

Dr. Arghadeep Biswas

Assistant Professor
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Research Interest: *Geocell-Reinforced Soil / Soil Reinforcement / Ground Improvement Techniques*

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ResearcherID: F-2203-2016

Google Scholar Profile: <https://scholar.google.com/citations?user=3PZ7NvEAAAAJ&hl=en>

Researchgate Profile: <https://www.researchgate.net/profile/Arghadeep-Biswas>

Education:

- **Ph.D.** (Geotechnical Engineering): Indian Institute of Technology Guwahati (2016)
- **M.Tech.** (Geotechnical Engineering): Indian Institute of Technology Kharagpur (2009)
- **B.E.** (Civil Engineering): Jadavpur University (2007)

Employments:

- **Assistant Professor:** Jadavpur University (From 29/09/2021)
- **Assistant Professor:** Jalpaiguri Govt. Engg. College, West Bengal (23/12/2014 to 28/09/2021)
- **Assistant Professor:** National Institute of Technology, Meghalaya (08/08/2014 to 22/12/2014)
- **Lecturer:** Adamas Institute of Technology, Kolkata (10/12/2009 to 31/12/2010)
- **Lecturer:** Ramakrishna Mission Shilpamandira, Howrah (01/09/2009 to 09/12/2009)

Publications:

(a) Journals:

1. Krishna, A.M., **Biswas, A.** (2021). Performance of Geosynthetic Reinforced Shallow Foundations, *Indian Geotechnical Journal*, Springer, DoI: 10.1007/s40098-021-00546-3
2. **Biswas, A.** (2019). Comparative Performance of Different Geosynthetics on Sandy Soil Overlying Clay Subgrades of Varying Strengths, *Innovative Infrastructure Solutions*, Springer DoI: 10.1007/s41062-019-0204-5
3. **Biswas, A.,** and Krishna, A.M. (2017). Behavior of Geocell-Geogrid Reinforced Foundations on Clay Subgrades of Varying Strengths, *International Journal of Physical Modelling in Geotechnics*, ICE Publishing, DoI.: 10.1680/jphmg.17.00013
4. **Biswas, A.,** and Krishna, A.M. (2017). Geocell-Reinforced Foundation Systems: A Critical Review, *International Journal of Geosynthetics and Ground Engineering*, DoI: 10.1007/s40891-017-0093-7
5. **Biswas, A.,** and Krishna, A.M. (2017). Behaviour of Circular Footing Resting on Layered Foundation: Sand Overlying Clay of Varying Strengths. *International Journal of Geotechnical Engineering*, DoI: 10.1080/19386362.2017.1314242

6. **Biswas, A.**, Krishna, A.M. and Dash, S.K. (2016). Behavior of Geosynthetic Reinforced Soil Foundation Systems Supported on Stiff Clay Subgrade. *International Journal of Geomechanics*, ASCE, DoI: 10.1061/(ASCE)GM.19435622.0000559
7. **Biswas, A.**, Ansari, M.A., Dash, S.K. and A., Krishna, A.M. (2015). Behavior of Geogrid Reinforced Foundation Systems Supported on Clay Subgrades of Different Strengths. *International Journal of Geosynthetics and Ground Engineering*, Springer, DoI: 10.1007/s4089101500235
8. **Biswas, A.**, Krishna, A.M. and Dash, S.K. (2013). Influence of Subgrade Strength on the Performance of Geocell-Reinforced Foundation Systems. *Geosynthetics International*, ICE Publishing, DoI: 10.1680/gein.13.00025

(b) Geotechnical Special Publication, ASCE (GSP):

1. GuhaRay, A., **Biswas, A.**, Chauhan, D.R. (2018). Reliability Analysis of Foundation Systems Supported on Clay Subgrades of Different Strengths: A Finite Element Approach. *International Foundations Congress and Equipment Exposition (IFCEE 2018)*, Florida, DoI: 10.1061/9780784481585.025 (ASCE, GSP 295)

(c) Conferences:

1. Chanda, A., Mandal, S., and **Biswas, A.** (2021). **Effect of Super Structural Symmetry on Pile Foundations under Pseudo-Static Loading**. *Indian Geotechnical Conference (IGC-2021)*, NIT Tiruchirapalli, Chennai, India
2. Mandal, S., Chanda, A., and **Biswas, A.** (2021). **Response of Isolated Shallow Footing on Sloping Ground with Dynamic Loading**. *Indian Geotechnical Conference (IGC-2021)*, NIT Tiruchirapalli, Chennai, India
3. Mandal, S., Chanda, A., and **Biswas, A.** (2021). **Stability of Isolated Shallow Footing on Slope under Dynamic Loading**. *8th Indian Young Geotechnical Engineers Conference (8IYGEC-2021)*, Chennai, India
4. Chanda, A., Mandal, S., and **Biswas, A.** (2021). **Pile-Performance Influenced by Super-structural Symmetry and Dynamic Loading**. *8th Indian Young Geotechnical Engineers Conference (8IYGEC-2021)*, Chennai, India
5. Krishna, A.M., and **Biswas, A.** (2020). Performance of Geosynthetic Reinforced Shallow Foundations (**Theme Lecture**). *Indian Geotechnical Conference (IGC-2020)*, Andhra University, Vizag, India
6. **Biswas, A.**, and Sarkar, H. (2020). Numerical Study of Multi-Layered Geocell Confined Pavement Subgrade. *Indian Geotechnical Conference (IGC-2020)*, Andhra University, Vizag, India
7. **Biswas, A.**, Mandal, U., and Chakraborty, A. (2020). Experimental Study on Parametric Influences of Stone Column Reinforced Foundation Systems. *Indian Geotechnical Conference (IGC-2020)*, Andhra University, Vizag, India
8. **Biswas, A.**, and Sarkar, H. (2019). Response of Multi-layered-Stepped Geocell Reinforcement in Soil Structures. *Indian Geotechnical Conference (IGC-2019)*, SVNIT Surat, Gujarat, India
9. Sarkar, H. and **Biswas, A.** (2019). Behaviour of Multi-Layer-Geocell Reinforced Soil Embankment. *7th Indian Young Geotechnical Engineers Conference (7IYGEC-2019)*, NIT Silchar, Assam
10. Ghose, S., **Biswas, A.**, and Mandal, U. (2019). Parametric Effect of Granular Column: A Brief Review. *7th Indian Young Geotechnical Engineers Conference (7IYGEC-2019)*, NIT Silchar, Assam

11. **Biswas, A.**, Banerjee, A., and Das, R. (2019). Parametric Influence on Behaviour of Skirted Foundation. *7th Indian Young Geotechnical Engineers Conference (7IYGEC-2019)*, NIT Silchar, Assam
12. Sarkar, H. and **Biswas, A.** (2019). Application of Geocell Reinforcement in Pavements – A Brief Review. *Indian Conference on Geotechnical and Geoenvironmental Engineering (ICGGE-2019)*, MNNIT Allahabad
13. Ghose, S., **Biswas, A.**, and Mandal, U. (2019). A Brief Review on Parametric Behaviour of Granular Column in Different Configurations. *Indian Conference on Geotechnical and Geoenvironmental Engineering (ICGGE-2019)*, MNNIT Allahabad
14. **Biswas, A.** and Krishna, A. M. (2017). Influence of Base-Geogrid on the Performance of Geocell Reinforced Foundation on Clay Subgrades of Varying Strengths. *6th Indian Young Geotechnical Engineers Conference (6IYGEC-2017)*, NIT Trichy, India
15. **Biswas, A.**, Krishna, A.M. and Dash, S.K. (2013). Applicability of Planar Geogrid Reinforcement in Geocell-Reinforced Foundation Systems, *Indian Geotechnical Conference (IGC-2013)*, IIT Roorkee, India
16. **Biswas, A.**, Krishna, A.M. and Dash, S.K. (2013). Behavior of Circular Footing on Layered Soil: Sand Overlying Clay Subgrades. *4th Indian Young Geotechnical Engineers Conference (4IYGEC-2013)*. IIT Chennai, India, 157-160
17. **Biswas, A.**, Dash, S.K. and Krishna, A.M. (2012). Parameters Influencing the Performance of Geocell-Reinforced Foundation System: A Brief Review. *Indian Geotechnical Conference (IGC-2012)*, IIT Delhi, India, Vol. 1, 365-368
18. **Biswas, A.** (2012). Geotechnical Aspect of Waste Utilization: A Qualitative Analysis. *Indian Geotechnical Conference (IGC-2012)*, IIT Delhi, India, Vol. 2, 787-790.
19. Ghosh, P. and **Biswas, A.** (2012). Effect of Reinforcement on Stability of Slopes using GEOSLOPE, *Special Publication in IJCA as Proceedings on International Conference on BEST*, 3, 29-32
20. Biswas, S., **Biswas, A.**, and Dighade, A (2012). Utilization of Rice Husk with Lime in Subgrade Soil for a Rural Road, *Special Publication in IJCA as Proceedings on International Conference on EFITRA*, 4, 1-3

(c) Conference (Abstract Only):

1. Sarkar, H. and **Biswas, A.** (2019). Multi-Layered Geocell: The Future of Soil Reinforcement, *4th Regional Science and Technology Congress (Northern Region)*, Alipurduar College, Alipurduar (**Awarded as Outstanding Paper**)
2. Sarkar, H. and **Biswas, A.** (2018). A Brief Review on Application of Geocell in Pavements. *3rd Regional Science and Technology Congress (Northern Region)*, Jalpaiguri Govt. Engg. College, Jalpaiguri
3. Ghose, S., **Biswas, A.**, and Mandal, U. (2018). Granular Column: A Brief Review. *3rd Regional Science and Technology Congress (Northern Region)*, Jalpaiguri Govt. Engg. College, Jalpaiguri
4. Banerjee, A., Das, R., and **Biswas, A.** (2018). Parametric Influence on Behaviour of Skirted Foundation. *3rd Regional Science and Technology Congress (Northern Region)*, Jalpaiguri Govt. Engg. College, Jalpaiguri

(d) Book Chapters:

1. Ghose, S., **Biswas, A.** and Mandal, U. (2022). Parametric Effect on Granular Columns: A Brief Review. Proceedings of the 7th Indian Young Geotechnical Engineers Conference, Springer Nature, DOI: 10.1007/978-981-16-6456-4.
2. Sarkar, H. and **Biswas, A.** (2022). Behaviour of Multi-layer Geocell-Reinforced Soil Embankment. Proceedings of the 7th Indian Young Geotechnical Engineers Conference, Springer Nature, DOI: 10.1007/978-981-16-6456-4.
3. **Biswas, A.**, Banerjee, A. and Das, R. (2022). Parametric Influence on the Behavior of Skirted Foundation. Proceedings of the 7th Indian Young Geotechnical Engineers Conference, Springer Nature, DOI: 10.1007/978-981-16-6456-4.
4. **Biswas, A.** and Sarkar, H. (2021). Numerical Study of Multi-Layered Geocell Confined Pavement Subgrade. N.V.S.R. Chirla et al. (eds.), *Ground Improvement and Reinforced Soil Structures*, Lecture Notes in Civil Engineering 152, Springer, https://doi.org/10.1007/978-981-16-1831-4_66 (Ch. - 66)
5. **Biswas, A.**, Mandal, U. and Chakraborty, A. (2021). Experimental Study on Parametric Influences of Stone Column Reinforced Foundation Systems. N.V.S.R. Chirla et al. (eds.), *Ground Improvement and Reinforced Soil Structures*, Lecture Notes in Civil Engineering 152, Springer, https://doi.org/10.1007/978-981-16-1831-4_4 (Ch. - 4)
6. Sarkar, H. and **Biswas, A.** (2021). Response of Multilayered Stepped Geocell Reinforcement in Soil Structures. S. Patel et al. (eds.), *Proceedings of the Indian Geotechnical Conference 2019*, Lecture Notes in Civil Engineering 136, Springer, https://doi.org/10.1007/978-981-33-6444-8_26 (Ch. - 26)
7. Krishna, A.M., **Biswas, A.**, Prasath, S.B. and Dash, S.K. (2020). Performance of Geocell-Reinforced Foundations with Clay Subgrades of Varying Strength. *Geocells: Advances and Applications*. Eds. Sitharam, T.G., Hegde, A., and Kolatkar, S. Springer Transactions in Civil and Environmental Engineering, Springer, https://doi.org/10.1007/978-981-15-6095-8_6 (Ch. - 6)

Invited Lecture/Speaker in Training Programme/Judge/Session Chair etc.:

- **Biswas, A.** (2022). ‘Slope Stability Analysis’ Invited Lecture at ICT based Short Term Training Programme (STTP) on Refresher Course in Geotechnical Engineering at NITTTR Kolkata on 29th April, 2022
- **Biswas, A.** (2022). ‘Lateral Earth Pressure’ Invited Lecture at ICT based Short Term Training Programme (STTP) on Refresher Course in Geotechnical Engineering at NITTTR Kolkata on 28th April, 2022
- **Session Chair** - ICTEMA2020 (19-20, December, 2020)
- **Biswas, A.** (2019). Delivered invited lecture at Arabinda Madhyamik (HS) Bidyalaya on Civil/Construction Engineering (2019)
- **Biswas, A.** (2019). ‘Design of Rural Pavement’. Invited Lecture at Training course of Nirman Sahayaks’, Organized by Dept. of Civil Engg., GKCIET, Malda, West Bengal, Sponsored by Panchayat and Rural Development Department, Govt. of West Bengal
- **Biswas, A.** (2019). ‘Soil Mechanics and Foundation Engineering’. Invited Lecture at Training course of Nirman Sahayaks’, Organized by Dept. of Civil Engg., GKCIET, Malda, West Bengal, Sponsored by Panchayat and Rural Development Department, Govt. of West Bengal

- **Biswas, A.** (2019). 'Soil Reinforcement/Ground Improvement Technique' Invited Lecture at the Five Days Seminar on Selected Topics in Cutting-Edge Engineering Applications organised by Cooch Behar Government Engineering College, Cooch Behar, West Bengal
- **Biswas, A.** (2017). 'Design of Rural Pavement'. Invited Lecture at Training course on 'Residential Training for Nirman Sahayaks on Rural Issues', Organized by Dept. of Civil Engg., Jalpaiguri Govt. Engineering College, West Bengal, Sponsored by Panchayat and Rural Development Department, Govt. of West Bengal.
- **Biswas, A.** (2017). 'Pavement Material Testing Manual'. Invited Lecture at Training course on 'Residential Training for Nirman Sahayaks on Rural Issues', Organized by Dept. of Civil Engg., Jalpaiguri Govt. Engineering College, West Bengal, Sponsored by Panchayat and Rural Development Department, Govt. of West Bengal.
- **Biswas, A.** (2017). 'Different in-situ Soil-Testing'. Invited Lecture at Training course on 'Residential Training for Nirman Sahayaks on Rural Issues', Organized by Dept. of Civil Engg., Jalpaiguri Govt. Engineering College, West Bengal, Sponsored by Panchayat and Rural Development Department, Govt. of West Bengal.
- **Judge** at District Student-Youth Science Fair-2016, under the auspices of Youth Services Department, Government of West Bengal, at A. C. College, Jalpaiguri, West Bengal (2016).

➤ **Short term Course/Conference/Seminar Organized/Committee Member:**

- Organizing Committee Member - International Conference on Thermal Engineering and Management Advances (ICTEMA2020) organised by Department of Mechanical Engineering, Jalpaiguri Govt. Engg. College (19-20, December, 2020)
- Organizing Committee Member - 3rd Regional Science & Technology Congress 2018 (Northern Region) Organised by Department of Science, Technology and Biotechnology, Govt. of West Bengal at Jalpaiguri Govt. Engg. College, Jalpaiguri
- Coordinated 9 nos. of training course, titled 'Residential Training for Nirman Sahayaks on Rural Issues'. Organized by Dept. of Civil Engg., Jalpaiguri Govt. Engineering College, West Bengal, Sponsored by PNRD, Govt. of West Bengal. (From 04/09/2017 to 08/12/2017: 9 Weeks)

Membership of Professional Bodies:

- Life Member: Indian Geotechnical Society, Kolkata Chapter
- Life Member: Indian Geotechnical Society
- Life Member: Institutes of Engineers (India)
- Chartered Engineer: Institutes of Engineers (India)
- Aff. Member: ASCE, ASCE (2014-2017) (Membership No. 9819016)

Reviewer of National/International Journals/Conferences:

- International Journal of Pavement Research and Technology
- Geomechanics and Engineering, *An International Journal* (Techno Press)
- Frontiers Built Environment
- Earthquake Engineering and Engineering Vibration
- International Journal of Physical Modelling in Geotechnics
- Marine Georesources & Geotechnology
- Advances in Civil Engineering (Hindawi)
- Journal of Institution of Engineers (India): Series A

- International Journal of Geomechanics, ASCE
- International Journal of Geo-Engineering
- Geosynthetics International
- International Journal of Geosynthetics and Ground Engineering
- Geotechnical and Geological Engineering
- Scientific Research and Essays
- Indian Geotechnical Conference-2020
- 3rd Regional Science & Technology Congress 2018 (Northern Region)
- Editorial Board Member – TRACE 2018 (Organised by Amity University, Noida)
- Indian Geotechnical Conference-2017