

Abhishek Chakraborty

<https://sites.google.com/view/abhishek-chakraborty>

Ph.D. student (Prime Minister's Research Fellow, PMRF)
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Education

Degree/Certificate	Institute/Board	CGPA/Percentage	Year
Ph.D.	Indian Institute of Science, Bangalore	9.0/10 (Current)	2018 - 2023
M. Tech.	Indian Institute of Technology, Guwahati	9.65/10	2016 - 2018
B. Tech.	Vellore Institute of Technology University	9.17/10	2011-2015
Senior Secondary	CBSE Board	71.4%	2011
Secondary	CBSE Board	92.4%	2008

Internship

- Construction of G+2 Railway Quarters and Railway Track Laying at Bilaspur June 2013
Supervision of construction work under JNPL constructions under South East Central Railway.

Publications

- **Chakraborty, A.**, Bhanja, S.N., Rao, L., Muddu, S. "Assessment of the Role of Seasonal Cycles-Water Table Depth Interplay on the Carbon and Water Fluxes of Indian Ecosystems". [to be submitted]
- **Chakraborty, A.**, Muddu, S., Rao, L. (2021), "Assessment of the Impacts of Climate and Land Use Change and Uncertainty Quantification of the Global Gross Primary Productivity: A Performance Weightage Ensemble Approach". 2021 Fall Meeting, AGU, New Orleans, LA, 13-17 December.
- **Chakraborty, A.**, Muddu, S., Rao, L. (2021), "Assessment of the Carbonate Weathering Carbon Sink Potential of Indian Ecosystems for the 21st Century". Goldschmidt2021 Virtual - 5584, 4-9 July, 2021.
- **Chakraborty, A.**, Muddu, S., and Rao, L. (2021): Assessment of Impact of Hydroclimatic Disturbances on Terrestrial GPP Extremes of India Under Land Use and Climate Change, EGU General Assembly 2021, online, 19–30 Apr 2021, EGU21-4195, <https://doi.org/10.5194/egusphere-egu21-4195>, 2021.
- **Chakraborty, A.**, Sekhar, M., Rao, L.N. (2020), "Assessment of Spatial Variations and the Interaction of Climate-Soil-Human Drivers of India's Terrestrial Carbon Use Efficiency". [Paper number: B108-0012], 2020 Fall Meeting, AGU, San Francisco, CA, 1-17 December.
- **Chakraborty, A.**, Sekhar, M., Rao, L.N. (2020), "Assessment of Carbon Storage of India's Terrestrial Ecosystems and Important Drivers: A Remote Sensing Approach". In National Symposium on Remote Sensing for Environment Modelling & Climate Change Assessment: Opportunities and Challenges, Space Applications Centre (ISRO), Ahmedabad, Page 132 – 133, 18-19 December. **[Awarded as the best paper in the student category]**
- **Chakraborty, A.**, Deb, D. and Kartha, S.A. (2017). Study on the Variation of Moisture Content and Suction Pressure in Boragaon Landfill soil. *7th International Ground Water Conference (IGWC-2017)*, December 11-13, 2017, New Delhi, India. ISBN: 978-93-81891-42-1.
- Deb, D., **Chakraborty, A.**, and Kartha, S.A. (2017). Effect of Cycles of Irrigation on the Amount of Toxic Metals Leached into Subsurface Water from Boragaon Waste Landfill Soil. *7th International Ground Water Conference (IGWC-2017)*, December 11-13, 2017, New Delhi, India. ISBN: 978-93-81891-42-1.

- Nithya, K.M., Joshi, A.A., **Chakraborty, A.** (2014). Study on Effects of Rubber Crumbs on Geotechnical Characteristics of Cohesive Soil. *Proceedings of Indian Geotechnical Conference IGC-2014*, Page 986 – 992, December 18-20, 2014, Kakinada, India.
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Projects

- 30-Year Temporal Land use - Land cover changes in Guwahati and Dispur Localities
Prof. D. Nagesh Kumar, Professor, Dept of Civil Engg., IISc Bangalore Oct 2018 - Nov 2018
Mapping the 30-year land use - land cover in Guwahati and Dispur localities using QGIS software.
 - Modeling Flow through Heterogeneous Boragaon Landfill Refuse
Dr. Suresh A. Kartha, Associate Professor, Dept of Civil Engg., IIT Guwahati Sept 2017 – May 2018
MATLAB programming to train and validate the neural network using experimental data. (M. Tech. thesis)
 - Stabilization of Black Cotton Soil using an Optimal Mixture of Cement and Rubber Crumbs
Dr. Nithya K.M., Assistant Professor, Dept of Civil Engg., VIT University Dec 2014 - May 2015
Experimental studies on expansive clay to increase strength and decrease the swelling and shrinkage.
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Technical skills

- Programming Languages: MATLAB, C*, R, Python.
 - Software Packages: RETC, MODFLOW*, Hydrus*, ArcGIS*, QGIS, ERDAS Imagine, ENVI, iMOD.
* *Elementary proficiency*
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Positions of Responsibility

- Teaching Assistant for the Stochastic Hydrology and Fluid Mechanics courses under the requirements of MHRD scholarship at IIT Guwahati.
 - Teaching Responsibility at KV, IISc Bangalore as part of PMRF teaching duties.
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Achievements

- Prime Minister's Research Fellowship (PMRF): PMRF awardee for research on national priorities.
 - Best Paper Award at National Symposium held by Space Applications Centre (ISRO), Ahmedabad: Awarded for the paper titled "Assessment of Carbon Storage of India's Terrestrial Ecosystems and Important Drivers: A Remote Sensing Approach" during National Symposium on Remote Sensing for Environment Monitoring & Climate Change Assessment: Opportunities & Challenges hosted by Space Applications Centre (Ahmedabad) on December 18-19, 2020.
 - Selected to receive Virtual Student Travel Grant to participate in the 2020 American Geophysical Union (AGU) Fall Meeting, 1-17 December 2020.
 - Graduate Aptitude Test in Engineering (GATE 2016): Secured a GATE 98.8 percentile and achieved the Ministry of Human Resources & Development (MHRD) scholarship.
 - Bachelor of Engineering: Secured third rank in VIT University, Chennai campus.
 - State Engineering Entrance Exam: Obtained 398th rank.
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Workshops Attended

- Hydro-JULES Summer School 2021: Attended a 5-day workshop Hydro-JULES Summer School Workshop on "Modeling Hydrology and Global Change" from 12 to 16 July 2021.
 - Advanced Geochemical Modeling Workshop: Attended a 5-day workshop Hydro-JULES Summer School Workshop on "Modeling Hydrology and Global Change" from 12 to 16 July 2021.
 - Indo-French Remote Sensing Workshop: Attended 3-day workshop in "Indo-French Monsoon School on Remote Sensing" in October 2019.
 - iMOD Workshop: Attended 1-day workshop on "Ganga Basin Groundwater Modeling" in December 2017.
 - Structural Engineering Group Workshop: Attended workshop on "Emerging trends in Achieving Sustainable Concrete" in April 2014.
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