

CURRICULUM VITAE

Dr Sudip Basack

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 Birth Date: 21 November 1971



Career Objectives

With my 22 years of academic experience in the most dedicated manner, together with my passion for carrying out outstanding teaching, cutting-edge research and innovative consultancy works, it is my sincere ambition to be a successful academician aiming towards creation and dissemination of knowledge. It is my dream to gain ground-breaking teaching and research achievements in a manner that my sincere contribution is remarkably recognized amongst the International Engineering Fraternity.

Educational & Training Background and Membership of Professional Bodies

2010	Post-Doctoral Research Centre for Geomechanics & Railway Engineering University of Wollongong, Australia (Australian Government Endeavour Fellowship) Major: Geotechnical Engineering
2000	Doctor of Philosophy in Engineering Jadavpur University, Kolkata, India Major: Geotechnical Engineering
1996	Master of Civil Engineering (1st class) Jadavpur University, Kolkata, India Major: Geotechnical Engineering
1994	Bachelor of Engineering (1st class) Bengal Engineering College, Shibpur University of Calcutta, India Major: Civil Engineering
Chartered Engineer	India
Professional Fellowship/ Membership	American Society of Civil Engineers International Association for Engineers Institution of Engineers (India) Indian Geotechnical Society Indian Society of Hydraulics Indian Society for Rock Mechanics and Tunneling Technology Indian Society for Technical Education

Key Skills and Experiences

- 21 years of teaching and research at various Universities / Institutes in India and abroad.
- Proficiency in writing: published papers in peer reviewed, reputed international journals and conferences, book and technical reports.
- Supervising: research students at Master and Doctoral levels.

- Executing: R and D projects sponsored by Government of India, Industrial consultancy.
- Delivering: presentations/invited lectures/seminar talks at national and international venues.
- Significant problem solving, experimental and numerical abilities.
- Good attitudes: initiatives, knowledge sharing and learning ability.
- Personal qualities: energetic, flexible, autonomous, adaptable and dedicated team member having leadership quality.

Positions Held / Employment History

- **Total Experience:** Academic = 22 years; Industry = 0.75 years;

ACADEMIC POSITIONS:

❖ **Principal, Regent Education and Research Foundation**

(Affiliated to MAKA University of Technology)

Primary Responsibility: Overall administration of the entire College

Research Area: Geotechnical Engineering, Water Resources

Teaching Area: Civil Engineering

Duration: June 2024 – Current (9 months)

❖ **Professor (Adjunct), Department of Civil Engineering**

Primary Responsibility: Research and Teaching

Research/Teaching Area: Geotechnical Engineering, Water Resources, Civil Engineering

Organization: Graphic Era Deemed to be University, Dehradun, INDIA

Duration: February 2024 – Current (1 year)

❖ **Principal, Elitte College of Engineering**

(Affiliated to MAKA University of Technology)

Primary Responsibility: Overall administration of the entire College

Research Area: Geotechnical Engineering, Water Resources

Teaching Area: Civil Engineering

Duration: Sept. 2019 – January 2024 (4 years 5 months)

❖ **Professor and Head, Department of Civil Engineering**

Research Area: Geotechnical Engineering, Water Resources

Teaching Area: Water Resources, Groundwater, Research Methodology

Organization: Kaziranga University, Jorhat, Assam, INDIA

Duration: Jan 2018 – Jan 2019 (1 year)

❖ **ARC Level-A Research Academic**

Research Area: Ground Improvement, Railway Geomechanics

Teaching Area: Soil Mechanics

Organization: University of Wollongong, New South Wales, AUSTRALIA

Duration: March 2014 – March 2017 (3 years)

❖ **Endeavour Postdoctoral Research Fellow, Australian Government**

Research Area: Ground Improvement, Railway Geomechanics Organization:

University of Wollongong, New South Wales, AUSTRALIA Duration: May

2010 – November 2010 (6 months)

❖ **Visiting Fellow**

Research Area: Ground Improvement, Groundwater

Teaching Area: Soil Mechanics

Organization: University of Technology, Sydney, New South Wales, AUSTRALIA

Duration: November 2010 – December 2010 (1 month)

❖ Faculty Member – Engineering and Technology

Research Areas: Solid Mechanics, Groundwater Hydraulics, Pile-Soil Interaction, Geoenvironmental Engineering, Construction Management

Teaching Area: Mechanics of Solids, Engineering Drawing and Drafting

Organization: Bengal Engineering and Science University, Howrah, INDIA

(An Institution aided by State Government)

Duration: **Associate Professor** - 3 years 10 months (April 2010 – February 2014)

Assistant Professor – 3 years (April 2007 – April 2010)

Lecturer - 4 years 8 months (August 2002 – April 2007)

❖ Lecturer – Civil Engineering

Research Area: Pile Foundation

Teaching Area: Soil Mechanics, Foundation Engineering, Construction Management

Organisation: ICV Polytechnic, Jhargram, West Bengal, INDIA

(State Government Institution)

Duration: February 2001 – August 2002 (1 year 6 months)

Duties and Responsibilities:

- Teaching post-graduate and undergraduate students.
- Conducting independent research and innovation.
- Supervision of Master and Doctoral Students and Project Fellows.
- Planning and Implementation of R & D projects as Principal/Co-Principal Investigators.
- Industrial Consultancy.
- Preparation and evaluation of examination papers.
- Convenor of research implementation committees, several selection committees, member of academic committees.
- Organising outreach education: Seminars, Conferences, Short Term Courses, etc.

Brief academic achievements:

- High quality teaching with satisfaction among students, as evidenced from the students' feedback.
- Quality publications in peer reviewed journals and conferences of repute.
- Successful completion of several sponsored research projects.
- Successful completion of several theses at ME/MTech and PhD levels in Engineering. Recipient of several academic awards at national and international levels.
- Successful completion of the Industrial consultancy projects.

INDUSTRIAL POSITIONS:

❖ Project Engineer

Work Area: Civil Engineering Projects Organization:

Tara International, Kolkata, INDIA

Duration: October 1999 – March 2000 (6 months)

❖ Trainee Structural Engineer

Work Area: Civil Engineering Projects

Organization: Sristi Consultants and Engineers Pvt. Ltd., Kolkata, INDIA

Duration: November 2000 – February 2001 (3 months)

Duties and Responsibilities:

- Design and construction supervision of structures like commercial buildings (shopping complex), overhead water tank, residential buildings.
- Rehabilitation of old and damaged buildings and structures which included rehabilitation of foundations.

Achievements: Successful completion of the assigned duties.

Details of Academic Achievements and Professional Activities

Career Progression Record	-	Appendix A
Publications	-	Appendix B
Awards and Recognitions	-	Appendix C
Current Research Areas and Supervision of Research Students	-	Appendix D
Funded Research Projects	-	Appendix E
Conference/Seminar Workshop/Professional Training	-	Appendix F
International Research Collaboration	-	Appendix G
Subjects Taught	-	Appendix H
Administrative Responsibilities/ Industry and Community Engagement	-	Appendix J

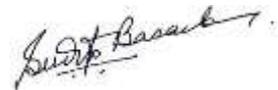
Affirmation / Signature

The above information are true to the best of my knowledge and belief.

Date: 28th February 2025

Signature:

Place: Kolkata, India.



APPENDIX A: CAREER PROGRESSION RECORD

Year \ Month	January	February	March	April	May	June	July	August	Sept.	October	Nov.	Dec.
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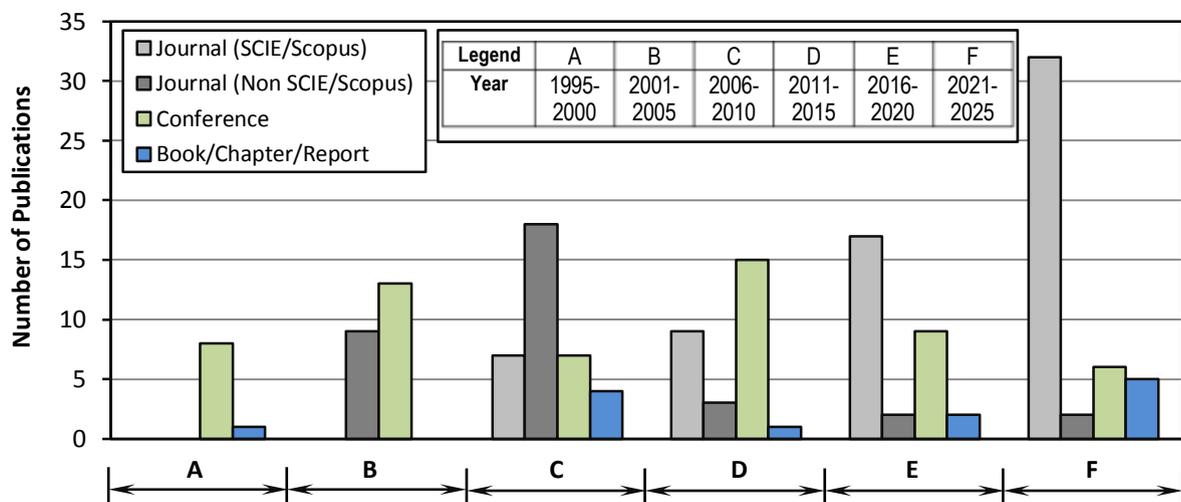
Legends:

	Senior Research Fellow, Jadavpur University, Kolkata, INDIA
	Trainee Structural Engineer, SCEPL, Kolkata, INDIA
	Project Engineer, Tara International, Kolkata, INDIA
	Lecturer, ICV Polytechnic (Government of West Bengal), Jhargram, West Bengal, INDIA
	Lecturer, Bengal Engineering and Science University, Howrah, INDIA
	Assistant Professor, Bengal Engineering and Science University, Howrah, INDIA
	Associate Professor, Bengal Engineering and Science University, Howrah, INDIA
	ARC Research Academic (Level A), University of Wollongong, New South Wales, AUSTRALIA
	Professor and Head of Civil Engineering, Kaziranga University, Jorhat, Assam, INDIA
	Principal, Elitte College of Engineering (affiliation: MAKU University of Technology), West Bengal, INDIA
	Professor of Civil Engineering (Adjunct), Graphic Era Deemed to be University, Dehradun, INDIA
	Principal, Regent Education & Research Foundation (affiliation: MAKU University of Technology), West Bengal, INDIA

- 1 Awarded Bachelor of Engineering (Civil), University of Calcutta, INDIA
- 2 Awarded Master of Civil Engineering, Jadavpur University, Kolkata, INDIA
- 3 Awarded Doctor of Philosophy (Engineering), Jadavpur University, Kolkata, INDIA
- 4 Academic Visitor, Institute of Geotechnical Engineering, University of Stuttgart, GERMANY
- 5 Academic Visitor, Centre for Offshore Foundation System, University of Western Australia, AUSTRALIA
- 6 Academic Visitor, Department of Civil Engineering, National University of Singapore, SINGAPORE
- 7 Academic Visitor, Department of Civil Engineering, Imperial College, London, UNITED KINGDOM
- 8 Academic Visitor, School of Civil Engineering, Oxford University, UNITED KINGDOM
- 9 Endeavour Post-Doctoral Research Fellow, University of Wollongong, New South Wales, AUSTRALIA
- 10 Visiting Fellow, Department of Civil Engineering, University of Technology, Sydney, AUSTRALIA
- 11 Academic Visitor, School of Civil Engineering, Fuzhou University, Fujian, CHINA
- 12 Academic Visitor, School of Architecture and Urban Planning, Yunnan University, CHINA

APPENDIX B: LIST OF PUBLICATIONS

Types of Publication				Number
Papers	Journal	International	SCI / SCIE / Scopus indexed	65
			Others	15
			Indian	18
	Conference	International		27
		Indian		31
Others			05	
Book / Book Chapter / Technical Reports				13
Scopus	Web of Science	Google Scholar	Research Gate	Total = 171
H-index: 21 Total citation: 1308	H-index: 18 Total citation: 837	H-index: 25; i10 index: 46; Total citation: 1768	H-index: 24 Total citation: 1534	



(A) ARTICLES IN SCI / SCIE / SCOPUS INDEXED INTERNATIONAL JOURNALS:

- [1] Gyadi, T., Bharti, A., Basack, S. and Lucchi, E. (2025). "Comparative analysis of cow and chicken manure as activators in windrow composting of vegetable waste." *Waste & Biomass Valorization*, Springer, <https://doi.org/10.1007/s12649-025-02893-1> [SCIE, Scopus, Q2]
- [2] Basack, S., Alkahtani, M. Q. and Islam, S. (2025). "Single pile response to uplift load: Computational model and analysis." *Marine Georesources & Geotechnology*, Taylor & Francis, 1–23, <https://doi.org/10.1080/1064119X.2024.2448734> [SCIE, Scopus, Q2]
- [3] Basack, S. and Khabbaz, H. (2024). "Analytical solution for single pile in two-layered soil subjected to torsion." *Geomechanics and Geoengineering*, Taylor & Francis, 1-17, <https://doi.org/10.1080/17486025.2024.2433203> [ESCI, Scopus, Q2]
- [4] Karami, M., Basack, S., Pan, M., Das, G., Gupta, A. and Karakouzian, M. (2024). "Experimental and numerical investigations on the performance of screw micropiles under pull-out and lateral loads." *International Journal of Geotechnical Engineering*, Taylor & Francis, 1-23, <https://doi.org/10.1080/19386362.2024.2437466> [ESCI, Scopus, Q2]
- [5] Gyadi, T., Bharti, A., Basack, S., Kumar, P. and Lucchi, E. (2024). "Influential factors in anaerobic digestion of rice-derived food waste and animal manure: A comprehensive review." *Bioresource Technology*, Elsevier, 413 (131398): <https://doi.org/10.1016/j.biortech.2024.131398> [SCIE, Scopus, Q1]
- [6] Dutta, J., Basack, S. and Goswami, G. (2024). "Analysis of Water Quality Data using Statistical and Artificial Neural Network Technique." *Water, Air & Soil Pollution*, Springer Nature [SCIE, Scopus, Q2]
- [7] Basack, S., Nimbalkar, S. and Zaman, M. (2024). "Recent developments in pile foundations: design, construction, innovations and case studies." *International Journal of Geotechnical Engineering*, Taylor & Francis, 17(6), 581-582: <https://doi.org/10.1080/19386362.2023.2380106> [ESCI; Scopus; Q2]

- [8] Karami, M., Basack, S., Das, G., Bhadra, D. and Karakouzian, M. (2023). "Experimental and numerical evaluations of load settlement response of helical piles in soft clay." *Marine Georesources and Geotechnology*, Taylor & Francis, <https://doi.org/10.1080/1064119X.2023.2254790> [SCIE; Scopus; Q1]
- [9] Tao, G., Zhang, F., Zhao, W., Xiao, H., Chen, Q. and Basack, S. (2023). "A new fractal model for predicting saturated soil permeability under different deformation." *Fractals*, World Scientific, 31 (08), <https://doi.org/10.1142/S0218348X23401692> [SCIE; Scopus; Q1]
- [10] Basack, S. and Nimbalkar, S. (2023). "Load-settlement characteristics of stone column reinforced soft marine clay deposit: Combined field and numerical studies." *Sustainability*, MDPI, 15(9), 7457; <https://doi.org/10.3390/su15097457> [SCIE; Scopus; Q1]
- [11] Goswami, G., Mondal, S., Basack, S. and Karakouzian, M. (2023). "Assessing the impacts of land use and land cover changes on the water quality of river Hooghly, West Bengal, India: A case study." *Hydrology*, MDPI, 10, 71. <https://doi.org/10.3390/hydrology10030071> [ESCI; Scopus; Q2]
- [12] Nimbalkar, S. and Basack, S. (2022). "Pile group in clay subjected to cyclic lateral load: Numerical modelling and design recommendation." *Marine Georesources & Geotechnology*, Taylor & Francis, DOI: 10.1080/1064119X.2022.2150103 [SCIE; Scopus; Q2]
- [13] Basack, S., Dutta, S. and Saha, D. (2022). "Installation and Performance Study of a Vertical Axis Wind Turbine Prototype Model." *Sustainability*, MDPI, 14(23), 16084; <https://doi.org/10.3390/su142316084> [SCIE; Scopus; Q1]
- [14] Basack, S., Goswami, G., Dai, Zihang and Baruah, P. (2022). "Failure Mechanism and Design Techniques for Offshore Wind Turbine Pile Foundation: Review and Research Directions." *Sustainability*, MDPI, <https://doi.org/10.3390/su141912666> [SCIE; Scopus; Q1]
- [15] Basack, S., Karami, M. and Karakouzian, M. (2022). "Pile-Soil Interaction under Cyclic Lateral Load in Loose Sand." *Soil Dynamics and Earthquake Engineering*, Elsevier, 162, 107439: <https://doi.org/10.1016/j.soildyn.2022.107439> [SCIE; Scopus; Q1]
- [16] Hua, Z., Chen, Q., Xua, C., Basack, S. and Luo, W. (2022). "Horizontal hollow pipes used as vibration isolation barriers: Numerical modelling and design optimization." *Transportation Geotechnics*, Elsevier, 37 (100885): <https://doi.org/10.1016/j.trgeo.2022.100885> [SCIE; Scopus; Q1]
- [17] Chen, Q., Li, Y., Hu, Z., Xu, C., Basack, S. and Ke, W. (2022). "Utilization of Horizontally Buried Hollow Pipes for Ground Vibration Mitigation in Public Transport Infrastructure: An Innovative Technique." *International Journal of Geomechanics*, ASCE, 22 (12): <https://ascelibrary.org/doi/abs/10.1061/%28ASCE%29GM.1943-5622.0002588> [SCIE; Scopus; Q1]
- [18] Goswami, G., Basack, S., Zaman, K. and Mastorakis, N. E. (2022). "Rainfall induced Geohydraulic and Evapotranspiration Characteristics: An Indian Case Study." *WSEAS Transactions on Environment and Development*, 18: 452-460. [Scopus; Q4]
- [19] Basack, S., Goswami, G., Khabbaz, H., and Karakouzian, M. (2022). "Flow Characteristics through Granular Soil Influenced by Saline Water Intrusion: A Laboratory Investigation." *Civil Engineering Journal*, 8(5): 863-878. [ESCI; Scopus; Q1]
- [20] Basack, S., Nimbalkar, S., Karakouzian, M., Bharadwaj, S., Xie, Z. and Krause, N. (2022). "Field Installation Effects of Stone Column Installation for Soft Ground Improvement." *International Journal of Geomechanics*, ASCE, 22(4): <https://ascelibrary.org/doi/abs/10.1061/%28ASCE%29GM.1943-5622.0002321> [SCIE; Scopus; Q1]
- [21] Nimbalkar, S. and Basack, S. (2022). "Pile Group in Clay under Cyclic Lateral Loading with Emphasis on Bending Moment: Numerical Modelling." *Marine Georesources and Geotechnology*, Taylor and Francis: <https://doi.org/10.1080/1064119X.2022.2029640> [SCIE; Scopus; Q2]
- [22] Basack, S., Loganathan, M. K., Goswami, G. and Khabbaz, H. (2022). "Saltwater Intrusion into Coastal Aquifers and Associated Risk Management: Brief Review and Research Directions." *Journal of Coastal Research*, 38 (3): 654-672. [SCIE; Scopus; Q2]
- [23] Basack, S., Loganathan, M. K., Goswami, G., Bruah, P. and Alam, R. (2022). "Review of Risk Assessment and Mitigation Measures of Coastal Aquifers Vulnerable to Saline Water Intrusion." *Polish Journal of Environmental Studies*, 31(2):1505–1512. [SCIE; Scopus; Q2]
- [24] Basack, S., Das, G., Iqbal, S. A., Deb, J. (2022). "Geomechanics of Soft Ground Improvement by Perforated Piles: Review and Case Study." *WSEAS Transactions on Applied and Theoretical Mechanics*, 17 (4): 21-28. [Scopus; Q4]

- [25] Kiron, B., Basack, S., Goswami, G. and Bida, H. (2021). "Hydrological and Environmental Study on Surface Water Characterization in a Locality in North Eastern India." *WSEAS Transactions on Environment and Development*, 17 (112): 1228-1233. [Scopus; Q3]
- [26] Basack, S., Goswami, G., Sonowal, S. and Karakouzian, M. (2021). "Influence of Saltwater Submergence on Geohydraulic Properties of Sand: A Laboratory Investigation." *Hydrology, MDPI*, 8 (181), <https://doi.org/10.3390/hydrology8040181> [ESCI; Scopus; Q2]
- [27] Kiron, B., Basack, S., Goswami, G. and Bida, H. (2021). "Geomechanical Hazards related to River Hydraulics and Remedial Measures: Selected Case Studies in India." *WSEAS Transactions on Fluid Mechanics*, 16 (20): 214-220. [Scopus; Q4]
- [28] Basack, S., Dutta, S., Saha, D. and Das, G. (2021). "Power Generation by Offshore Wind Turbines: An Overview on Recent Research and Development." *WSEAS Transactions on Power Systems*, 16: 254-261. [Scopus; Q2]
- [29] Basack, S., Goswami, G., Khabbaz, H., Karakouzian, M., Baruah, P. and Kalita, N. (2021). "A Comparative study on Soil Stabilization Relevant to Transport Infrastructure using Bagasse Ash and Stone Dust and Cost Effectiveness." *Civil Engineering Journal*, 7(11): 1947-1963. [ESCI; Scopus; Q1]
- [30] Basack, S., Goswami, G. and Nimbalkar, S. (2021). "Analytical and Numerical Solutions to Selected Research Problems in Geomechanics and Geohydraulics." *WSEAS Transactions on Applied and Theoretical Mechanics*, 16: 222-231. [Scopus; Q4]
- [31] Tao, G., Yuan, J., Chen, Q., Peng, W., Yu, R. and Basack, S. (2021). "Chemical stabilization of calcareous sand by polyurethane foam adhesive." *Construction and Building Materials, Elsevier*, 295 (123609), 1-12. [SCIE; Scopus; Q1]
- [32] Chen, Q., Li, Y., Ke, W., Basack, S. and Xu, C. (2021). "A New Technique for Ground Vibration Mitigation by Horizontally Buried Hollow Pipes." *International Journal of Geomechanics, ASCE*, 21(7): 04021114-1-12. [SCIE; Scopus; Q1]
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- [34] Baruah, P., Basack, S. and Goswami, G. (2020). "Compressive Strength of Interlocking Concrete Pavement Block influenced by Admixtures." *International Journal of Mechanics*, 14(2020): 58-61. [Scopus; Q4]
- [35] Goswami, G., Basack, S., Mastorakis, N., Saikia, A., Nilo, B. and Ahmed, N. (2020). "Coastal Ground Water Flow and Management: A State-of-the-Art Review." *International Journal of Mechanics*, 14 (2020): 37-48. [Scopus; Q4]
- [36] Basack, S., Goswami, G., Deka, P., Borah, P. P. and Mastorakis, N. (2020). "Analysis and Control of Flow Parameters through Sluice Gate in Dam." *International Journal of Mechanics*, 14 (2020): 22-27. [Scopus; Q4]
- [37] Nimbalkar, S. S., Punetha, P., Basack, S. and Mirzababaei, M. (2019). "Piles Subjected to Torsional Cyclic Load: Numerical Analysis." *Frontiers in Built Environment*, 5 (24): 1-10. [ESCI; Scopus; Q2]
- [38] Wu, Z., Chen, Q., Basack, S. and Karekal, S. (2018). "Laboratory investigation on rheological properties of greenschist considering anisotropy under multi-stage compressive creep condition." *Journal of Structural Geology, Elsevier*, 114:111-120. [SCIE; Scopus; Q1]
- [39] Basack, S. and Nimbalkar, S. (2018). "Measured and predicted response of pile group in soft clay subjected to cyclic lateral loading." *International Journal of Geomechanics, ASCE*, 18(7): 04018073-1-20. [SCIE; Scopus; Q1]
- [40] Basack, S., Siahaan, F., Indraratna, B. and Rujikiatkamjorn, C. (2018). "Stone column stabilized soft soil performance influenced by clogging and lateral deformation: laboratory and numerical evaluation." *International Journal of Geomechanics, ASCE*, 18(6): 04018058-1-18. [SCIE; Scopus; Q1]
- [41] Oweis, I. S., Basack, S., Indraratna, B., Rujikiatkamjorn, C. and Siahaan, F. (2018). "Closure to Discussion of 'Modeling the stone column behavior in soft ground with special emphasis on lateral deformation'." *Journal of Geotechnical and Geoenvironmental Engineering, ASCE*, 144(5): 07018008-1-2. [SCIE; Scopus; Q1]
- [42] Basack, S., Indraratna, B. and Rujikiatkamjorn, C. (2018). "Effectiveness of stone column reinforcement for stabilizing soft ground with reference to transport infrastructure." *Geotechnical Engineering Journal of SEAGS & AGSSEA*, 49(1): 8-14. [ESCI; Scopus; Q4]
- [43] Basack, S. and Nimbalkar, S. (2017). "Free strain analysis of the performance of vertical drains for soft soil improvement." *Geomechanics and Engineering, Techno Press*, 13(6), 963-975. [SCIE; Scopus; Q2]
- [44] Basack, S., Indraratna, B., Rujikiatkamjorn, C. and Siahaan, F. (2017). "Modelling the stone column behavior in soft ground with special emphasis on lateral deformation." *Journal of Geotechnical and Geoenvironmental Engineering, ASCE*, 143(6), 04017016-1-19. [SCIE; Scopus; Q1]
- [45] Basack, S. and Nimbalkar, S. (2017). "Numerical solution of single pile subjected to torsional cyclic load." *International Journal of Geomechanics, ASCE*, 17(8), 04017016-1-17. [SCIE; Scopus; Q1]

- [46] Mu, L., Chen, Q., Huang, M. and Basack, S. (2017). "Hybrid approach for rigid piled-raft foundations subjected to coupled loads in layered soils." *International Journal of Geomechanics, ASCE*, 17(5), 04012122-1-15. [SCIE; Scopus; Q1]
- [47] Wu, C.Z., Chen, Q., Basack, S., Xu, R.Q. and Shi, R.M. (2016). "Biaxial creep test study on the influence of structural anisotropy on rheological behaviour of hard rock." *Journal of Materials in Civil Engineering, ASCE*, 28(10), 04016104-1-12. [SCIE; Scopus; Q1]
- [48] Basack, S., Indraratna, B. and Rujikiatkamjorn, C. (2016). "Modelling the Performance of Stone Column- Reinforced Soft Ground under Static and Cyclic Loads", *Journal of Geotechnical and Geoenvironmental Engineering, ASCE*, 142(2), 04015067-1-15. [SCIE; Scopus; Q1]
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- [51] Basack, S. and Sen, S. (2014). "Numerical modelling on single pile subjected to pure torsion." *Journal of Geotechnical and Geoenvironmental Engineering, ASCE*, 140 (1), 74-90. [SCIE; Scopus; Q1]
- [52] Basack, S. and Sen, S. (2014). "Numerical modelling on single pile subjected to simultaneous torsional and axial loads." *International Journal of Geomechanics, ASCE*, 14(4), 06014006-1-14. [SCIE; Scopus; Q1]
- [53] Basack, S., Bhattacharya, A. K. and Maity, P. (2014). "A coastal groundwater management model with Indian case study." *Water Management, ICE*, 167 (WM3), 126-140. [SCIE; Scopus; Q3]
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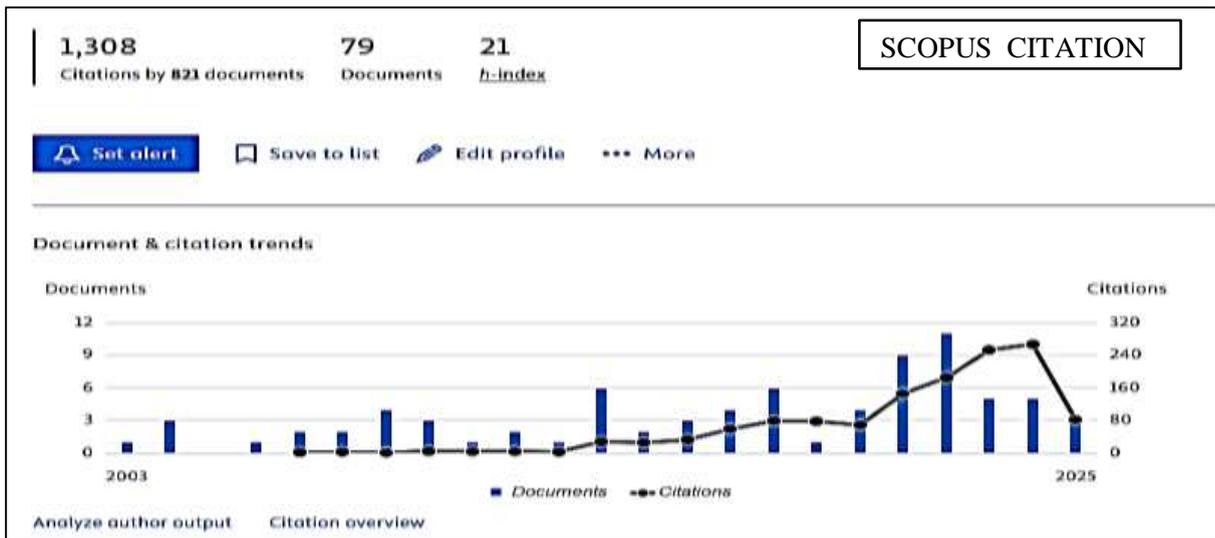
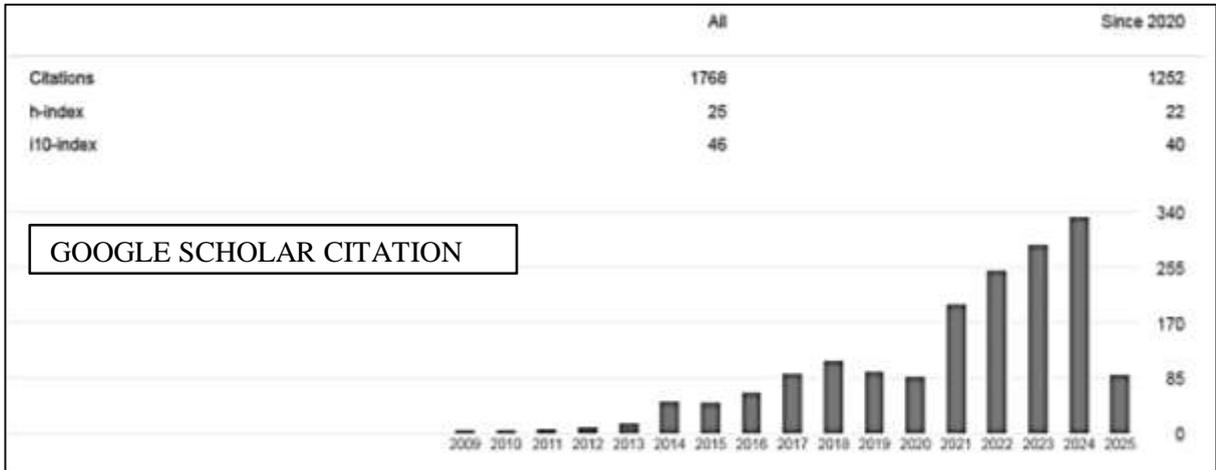
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- International Journal of Geomechanics (Publisher: ASCE)
- Computers and Geotechnics (Publisher: Elsevier)
- Geotechnical and Geological Engineering, An International Journal (Publisher: Springer)
- Experimental Techniques (Publisher: Wiley-Blackwell)
- Marine Georesources and Geotechnology (Publisher: Taylor & Francis)
- Alexandria Journal of Engineering (Publisher: Elsevier)
- International Conference on Ground Improvement, Australia (2012)

EDITORSHIP:

- Editorial Board Member: Chinese Science Journal, Bentham Publisher.
- Lead Editor: Special Issue Edition 'Design and Construction of Deep Foundation' of Advances in Civil Engineering, Wiley.
- Editorial Board Member: Architectural Engineering Division, SET Publishers.
- Lead Editor: Special Issue on 'Recent Developments in Pile Foundation – Design, Construction, Innovations and Case Studies', International Journal of Geotechnical Engineering, Taylor & Francis.

GRAPHICAL REPRESENTATION: CITATION

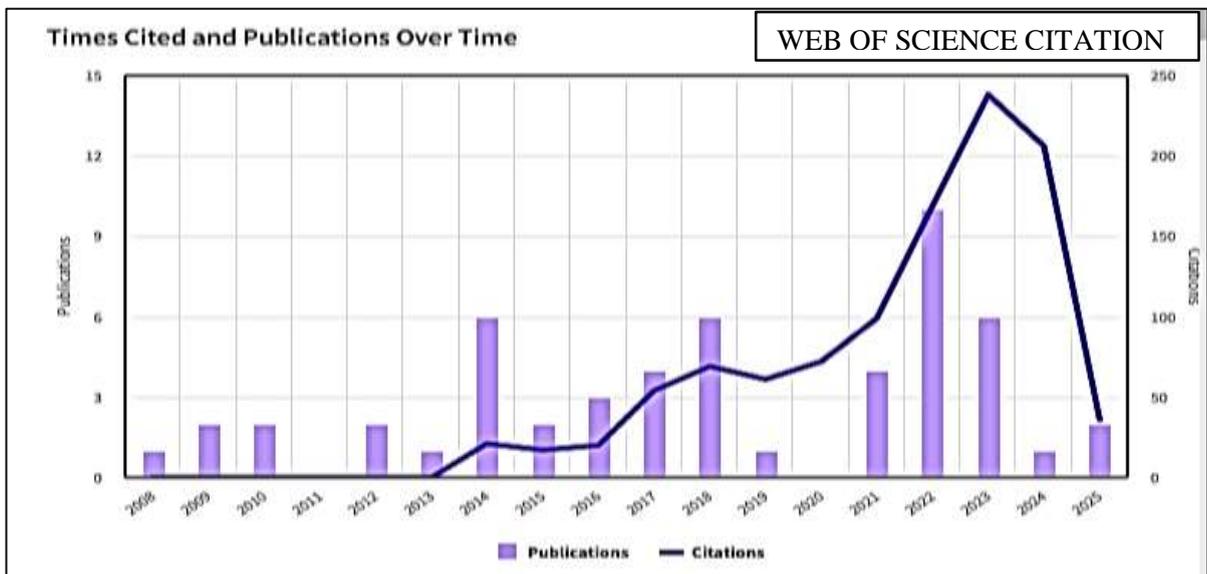


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Document & citation trends

Year	Documents	Citations
2003	1	0
2004	2	0
2005	1	0
2006	2	0
2007	2	0
2008	4	0
2009	2	0
2010	2	0
2011	2	0
2012	2	0
2013	2	0
2014	2	0
2015	2	0
2016	6	10
2017	2	20
2018	2	30
2019	2	40
2020	2	50
2021	2	60
2022	9	100
2023	11	150
2024	4	240
2025	4	250

[Analyze author output](#) [Citation overview](#)



APPENDIX C

ACADEMIC AWARDS AND RECOGNITIONS

(1) AWARDS AND RECOGNITIONS:

- Received *Outstanding Paper Award* in Engineering Science Division, West Bengal Science & Technology Congress 2025, Government of West Bengal, India.
- Received *Outstanding Paper Award* in 7th Regional Science & Technology Congress 2024-25, Region 5, West Bengal, India.
- Listed as top 2% Scientist List sourced from Stanford University and Elsevier in the year of 2024 in the field of Geological and Geomatic Engineering.
- Received *Best Paper Award* in the Civil Engineering Division, National Conference on 'Development in Engineering Education and Practices' (DEEP-2022) on April 6-8, 2020 at Elite College of Engineering, Kolkata, India.
- Received *Best Poster Presentation Award* in the International Workshop on Advances in Sustainable Civil Infrastructure Development on January 22-23, 2019 at Kaziranga University, Assam, India.
- Awarded *2018 Albert Nelson Marquis Lifetime Achievement Award* by Marquis Who's Who.
- Awarded as *Reviewer of Excellence 2017* by Computers and Geotechnics, Elsevier.
- Included in the list of *top downloaded ASCE articles* in geotechnical engineering in 2017.
- Awarded as *Outstanding Reviewer 2016* by Computers and Geotechnics, Elsevier.
- Awarded as *Outstanding Reviewer 2015* by ASCE International Journal of Geomechanics.
- Acted as an *Examiner of Ph.D. theses* at University of Technology, Sydney, Australia.
- Received the *International Travel Support* from the Department of Science and Technology (DST), Government of India and the Centre for International Co-operation in Science (CICS).
- Awarded *Endeavour Post-Doctoral Research Fellowship* sponsored by Department of Education, Environment & Workplace Relations, Australian Government.
- Worked as a *Visiting Fellow* at the University of Technology, Sydney, Australia.
- *Academic Visitor* for research at the following world-renowned academic institutions:
 - (i) Institute of Geotechnical Engineering, University of Stuttgart, Germany.
 - (ii) Centre for Offshore Foundation Systems, University of Western Australia.
 - (iii) Department of Civil Engineering, National University of Singapore.
 - (iv) Department of Civil and Environmental Engineering, Imperial College, London, U.K.
 - (v) Department of Engineering Science, Oxford University, U.K.
 - (vi) School of Civil Engineering, Fuzhou University, China.
 - (vii) School of Architecture and Urban Planning, Yunnan University, China.
- *Citation of Biography* in Marquis Who's Who in Science and Engineering in 2006.
- Received Early Career Research Award (*Career Award for Young Teachers*) sponsored by the All India Council for Technical Education (AICTE) in 2004.
- Received *IGS-ONGC Best Paper Award* in the field of 'Marine Geotechnical Engineering' in 2000.
- Awarded *Senior Research Fellowship* under the Direct Fellowship Scheme of Council of Scientific and Industrial Research, Government of India in 1997.
- Awarded University Post-Graduate Fellowship after qualifying in the Indian *National Graduate Aptitude Test in Engineering* in 1994.
- Awarded *National Scholarship* at Secondary and Senior Secondary School Exams in 1989 and 1987.

(2) KEYNOTE / INVITED LECTURES:

- Delivered *Keynote Lectures* at National Conference on Developments in Engineering Education and Practices (DEEP-2022), April 6-8, 2022.
- Delivered *Keynote Lecture* at 2nd International Conference on Civil Engineering and Clean Energy (ICCECE2021), December 10-12, 2021, Nanchang, China.
- Delivered *Online Lecture* at the ‘CSIR-NEIST Online Summer Research Training Programme’ organised by NEIST, Jorhat, Assam, India, on 2nd July 2020.
- Delivered *Invited lecture* at Indian Science Congress 2020.
- Delivered *Keynote Presentation* at International Workshop on Advances in Sustainable Civil Infrastructure Development 2019 on January 22-23, 2019 at Kaziranga University, Assam, India.
- Delivered *Keynote Presentation* at National Workshop on Advances in Civil Engineering (ACE-2018) on September 28-29, 2018 at Kaziranga University, Assam, India.
- Delivered *Expert Lecture* on August 29-30, 2018 in Short Term Training Course (Sponsor: TEQIP-III, Government of India) at Jorhat Engineering College, Government of Assam.
- Delivered *Keynote Lecture* on 9th April 2018 in National Workshop on ‘Recent Development on Civil and Earthquake Engineering’ at North-east Institute of Science and Technology, Council of Scientific and Industrial Research, Government of India.

(3) INVITED SEMINAR TALKS:

- “Piles subjected to Torsion”: School of Civil and Environmental Engineering, University of Technology, Sydney, Australia
- “Coastal Groundwater Management Model”: School of Environmental Sciences, Calcutta University, India
- “Piles subjected to Cyclic Loading”: School of Civil Engineering, Fuzhou University, Fujian, China
- “Piles subjected to Lateral Cyclic Load: Theory and Tests”: School of Architecture and Urban Planning, Yunnan University, China
- “Analysis of Single Pile under Torsional Load”: Centre for Geomechanics and Railway Engineering, University of Wollongong, Australia
- “Analysis and Design of Offshore Pile Foundation”: Technique Polytechnic Institution, India
- Delivered seminar talk on my recent research achievements at the School of Civil and Environmental Engineering, University of Technology, Sydney, Australia
- “Piles under Lateral Cyclic Loading” : ASCE-ICE monthly panel discussion at Jadavpur University, Kolkata, India
- “Behaviour of Pile Foundation under Lateral Cyclic Load”: Department of Engineering Science, Oxford University, U.K.
- “Groundwater Extraction and Land Subsidence”: ASCE-ICE monthly panel discussion at Jadavpur University, Kolkata, India
- “Effect of Lateral Cyclic Loading on Axial Response of Pile Foundation” : Civil Engineering Department, National University of Singapore
- “Response of Pile Foundation under Lateral Cyclic Load ----- An Experimental Study”: Centre for Offshore Foundation System, University of Western Australia, Perth, Australia
- “An Experimental Study on Effect of Lateral Cyclic Loading on Axial Response of Pile”: Institute of Geotechnical Engineering, University of Stuttgart, Germany
- “Pile Foundation”: ASCE-ICE monthly panel discussion at Jadavpur University, Kolkata, India

(4) COUNTRIES VISITED FOR ACADEMIC ASSIGNMENTS:

- United States of America
- United Kingdom
- Germany
- Australia
- New Zealand
- Singapore
- Malaysia
- China
- Sri Lanka
- Bangladesh

APPENDIX D

SUPERVISION OF RESEARCH STUDENTS

(1) AREAS OF RESEARCH:

- Ground Improvement
- Transport Geotechnics
- Pile Foundations
- Marine Geotechnology
- Groundwater Hydraulics and Hydrology
- Mechanics of Solids
- Construction Management
- Renewable Energy

(2) SUPERVISION OF STUDENTS:

- Doctor of Philosophy in Engineering --- 03
- Master of Engineering --- 10

(3) DETAILS OF SUPERVISION OF STUDENTS:

Level	Name of the student	Title of thesis	Area of Research	Status	Joint Supervision
Ph. D. (Engineering)	Subhadeep Mondal	Soft Ground Improvement using Natural and Synthetic Fibers	Geotechnical Engineering	Ongoing	Yes
Ph. D. (Engineering)	Tai Pei	Behaviour of Stone Column Stabilized Soft Ground under Cyclic Load	Geotechnical Railway Engineering	Awarded	Yes
Ph. D. (Engineering)	Debabrata Kar	An Innovative Technique for Arresting Project Slippage in Water Resource Development Projects	Construction Management	Awarded	Yes
Master of Engineering	Sameer Bharadwaj	Stone Column Improved Soft Soil: Installation Effects	Geotechnical Engineering	Awarded	Yes
Master of Engineering	Ghritartha Goswami	A Laboratory Study on Saltwater Intrusion Effects on Aquifer Material relevant to Coastal Environment	Water Resources Management	Awarded	Yes
Master of Technology	Sanjay Bhuyan	Effects of Land Use Change on Storm Hydrograph of Kakodonga Watershed	Water Resources	Awarded	Yes
Master of Technology	Khairul Zaman	Modification of Major Evaporation Models for use in Kakodonga Watershed	Water Resources Management	Awarded	Yes
Master of Engineering	Sankha Subhra Sen	A Mathematical Solution of Torsional Cyclic Loading on Piles embedded in an Elastic Medium	Geotechnical Engineering	Awarded	No
Master of Engineering	Chitta Sahana	Experimental Investigation on Saline Water Intrusion	Geoenvironmental Engineering	Awarded	Yes
Master of Engineering	Kallol Biswas	Development and Performance Study of an Apparatus for Imparting Cyclic Load on Model Pile Foundations	Geotechnical Engineering/ Solid Mechanics	Awarded	Yes
Master of Engineering	Mrinmoy Debnath	Extraction of Groundwater from Wells and associated Land Subsidence	Geoenvironmental Engineering	Awarded	Yes
Master of Engineering	Sujoy Kr Sarkar	Reduction of Local Scour around Bridge Pier	Geohydraulic Engineering	Awarded	Yes
Master of Engineering	Pronoy Kumar Mohapatra	Flow of Saline Water through Sand	Geoenvironmental Engineering	Awarded	Yes

(4) Supervision of Research Fellows in R & D Projects:

- Biswajit Barman.
- Subhajit Kumar.
- Ayan Banerjee.

(5) Undergraduate Thesis Supervision:

Level	Name of the student	Title of thesis	Field of Specialization	Status	Duration (months)	Joint supervision	University
Bachelor of Technology – final year	S. Dutta et al.	Offshore Wind Turbine	Civil, Mechanical, Electrical Engineering	Complete	12	Yes	MAKAUT
Bachelor of Technology – final year	Asif Iqbal et al.	Soft Ground Improvement by Perforated Piles	Geotechnical Engineering	Complete	12	Yes	MAKAUT
Bachelor of Engineering –final year	Nathan Krause	Smear Zone Characteristics of Stone Columns	Geotechnical Engineering	Complete	6	No	UOW
Bachelor of Engineering –final year	Zhenkun Xie	Laboratory Study on Installation effect of Stone Columns in Soft Ground	Geotechnical Engineering	Complete	6	No	UOW
Bachelor of Engineering – final year (Summer Research)	Sandip Dey	Analysis of Single Pile in Sand under Cyclic Lateral Loading	Geotechnical Engineering	Complete	2	No	BESU
Notes: UOW = University of Wollongong; BESU = Bengal Engineering and Science University; MAKAUT: MAKA University of Technology							

APPENDIX E

FUNDED RESEARCH PROJECTS EXECUTED

Title of the Project	Sponsoring Authority	Official Designation of the Applicant	Amount Sanctioned	Status
Development of a Boundary Element Solution for Offshore Pile Foundation	Defence Research and Development Organisation, Government of India	Supervisor	INR 10,000	Completed (2012)
Mathematical Solution of Pile subjected to Torsional Cyclic Loading	Defence Research and Development Organisation, Government of India	Supervisor	INR 15,000	Completed (2012)
A Study on Effectiveness of Vertical Drains for Improving Long Term Performance of Soft Clay Deposits with Particular Reference to Stone Columns	DEEWR, Australian Government	Post-Doctoral Fellow	AU\$ 22,500	Completed (2010)
Degradation of Soil Pile Interactive Performance under Lateral Cyclic Loading.	University Grants Commission, Government of India.	Principal Investigator	INR 6,88,100	Completed (2005-2008)
Effect of Lateral Cyclic Loading on Axial Response of Pile Foundation.	All India Council for Technical Education (Career Award for Young Teachers)	Principal Investigator	INR 10,50,000	Completed (2004-2007)
Saline Water Intrusion into Coastal Aquifers of East Coast of India.	All India Council for Technical Education (Research Promotion Scheme)	Co-Principal Investigator	INR 3,00,000	Completed (2004-2006)
Pile under Lateral Cyclic Load	Council of Scientific and Industrial Research, Government of India	Senior Research Fellow	INR 2,00,000	Completed (1997-1999)

APPENDIX F

CONFERENCE / SEMINAR / WORKSHOP and PROFESSIONAL TRAINING

(1) ORGANISING CONFERENCE/SEMINAR/WORKSHOP:

- Patron, National Conference on ‘Development in Engineering Education and Practices’ (DEEP-2022) , EliteCollege of Engineering, Kolkata, India (April 6-8, 2020).
- Chairman, International Webinar on ‘Featured Advances in Science and Technology’, Elite College of Engineering, Kolkata, India (August 17-21, 2020).
- Convener, International Workshop on ‘Advances in Sustainable Civil Infrastructure Development’, Kaziranga University, Assam India (January 22-23, 2019).
- Convener, National Workshop on ‘Advances in Civil Engineering’, Kaziranga University, Assam India (September 27-28, 2018).
- Member, Organizing Committee: North-east Sustainable and Inclusive Development Summit, Kaziranga University and Council for Scientific and Industrial Research, India (April 26-28, 2018).
- Member, Organising Committee: Workshop on Transport and Energy, Centre for Geomechanics and Railway Engineering, University of Wollongong, Australia (November 26, 2014).
- Member, Organising Committee: 42nd Annual Conference on Indian Society for Theoretical and Applied Mechanics, at Bengal Engineering and Science University, Howrah, India (December 18-21, 2013).
- Secretary: Seminar on ‘Advances in Engineering Education’ (Special Topic: Problem-Based Learning in Engineering, delivered by Dr H K Banerjee, Retired Professor of Civil Engineering, University of Newcastle, NSW, Australia) at Bengal Engineering and Science University, Howrah, India (July 23, 2012)
- Member, Organising Committee: 2nd Regional Workshop on Disaster Management, sponsored by Department of Science and Technology, Government of India, hosted by Bengal Engineering and Science University, Howrah, India (March 1-2, 2005).

(2) PARTICIPATION IN SHORT TERM COURSES:

Title of the Course	Organiser		Duration
NPEEE course on “Soil Dynamics and Earthquake Engineering”	Indian Institute of Technology, Madras.	Department of Civil Engineering, Indian Institute of Technology, Madras, India.	01 week
“Environmental Science for Engineers and Scientists”	Bengal Engineering and Science University, Shibpur.	Bengal Engineering and Science University, Shibpur, India.	01 week
“Application of Rock Mechanics in Civil Engineering Projects”	Indian Institute of Technology, Roorkee.	Department of Civil Engineering, Indian Institute of Technology, Roorkee, India.	01 week
NPEEE course on “Structural Dynamics --- Applications to Earthquake Engineering”	Indian Institute of Technology, Bombay.	Department of Civil Engg., Indian Institute of Technology, Bombay, India.	02 weeks
“Design of Instructional System”	Technical Teachers’ Training Institute, Kolkata.	Technical Teachers’ Training Institute, Kolkata, India.	02 weeks
“Relational Data Based Management Systems”	- do -	Technical Teachers’ Training Institute, Kolkata, India.	02 weeks

(3) PARTICIPATION IN MAJOR CONFERENCE/SEMINAR:

- International Conference on Geotechnical Engineering 2015: Colombo, Sri Lanka
- 12th Australia-New Zealand Conference on Geotechnical Engineering, Wellington, New Zealand
- International Conference on Advances in Geotechnical Engineering, Perth, Australia
- 31st Southwest Geotechnical Engineers Conference, Albuquerque, New Mexico, USA
- International Science Congress 2005, Kuala Lumpur, Malaysia.
- Indian Geotechnical Conferences (1996 - 2012)

APPENDIX G**INTERNATIONAL RESEARCH COLLABORATION**

- ❖ Geotechnical Engineering Division
Department of Civil and Environmental Engineering
University of Nevada, Las Vegas
UNITED STATES OF AMERICA
- ❖ Petroleum and Geological Engineering Division
School of Civil Engineering
University of Oklahoma
UNITED STATES OF AMERICA
- ❖ Geotechnical Engineering Division
Department of Civil and Environmental Engineering
University of Technology, Sydney
AUSTRALIA
- ❖ Centre for Geomechanics and Railway Engineering
School of Civil, Mining and Environmental Engineering
University of Wollongong
AUSTRALIA
- ❖ Geotechnical Engineering Division
Department of Civil Engineering
Fuzhou University
Fujian
CHINA
- ❖ Geotechnical Engineering Division
Department of Civil and Environmental Engineering
East China Jiao Tong University
Nanchang
CHINA
- ❖ Faculty of Engineering
Technical University of Sofia
Sofia
BULGARIA
- ❖ Civil Engineering Department
College of Engineering,
King Khalid University
SAUDI ARABIA
- ❖ Department of Civil Engineering & Architecture
University of Pavia
ITALY

APPENDIX H

THEORETICAL SUBJECTS TAUGHT

Undergraduate:

- Soil Mechanics
- Ground Improvement Techniques
- River Engineering
- Strength of Materials
- Engineering Mechanics
- Engineering Drawing

Postgraduate:

- Groundwater Resources
- Design of Hydraulic Structures
- Theory of Elasticity
- Theory of Plasticity
- Research Methodology

Laboratory Classes:

- Soil Mechanics
- Strength of Materials
- Engineering Mechanics
- Fluid Mechanics
- Hydraulics
- Engineering Drawing and Drafting

APPENDIX J

ADMINISTRATIVE RESPONSIBILITIES HANDLED AND ENGAGEMENT WITH INDUSTRY AND COMMUNITY

INDUSTRIAL CONSULTATIONS:

- Subsoil investigation for Prime Minister’s Rural Roads Construction Scheme, India (2001-2002).
- Concrete testing for Department of Irrigation Engineering, Government of West Bengal, India (2002).
- Carried out consultancy works on Low Head Hydel Power project for M/s Centre for Leather Forum, Kolkata, India (2002-2003).
- Carried out consultancy project titled as “Strengthening, Retrofitting, Rehabilitation of Structural and Non-Structural Members of various RCC Framed and Masonry Structures including Hospital Buildings.” Naisarai Colony, Ramgarh, Jharkhand on behalf of CCL and CMPDI, Ranchi, Government of India (2023).

ADMINISTRATIVE RESPONSIBILITIES HANDLED:

- Acted as Principal of Engineering Colleges affiliated to MAKKA University of Technology and handling various administrative responsibilities.
 - Acted as Chairman, Internal Quality Assurance Cell, Elite College of Engineering.
 - Acted as Head of the Department of Civil Engineering at Kaziranga University, India and handled various administrative responsibilities.
 - Organised Seminars and Meetings on behalf of the Centre for Geomechanics and Railway Engineering, University of Wollongong, Australia and also in India.
 - Served as a Member of Selection Committees for recruitment in several technical institutions in West Bengal, India including Bengal Engineering and Science University, Technique Polytechnic and Industrial Training Institute.
 - Service as member of Interview Board for admission to Postgraduate Studies at Bengal Engineering and Science University, India.
 - Served regularly as External Observer in the State Level Engineering Entrance Examination in West Bengal, India.
 - Served as an active member of various committees like: Research Projects Evaluation Committee, Departmental Academic Committee, Tabulation Committee, etc. at Bengal Engineering and Science University, India.
-