitigate the earthquake-induced damage of rubble mound breakwater. *Geotextiles and Geomembranes*. 52(3), 260-285 <https://doi.org/10.1016/j.geotexmem.2023.11.001> (Q1, Impact Factor 6.2/2025).
9. Akarsh, P. K., **Chaudhary, B.**, Sajan, M. K., and Kumar, S. (2024). Seismic stability evaluation of rubble mound breakwater: Shake table tests and numerical analyses. *Soil Dynamics and Earthquake Engineering*. 178, 1-22 <https://doi.org/10.1016/j.soildyn.2024.108466> (Q1, Impact Factor 4.6/2025)
10. Sajan, M. K., **Chaudhary, B.**, Akarsh, P. K., and Sah, B. (2024). Developing tsunami resilient rubble mound breakwater: Novel gabion-based technique. *ASCE Natural Hazards Review* 26(1), 04024049. <https://doi.org/10.1061/NHREFO.NHENG-2183> (Q1, Impact Factor 2.2/2025).
11. Nagaraju, T. V., Sunil, B. M., Chaudhary, B., Ravindran G., Chitturi, P. & Chinta, DP (2024). Novel assessment tools for inland aquaculture in the western Godavari delta region of Andhra Pradesh. *Environmental Science and Pollution Research*, 31, 36275-36290, <https://doi.org/10.1007/s11356-023-30206-3> (Q1, Impact Factor 7.7/2025)
12. Nagaraju, T. V., Sunil, B. M., Chaudhary, B., Gobinath, R. & Bala G.S. (2024). Exploring the impact of aquaculture sludge on the swell-shrink behavior of expansive clays. *Case Studies in Chemical and Environmental Engineering*, 10, 1-10, <https://doi.org/10.1016/j.cscee.2024.100897>. (Q1/2025)
13. Rambabu, N, Srineash, VK, Sajan, MK, Chaudhary, B and Singh, DN (2024) Reef Breakwaters for Coastal Protection: A State-of-the-Art Review. *Journal of Marine Environmental Engineering* 11(3), 193-225, DOI: 10.32908/JMEE.v11.2024022701(Q2/2025)
14. Sajan, MK, **Chaudhary, B.**, Akarsh PK and Kumar, S (2024) Geosynthetic Reinforced Rubble Mound Breakwater for Mitigation of Tsunami-Induced Damage. *Geotextiles and Geomembranes* 52(1), 72–94. <https://doi.org/10.1016/j.geotexmem.2023.09.003> (Q1, Impact Factor 6.2/2025).
15. Sajan, MK, **Chaudhary, B.**, Akarsh PK, Kumar, S and Sah, B (2024) Novel Techniques for Reinforcing Rubble Mound Breakwater against Tsunami. *ASCE Journal of Geotech. and Geoenvironmental Eng* 150(3), <https://doi.org/10.1061/JGGEFK.GTENG-11773> (Q1, Impact Factor 4.4/2025).
16. Nagaraju, TV, Sunil BM, **Chaudhary, B.**, Prasad, CD, & Gobinath, R (2023) Prediction of ammonia contaminants in the aquaculture ponds using soft computing coupled with wavelet analysis. *Environmental Pollution*, 331(2), 121924, <https://doi.org/10.1016/j.envpol.2023.121924> (Q1, Impact Factor 10.0/2022)
17. Sajan, M. K., **Chaudhary, B.**, Akarsh, P K., and Kumar, S. (2023). Investigating the impact of tsunami waves on gabion material-reinforced coastal structures: A numerical analysis. *Materials Today: Proceedings*. Elsevier. <https://doi.org/10.1016/j.matpr.2023.09.033>
18. Nagaraju, TV, Sunil BM, **Chaudhary, B.**, Ravindran, G (2022) Assessment of Environmental Impact of Aquaculture Ponds in the Western Delta Region of Andhra Pradesh.

- Sustainability*, 14(20), 13035. pp 1-19 (<https://doi.org/10.3390/su142013035>) (*Q1, Impact Factor 3.3/2022*)
19. **Chaudhary, B.**, Hazarika, H. Murakami, A. and Fujisawa, K. (2019) Development of resilient breakwater against earthquake and tsunami. *ASCE International Journal of Geomechanics*, 19 (1); 04018188-1 to 17 (DOI: 10.1061/(ASCE)GM.1943-5622.0001314) (*Q1, Impact Factor 3.3/2025*)
 20. **Chaudhary, B.**, Hazarika, H. Murakami, A. and Fujisawa, K. (2018) Geosynthetic-Sheet Pile Reinforced Foundation for Mitigation of Earthquake and Tsunami Induced Damage of Breakwater. *Geotextiles and Geomembranes* 46; 597-610. Elsevier (DOI: 10.1016/j.geotexmem.2018.04.011) (*Q1, Impact Factor 6.2/2025*)
 21. **Chaudhary, B.**, Hazarika, H. Murakami, A. and Fujisawa, K. (2018) Countermeasures for Enhancing the Stability of Composite Breakwater under Earthquake and Subsequent Tsunami. *Acta Geotechnica* 13(4); 997-1017, Springer (DOI: 10.1007/s11440-017-0615-4) (*Q1, Impact Factor 5.7/2025*)
 22. **Chaudhary, B.** and Hazarika, H. (2018) Centrifuge Modelling for Stability Evaluation of a Breakwater Foundation Subjected to an Earthquake and a Tsunami. *Ocean Engineering* 148; 169-181, Elsevier (DOI: 10.1016/j.oceaneng.2017.11.005) (*Q1, Impact Factor 5.5/2025*)
 23. **Chaudhary, B.**, Hazarika, H. Murakami, A. and Fujisawa, K. (2018) Mitigation of Earthquake Induced Damage of Breakwater by Geogrid Reinforced Foundation. *Marine Georesources & Geotechnology* 36 (7); 827-840, Taylor & Francis (DOI: 10.1080/1064119X.2017.1391902) (*Q2, Impact Factor 2.0/2025*).
 24. Pasha, SMK., Hazarika, H., Bahadori, H. and **Chaudhary, B.** (2018) Dynamic behaviour of saturated sandy soil reinforced with non-woven polypropylene fibre. *International Journal of Geotechnical Engineering* 12(1); 89-100, Taylor & Francis (DOI: 10.1080/19386362.2016.1250978) (*Q2, Impact Factor 2.3/2025*).
 25. WO Sumartini, H Hazarika, T Kokusho, S Ishibashi, D Matsumoto and **Chaudhary, B.** (2018) Deformation and failure characteristics of Volcanic soil at landslides site due to the 2016 Kumamoto Earthquake. *Lowland Technology International Journal* 19(4); 237-244.
 26. **Chaudhary, B.**, Hazarika, H. and Nishimura, N. (2017) Effects of duration and acceleration level of earthquake ground motion on the behavior of unreinforced and reinforced breakwater foundation. *Soil Dynamics and Earthquake Engineering* 98; 24-37, Elsevier (DOI: 10.1016/j.soildyn.2017.04.006) (*Q1, Impact Factor 4.6/2025*).
 27. **Chaudhary, B.**, Hazarika, H., Ishibashi, I. and Abdullah, A. (2017) Sliding and overturning stability of breakwater under combined effect of earthquake and tsunami. *Ocean Engineering* 136; 106-116, Elsevier (DOI: 10.1016/j.oceaneng.2017.03.021) (*Q1, Impact Factor 5.5/2025*).
 28. **Chaudhary, B.**, Hazarika, H. and Pasha, SMK. (2017) Countermeasures for breakwater foundation subjected to foreshocks and main shock of earthquake loading. *Marine Georesources & Geotechnology* 36(3); 308-322, Taylor & Francis (DOI: 10.1080/1064119X.2017.1313342) (*Q2, Impact Factor 2.0/2025*).
 29. **Chaudhary, B.**, Hazarika, H. and Nishimura, N. (2017) Effects of reinforcement on the performance of breakwater foundation subjected to earthquake loadings. *International Journal of Geotechnical Engineering* 11(2); 186-197, Taylor & Francis (DOI: 10.1080/19386362.2016.1205167) (*Q2, Impact Factor 2.3/2025*).

30. **Chaudhary, B.** and Hazarika, H. (2017) An overview on development of countermeasures for breakwater against earthquake and tsunami induced damage. *Recent Advances in Petrochemical Science* 1(5); 1-3.
31. Hazarika, H., Hara, T., Nishimura, K., Yamasaki, N., Monji, N. **Chaudhary, B.**, Ishikura, R. and Kasama, K. (2016) Fundamental study on seismic resistant behavior of caisson type breakwater foundation reinforced by steel sheet pile and gabion. *Journal of Japan Association for Earthquake Engineering* 16(1); 184-204 (DOI: 10.5610/jaee.16.1_184) (In Japanese).
32. **Chaudhary, B.**, Hazarika, H., Monji, N., Nishimura, K., Ishikura, R. and Kasama, K. (2016) New reinforcing method for improving the bearing capacity of breakwater foundation against earthquake and tsunami. *Japanese Geotechnical Society Special Publication (15th ARC, ISSMGE)* 2(35); 1273-1278 (DOI: 10.3208/jgssp.IND-35).
33. **Chaudhary, B.**, Hazarika, H., Sah, B. and Krishna, A.M. (2016) Effects of reinforcement on the geo-structure for mitigation of the earthquake effects. *Japanese Geotechnical Society Special Publication (15th ARC, ISSMGE)* 2(68); 2319-2323 (DOI: 10.3208/jgssp.IGS-25).
34. Hazarika, H., Nishimura, K. and **Chaudhary, B.** (2016) Model testing on resilient solution for breakwater protection against tsunami. *Japanese Geotechnical Society Special Publication (International workshop on Geotechnics for resilient infrastructure- The second Japan-Indian Workshop in Geotechnical Engineering)* 3(2); 40-44 (DOI: 10.3208/jgssp.v03.j05).

❖ **ASCE Special Publication:**

35. **Akarsh, P K.**, Chaudhary, B., Sajan, M. K., Sah, B., and Kumar, S. (2025). Geosynthetic Reinforcing Technique against Earthquake-Induced Damage of Rubble Mound Breakwaters. *Geotechnical Frontiers* 2025, Louisville, KY state, USA. <https://doi.org/10.1061/9780784485996.052>

❖ **Magazine Recognition:**

36. Sajan, M.K., **Akarsh, P. K.**, and Chaudhary, B. (2024). “Innovative Application of Geogrid to Make Tsunami Resilient Rubble Mound Breakwaters”. *Geotechnical Engineering & Deep Foundations, New Building Materials and Construction World (NBM&CW)* September 2024- Online Edition. (n.d.), 120-128. https://www.nbmcw.com/online_edition/nbmcw/sep-2024/index.html

❖ **BOOK CHAPTERS (34)**

1. Sajan, M. K., Chaudhary, B., Akarsh P K, and Sah, B. (2026) Numerical Analysis of Coastal Dike Stability Under Sudden Drawdown. *Sustainable Practices in Offshore Geotechnics: Select Proceedings of the International Symposium on Offshore Geotechnics (ISOG 2024)(Eds: Parthasarathy,CR, Sunil, BM, Sharanappagouda K, Nainegali, L, Kolathayar, S.)* Springer LNCE, volume 768, pp 249-258 (eBook ISBN 978-981-95-3301-5).
2. Sajan, M. K., Chaudhary, B., **Akarsh P K**, Babita S and Kumar, S., (2026) Mitigating Earthquake-Induced Damages on Foundation Structures Using Scrap Tire. *Engineering Soil, Water and Environment for Sustainable Infrastructure (Eds: Kolathayar, S, Hegde A., Shivapur A., Mulangi. RH)* Springer LNCE, volume 661, pp235-242 (eBook ISBN 978-981-96-7552-4). <https://doi.org/10.1007/978-981-96-7552-4>

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12. Nishimura, K., Hazarika, H., **Chaudhary, B.**, Yanagi, S., Yasufuku, N. and Ishikura, R. (2016) Study on displacement and tilt suppressing effect by the reinforcement breakwater foundation at the time of the tsunami. *Proceedings of the Japan Society of Civil Engineers Annual Conference (JSCE-western Branch)*, 6 March 2016, Fukuoka, Japan, pp. 443-444 (In Japanese).
13. Nishimura, K., Hazarika, H., **Chaudhary, B.**, Monji, N., Yasufuku, N. and Ishikura, R. (2015) Model tsunami overflow test on tsunami resistant breakwater foundation using steel sheet pile and gabion. *Proceedings of the 50th Japan National Conference on Geotechnical Engineering*, 1-4 September, 2015, Hokkaido, Japan, pp. 1211-12 (In Japanese).
14. Monji, N., Hazarika, H., **Chaudhary, B.**, Nishimura, K., Ishikura, R., Kasama, K., Hara, T. and Yamasaki, N. (2015) Influence of shaking level and shaking time to deformation of reinforced breakwater foundation. *Proceedings of the Japan Society of Civil Engineers Annual Conference (JSCE-western Branch)*, 7 March 2015, Okinawa, Japan, pp. 409-410 (In Japanese).
15. Hara, T., Yamasaki, N., Hazarika, H., Monji, N. and **Chaudhary, B.** (2015) Study on cyclic shear strength of the breakwater mound material in partial drainage conditions. *Proceedings of the 50th Japan National Conference on Geotechnical Engineering*, 1-4 September, 2015, Hokkaido, Japan, pp. 1273-74 (In Japanese).
16. Nishimura, K., Hazarika, H., Monji, N., **Chaudhary, B.**, Yasufuku, N., Hara, T. and Ishikura, R. (2015) Tsunami overflow model experiment of breakwater that focuses on the scouring of the foundation ground and mound. *Proceedings of the Japan Society of Civil Engineers Annual Conference (JSCE-western Branch)*, 7 March 2015, Okinawa, Japan, pp. 407-408 (In Japanese).

TEACHING & LAB (UG/PG/PHD) AT NITK SURATHKAL

- ❖ Pile Foundations (CV725) -PG
- ❖ Geo-disaster Mitigation (CV830)-PG
- ❖ Selected Topics in Geotechnical Engineering M Tech (CV829)-PG

- ❖ Computational Lab for Geotechnical Engineers (CV727)-PG
- ❖ Geotechnical Engineering Lab (CV723)-PG
- ❖ Ground Improvement Techniques (CV472)-UG
- ❖ Soil Mechanics (CV252) -UG
- ❖ Soil Mechanics Lab (CV267)-UG
- ❖ Surveying Practice (CV265)-UG

PROJECT GUIDANCE

- ❖ **PhD - 05** (02-completed, 03-ongoing)
- ❖ **M. Tech - 25** (22-completed, 03-ongoing)
- ❖ **BTech – 15** (09-Completed; 06-ongoing)
- ❖ **PhD Scholar**

S.No.	Name of Student	Topic	Remarks
P-1.	Manu K Sajan (197CV010)	Modelling of resilient rubble mound breakwater against tsunami	Completed , Oct. 2024
P-2.	T Vamsi Nagaraju (197CV501)	Assessment of environmental impact of un engineered aquaculture ponds in the delta region of Andhra Pradesh	Completed (Jointly supervised) Aug, 2023.
P-3.	Subodh Kumar (207CV011)	Experimental and numerical investigations of suction caisson foundations for offshore wind turbines subjected to earthquakes, wind waves and sea waves	Ongoing
P-4.	Akarsh P K (217CV510)	Novel countermeasure techniques to protect rubble mound breakwater against earthquakes: experimental and numerical studies	Ongoing
P-5.	Anil Chavan (247CV501)	Topic yet to be decided	Ongoing

❖ M. Tech Students

S.No.	Name of Student	Topic	Remarks
M-1.	P Vishnu V Reddy (172GT010)	Offshore wind turbine foundation subjected to cyclic loading: Numerical analyses	Completed (2018-19)
M-2.	Abhishek Trivedi (182GT001)	Offshore wind turbine caisson foundation subjected to monotonic loadings: Numerical analyses	Completed (2019-20)
M-3.	K Jhansi (182GT007)	Monopile foundation of offshore wind turbine subjected to wind waves: Numerical simulation	
M-4.	Raveena P. (182GT010) <i>Jointly Supervised</i>	Analytical approach for seismic stability of reinforced earth retaining wall	

	<i>with Dr BM Sunil</i>		
M-5.	Vaibhav Vatsalya (182GT013)	Numerical analyses of reinforced soil retaining wall with granular backfills	
M-6.	Ashitha C. (192GT005)	Monopile foundation for offshore wind turbine under action of earthquake loadings: Numerical analyses	Completed (2020-21)
M-7.	Yuvraj Singh (192GT014)	Behavior of rubble mound breakwater under earthquake loadings	
M-8.	Akshat Srivastava (202CM003)	Analysis of current process of GTI and piling works and suggestion for productivity enhancement at HSR Surat	Completed (2021-22)
M-9.	Aman Singh (202GT005)	Numerical analysis of laterally loaded pile	
M-10.	Kiran Kumar Kancharla (202GT013)	Seismic response of wrapped face reinforced soil retaining wall: Numerical analyses	
M-11.	Nimish Ajit Patil (202GT016)	Dynamic response of pile foundations	
M-12.	Shabinraj P P (202GT018)	Vibration isolation using open and in-filled trenches	
M-13.	Ravutla Sujana (202CM045)	Condition assessment and analysis of retaining walls	
M-14.	Hema Gurappa Pol (212GT009)	Seismic response of stabilising piles for landslides mitigation: Numerical analyses	
M-15.	Kaveri (212GT010)	Seismic response of rubble mound breakwater: An experimental study	Completed (2022-23)
M-16.	Sudhanshu Kumar (212GT018)	Behaviour of rubble mound breakwaters subjected to tsunami overflow: An experimental study	
M-17.	Tanmoy Barik (212GT020)	Response of offshore wind turbine monopile foundation subjected to monotonic loadings: Numerical analyses	
M-18.	Ajit Kumar (222GT002)	Numerical Simulation of Open and Infill Trenches for Mitigation of Ground-Borne Vibrations	
M-19.	K R Srikrishna Setty (222GT010)	Numerical simulation of monopile foundation For offshore wind turbines	Completed (2023-24)
M-20.	Sudhansu Behera (222GT019)	Numerical simulation for dynamic response of rubble mound breakwater	
M-21.	Naveen Kumar (222CM041)	Latest cost-effective technologies in distribution (overhead/underground) systems to reduce the execution time	
M-22.	Rahul Ravi (222CM045)	Slag sands as replacement of river sands for sustainable geotechnical developments	
M-23.	Nitesh Patidar (232GT013)	Numerical Analysis of Rainfall Induced Landslide	
M-24.	Hansraj Saroj (232GT007)	Ground-Borne Vibration Isolation Using Open and In-Filled Trenches	
M-25.	Anshika Kalesh (232GT002)	Numerical Analysis of Monopile Foundations for Offshore Wind Turbines Subjected to Wind and Wave Loads	

ADMINISTRATIVE POSITIONS IN NITK

- ❖ Hostel Warden- Mega Tower 2; Himalaya (2026 to till date)
- ❖ Establishment of New Lab-Geotechnical Earthquake Engineering Lab -2023
- ❖ Establishment of New Lab-Geo-Disaster Prevention Lab -2020
- ❖ Coordinator for NBA for PG(Geotech)Program (2021 to 2023)
- ❖ DPGC Secretary (2023-till date)
- ❖ DUGC Secretary (2019-21)
- ❖ Faculty Advisor- MTech (Geotech) 2022-24 batch
- ❖ Lab in-charge - Geotechnical Engineering Laboratory (2019 to 2023)
- ❖ Lab in-charge– Geo-Disaster Prevention Lab (2021 to till date)
- ❖ Lab in-charge of Department Computer Center (2022-23)
- ❖ Chairman-Committee for Conducting Written Testes and Interview for PhD admission in Geotech. Engg. (2020)
- ❖ Faculties in-charge - Institute library related work (2019-20)
- ❖ Faculties in-charge- Website related work, data upkeeping & updating and CCC related correspondences at department level (2019-20)
- ❖ Chairman- GTE Committees for Conducting Written Test/Interviews for Selection of Candidates to Ph. D Program, M. Tech (Sponsored) and M. Tech (Research)-(Aug-Sep 2020)
- ❖ Member of official language working committee- Dept representative (2020 to till date)
- ❖ Convener of purchase committee for furniture through IRG fund (2018-19)
- ❖ Faculties in-charge of Website related work, data upkeeping & updating and CCC related correspondences (2019-20)
- ❖ Member for Anti-Ragging squad (2019-20 & 2022-23)
- ❖ Exam monitoring committee member for departmental mid-term and end-term examination 2019
- ❖ Polling officer for student council elections for year 2019-20
- ❖ Ring presentation committee member for year 2019

FIELD/SITE INVESTIGATION

- ❖ Member of **US-Japan Joint Investigation** Team for Kumamoto (Japan) Earthquake 2016 (11-14 May, 2016).
- ❖ Member of Investigation team for **Nagano (Japan) Earthquake 2014** (Nov. 2014).

PROFESSIONAL ACTIVITY

- ❖ Secretary of ISSMGE Asian Regional Technical Committees 1 (AsRTC1): Geotechnical Mitigation and Adaptation to Climate Change-induced Geo-disasters in Asia-Pacific Regions

REVIEWER OF JOURNALS

- ❖ Indian Geotechnical Journal
- ❖ Computer and Geotechnics
- ❖ International Journal of Geomechanics, ASCE
- ❖ Natural Hazards Review, ASCE
- ❖ Natural Hazards
- ❖ Geosynthetics International
- ❖ Soil Dynamics and Earthquake Engineering

- ❖ Ocean Engineering
- ❖ Earthquake Spectra, EERI
- ❖ Earthquake Engineering and Engineering Vibration
- ❖ Canadian Journal of Civil Engineering
- ❖ Applied Ocean Research
- ❖ Marine Georesources & Geotechnology
- ❖ International Journal of Geosynthetics and Ground Engineering
- ❖ Scientific Reports, Nature
- ❖ Journal of Marine Science and Application
- ❖ Natural Resource Modeling
- ❖ Arabian Journal of Geosciences
- ❖ International Journal of Oil, Gas and Coal Technology
- ❖ Journal of Marine Science and Engineering
- ❖ Journal of Marine Science and Application
- ❖ Journal of Marine Science and Technology
- ❖ Lowland Technology International (Journal)
- ❖ Aquaculture
- ❖ PLoS One
- ❖ Iranian Journal of Science and Technology, Transactions of Civil Engineering
- ❖ International Journal of Oil, Gas and Coal Technology
- ❖ Resilient Cities and Structures
- ❖ Alexandria Engineering Journal, Elsevier

PROFESSIONAL MEMBERSHIP

1. Indian Geotechnical Society, IGS (Life Member)
2. Indian Society of Earthquake Technology, ISET (Life Member)
3. International Society of Soil Mechanics and Geotechnical Engineering, ISSMGE
4. Japanese Geotechnical Society, JGS
5. Japanese Society of Civil Engineers, JSCE
6. American Society of Civil Engineers, ASCE
7. International Geosynthetics Society, IGS
8. Geo-Institute (ASCE Specialty Institute)
9. Association of Consulting Civil Engineers (India)- ACCE(I)

EXTRA CURRICULAR ACTIVITIES

- ❖ **Vice President** of Indian Association in Fukuoka, Japan (2015-2017)
- ❖ Collected funds at Kyushu University, Japan for earthquake victims of the 2015 Nepal Earthquakes.
- ❖ Participated in flood relief camp in nearby areas of NIRMALI (home town).
- ❖ Mess secretary in hostel no 5 during B. Tech.
- ❖ Qualified in SCOUT & GUIDE (3rd Sopan).
- ❖ Active participation in GOLDEN JUBILEE Celebration of M.I.T. (B. Tech College).
- ❖ Active participation in various curricular activities during undergraduate, master and PhD studies.

I hereby declare that the information furnished above is true to the best of my knowledge.

BABLOO CHAUDHARY