ABHISHEK GHOSH DASTIDER

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EDUCATIONAL BACKGROUND

- **PhD** – Civil Engineering (Geotechnical Specialisation) - Indian Institute of Technology Bombay, India, 2021 (GPA – 9.73/10)
  Thesis*: Advanced Numerical Analysis of Free-Fall Penetration and Bearing Capacity Problems in Clay*; Supervisor: *Dr. Santiram Chatterjee* and *Dr. Prasenjit Basu*
- **MTech** - Civil Engineering (Geotechnical Specialisation) - Indian Institute of Technology Kharagpur, India, 2015 (GPA – 9.46/10)
  Thesis: *Evaluation of Liquefaction Potential of Soils – Reliability Based Approach*;
  Supervisor: *Prof. Dilip Kumar Baidya*
- **BEng** - Civil Engineering - Jadavpur University, India, 2012 (GPA – 8.48/10)
- **Higher Secondary** (12^{th}) - Jodhpur Park Boys' School, India, 2008 (Percentage – 91.4)
- **Secondary** (10^{th}) - Jodhpur Park Boys' School, India, 2006 (Percentage – 86.6)

PROFESSIONAL APPOINTMENTS

- **Assistant Professor**, Department of Civil Engineering, Indian Institute of Technology Kharagpur, India (September 2023 – present)
- **Research Associate**, Department of Engineering, University of Cambridge, United Kingdom (September 2022 – August 2023); Mentor: *Dr. Sam Stanier* and *Prof. Giulia Viggiani*
- **Postdoctoral Fellow**, Department of Civil Engineering, Indian Institute of Technology Bombay, India (December 2021 - August 2022); Mentor: *Dr. Santiram Chatterjee* and *Prof. Prasenjit Basu*
- **Assistant Professor**, Kalinga Institute of Industrial Technology, Bhubaneswar, India (June 2015 - December, 2015)
- **Structural Engineer**, M. N. Dastur & Co. Pvt. Ltd., Kolkata, India (August 2012 - July 2013)

PUBLICATIONS

In Refereed International Journal

J1. Shah, I. A., **Dastider, A. G.**, Basu, P., & Chatterjee, S. (2024). "A thermoplastic clay constitutive model with temperature dependent evolution of stress anisotropy" *Geomechanics for Energy and the Environment*, 38, 100568. https://doi.org/10.1016/j.gete.2024.100568. *Impact factor - 5.1.*

J2. **Dastider, A. G.**, Basu, P., & Chatterjee, S. (2023). "Effect of aspect ratio on bearing capacity of footings in structured clay" ***Journal of Geotechnical and Geoenvironmental Engineering***, *149*(8), 06023004. https://doi.org/10.1061/JGGEFK.GTENG-10729. *Impact factor - 4.6*

J3. **Dastider, A. G.**, Chatterjee, S., & Basu, P. (2022). Closure to "Advancement in Estimation of Undrained Shear Strength through Fall Cone Tests" by Abhishek Ghosh Dastider, Santiram Chatterjee, and Prasenjit Basu. ***Journal of Geotechnical and Geoenvironmental Engineering***, *148*(6), 07022006. https://doi.org/10.1061/(ASCE)GT.1943-5606.0002808. *Impact factor - 4.6*

J4. Mandal, A., **Dastider A. G.**, & Chatterjee, S. (2022) "Combined load behaviour of embedded strip footings in layered clays" ***International Journal of Geomechanics***, 22(6), 06022008. https://doi.org/10.1061/(ASCE)GM.1943-5622.0002418. *Impact factor - 3.918*

J5. **Dastider, A. G.**, Chatterjee, S., & Basu, P., (2021). "An Advancement in Estimation of Undrained Shear Strength through Fall Cone Tests" ***Journal of Geotechnical and Geoenvironmental Engineering***, 147(7), 04021047. https://doi.org/10.1061/(ASCE)GT.1943-5606.0002535. *Impact factor - 4.6*

J6. **Ghosh Dastider, A.**, Basu, P., & Chatterjee, S. (2021). "Numerical Implementation of a Stress-Anisotropy Model for Bearing Capacity Analysis of Circular Footings in Clays Prone to Destructuration." ***Journal of Geotechnical and Geoenvironmental Engineering***, 147(5), 04021019. https://doi.org/10.1061/(ASCE)GT.1943-5606.0002482. *Impact factor - 4.6*

J7. **Dastider, A. G.**, Sarkar, N., & Chatterjee, S. (2020). "Numerical study on the lateral breakout behaviour of deep- water pipelines in clays with surficial crust." ***Ocean Engineering***, 218, 108239. https://doi.org/10.1016/j.oceaneng.2020.108239. *Impact factor - 4.372*

J8. **Dastider, A. G.**, Mana, D. S., Chatterjee, S., & Basu, P. (2020). "Free Fall Penetration of Ball Penetrometers in Clay." ***International Journal of Offshore and Polar Engineering***, 30(02), 248-254. https://doi.org/10.17736/ijope.2020.cl16. *Impact factor - 0.897*

J9. Mana, D. S., **Dastider, A. G.**, Basu, P., & Chatterjee, S. (2018). "In situ Undrained Shear Strength Characterization Using Data from Free Fall Ball Penetrometer Tests." ***Computers and Geotechnics***, 104, 310-320. https://doi.org/10.1016/j.compgeo.2017.12.006. *Impact factor - 5.218*

In Refereed International and National Conferences

C1. Chalakatevaki, M., Stanier, S., Lan, H., **Dastider, A. G.**, & Lennon, A. (2023) "A comparison of methods to estimate the cable breakout capacity for off-shore wind applications" in Offshore Site Investigation and Geotechnics conference (OSIG), London, UK, 666-673.

C2. **Ghosh Dastider, A.**, Basu, P., & Chatterjee, S. (2023) Influence of Soil Destructuration on Bearing Capacity Estimation of Square Footings in Structured Clay. Geo-Congress, Los Angeles, USA, 582-592.

C3. **Dastider, A. G.**, Mana, D. S., Chatterjee, S., & Basu, P. (2018). "Prediction of Maximum Penetration Depth for Free Fall Ball Penetrometers in Clay." *In The 28th International Ocean and Polar Engineering Conference*. International Society of Offshore and Polar Engineers. Document Id: ISOPE-I-18-679

C4. **Dastider, A. G.**, Mana, D. S., Chatterjee, S., & Basu, P. (2017). "Use of Coupled Eulerian-Lagrangian Method in Modeling of Free Fall Penetration in Clay" *Proceedings of Indian Geotechnical Conference (IGC-2017), Guwahati*. Document Id: Th16_432.

INVITED PRESENTATIONS

T1. *A framework of material subroutines to implement soil constitutive models*, Lunch & Learn presentations, Division D, Department of Engineering, University of Cambridge, November 2022.

T2. *Influence of Soil Destructuration on Bearing Capacity of Shallow Foundations in Structured Clay*, Cambridge University Geotechnical Society, Michaelmas 2022 Seminar series, December 2022.

RESEARCH GUIDANCE

Doctoral research scholar

D1. Kuldeep Khichar – Co-supervisor

D2. Sumarta Biswas – Supervisor

Postgraduate research scholar

PG1. Namburi Gowtham

PG2. Avikal Srivastava

Summer Interns

SI1. Subharthi Chattopadhyay, MTech, NIT Rourkella (May to June, 2024)

INDUSTRIAL PROJECT INVOLVEMENT

R1. Research Assistant in the Pan IIT-ONGC project, *In situ Strength Characterization of Deep-water Indian Seabed using Free Fall Penetrometers – A Scientific Framework and Field Implementation Guidelines*, at Indian Institute of Technology Bombay, India (2018 - 2022)

COMPUTATIONAL TOOL DEVELOPMENT

- Developed of an open-source library of material subroutines on soil constitutive models (GEOMAT) with my postdoctoral mentor that provides a structured and efficient routine for implementing advanced soil constitutive models in commercial numerical modelling software (https://github.com/sas229/geomat).

COMPUTATIONAL EXPERTISE

- Proficiency in different programming languages such as Python, FORTRAN, C++, and MATLAB.
- Experience of working with different commercial finite element packages such as ABAQUS (using advanced numerical techniques such as CEL, RITSS), PLAXIS, CODEBRIGHT
- Developed user defined subroutines (UMAT, VUSDFLD, UINTER) using FORTRAN programming language compatible to the ABAQUS FE framework.

TEACHING RESPOSIBILITIES

Indian Institute of Technology Kharagpur

- Basic Engineering Mechanics (ME11003)
- Engineering Drawing and Visualization (CE13003; CE13005)
- Geotechnical Engineering Laboratory (CE39203)

University of Cambridge

- Teaching supervisions: *Geotechnical Engineering – I, II* (3D1, 3D2)
- Laboratory Demonstrations: *Geotechnical Engineering – I* (3D1)

Indian Institute of Technology Bombay

- Teaching assistant on *Plasticity Theory and Applications in Geomechanics* (CE656). Delivered guest lectures on the section *Role of plasticity theory in geotechnical boundary value problems.*
- Teaching Assistant in a few other undergraduate and postgraduate courses: *Geotechnical Engineering – I, II, Advanced Soil Mechanics*.

Kalinga Institute of Industrial Technology

- Taught undergraduate and postgraduate theoretical and laboratory courses within the Civil Engineering domain

ADMINISTRIVE DUTIES

- Professor in Charge, Examination Coordination Committee, Civil Engineering Department, IIT Kharagpur

REVIEW RESPONSIBILITIES

Journal

- Journal of Geotechnical and Geoenvironmental Engineering, ASCE
- Indian Geotechnical Journal, Springer

Conference

- GeoCongress ASCE

AWARDS/SCHOLARSHIPS

- **Naik and Rastogi Award for Excellence in Ph.D. Research** (best Ph.D. thesis) from Civil Engineering Department at Indian Institute of Technology Bombay
- Graduate Aptitude Test for Engineers (**GATE**) scholarship, Ministry of Human Resource Development (MHRD), Government of India for the duration of Master degree
- **National scholarship** for college and university students, Ministry of Human Resource Development (MHRD), Government of India for the duration of Bachelor degree
- **Mamraj Agarwal Rashtriya Purashkar** (2008), for holding 7th rank within the state in Higher Secondary Examination

PROFESSIONAL MEMBERSHIPS

- Life member of Indian Geotechnical Society (IGS)
- Member of International Society of Soil Mechanics and Geotechnical Engineering (ISSMGE)
- Affiliated Member of American Society of Civil Engineers (ASCE)
- Member of Trinity College Postdoctoral Society, University of Cambridge