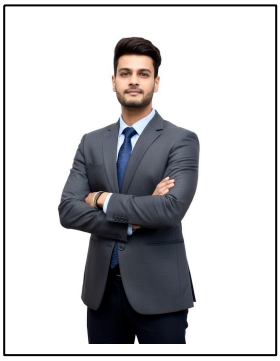

Name: Abhishek Dixit

E-mail: ad144@snu.edu.in

Specialization/Area of Research: Foundation Dynamics, Soil-Structure Interaction and Geotechnical Earthquake Engineering

Topic of Research: Seismic Analysis and Design of Caisson Foundation with Soil-Structure Interaction Effects

PhD Advisor: Dr. Gyan Vikash

LinkedIn ID: http://www.linkedin.com/in/abhishek-dixit-105831190

## Publications

1. Dixit, A., & Vikash, G. (2026). Development and Calibration of a Simplified Nonlinear Spring Model for Predicting the Lateral Response of Caisson Foundations Using a Multiobjective Genetic Algorithm. *International Journal of Geomechanics*, 26(2), 04025355. *ASCE* **(SCI & Scopus Indexed) – Q1**
2. Dixit, A., & Vikash, G. (2025). Modified Winkler Spring Constants Incorporating Interface Nonlinearity for Lateral Response Prediction of Caisson. *Indian Geotechnical Journal*, 1-15. *Springer Nature* **(ESCI & Scopus Indexed) – Q2**
3. Dixit, A., & Vikash, G. (2025). Significance of Interface Non-linearity on the Seismic Response of Caisson. In *Foundation Dynamics (Vol. 572, p. 353). Springer Nature* **(WoS & Scopus Indexed)**
4. Dixit, A., & Vikash, G. (2025). Effect of Pier-Deck Joint Rigidity on the Seismic Response of Bridge. In *Deep Foundations for Infrastructure Development in India, Volume 2 (Vol. 620, p. 217). Springer Nature*. **(WoS & Scopus Indexed)**

## Awards and Recognitions

1. Ph.D. thesis abstract selected among the **top 5 applicants** for the final presentation round at Deep Foundations Institute of India (**DFII**) – **Student Awards 2025**.
2. Received '**Best Thesis Award**' at Doctoral Research Award Presentations held at iGrip Conclave, IIT Gandhinagar in February 2025.
3. Received '**Best Paper Award**' at 8ICRAGEE held at IIT Guwahati in December 2024.
4. Received '**2nd Prize**' in Poster Presentation Competition organized by ASCE SNIoE Student Chapter.

Name: Adwait

e-mail: ad182@snu.edu.in

Specialization/Area of Research: Water Resources Engineering

Topic of Research: Applications of UAV-based remote sensing for phenology monitoring and yield modeling

PhD Advisor: Dr. Gopal Das Singhal and Dr. Hitesh Upreti

LinkedIn ID: https://www.linkedin.com/in/adwait-singh-67818831a/

Scopus/ Google Scholar ID: https://scholar.google.com/citations?hl=en&user=511ew3cAAAAJ

**Publications**

**Adwait A.**, & Roshni, T. (2023). Mean sea level modelling using the neural network along the Chennai coast. *Journal of Water and Climate Change*, *14*(1), 66-82. **Impact Factor 3.1, Q1**

**Conferences**

**Adwait, A.**, Yadav, A., Upreti, H., Das Singhal, G., 'Monitoring of wheat crop and its phenology pattern using UAV Multispectral data'. *International Association of Hydrological Sciences (IIT Roorkee)*.

**Adwait, A.,** Yadav, A., Upreti, H., Das Singhal, G., 'Assessment of Irrigation-induced Variability in Spectral Indices using UAV Multispectral and Hyperspectral Remote Sensing'. 30th International Conference on Hydraulics, Water Resources, River and Coastal Engineering, NIT Rourkela.

**Awards and Recognitions**

**(2025) Best Paper Presentation Award -** Assessment of Irrigation-induced Variability in Spectral Indices using UAV Multispectral and Hyperspectral Remote Sensing**, 30th International Conference on Hydraulics, Water Resources, River and Coastal Engineering, NIT Rourkela.**

**Name: Anshal Kumar**

E-mail: ak227@snu.edu.in

Specialization/Area of Research: **Environmental Engineering**

Topic of Research: Sustainable approaches for dairy wastewater treatment and resource recovery

PhD Advisor: Dr. Susant Kumar Padhi

LinkedIn ID: https://www.linkedin.com/in/anshal-kumar-thakur-9596b3b3/

Scopus/ Google Scholar ID:
https://scholar.google.com/citations?user=tAgtisYAAAAJ&hl=en

**Publications:**

1. **Anshal Kumar,** Himanshu Kumar Sadhya, Shashivendra Dulawat, Dr. Esar Ahmad (2020), **"Application of Bio-Enzyme in Wastewater (Greywater) Treatment"** *International Research Journal of Engineering and Technology (IRJET)* ISSN: 2395-0056, Volume 07, Issue 05, May 2020.

**Conference Papers / Proceedings**

1. **Anshal Kumar,** Himanshu Kumar Sadhya, (2022), **"Wastewater Treatment by using Bio-Enzymes Extracted from Fruits and Vegetables Waste"** International Journal of Advanced Technology in Engineering & science (IJATES) ISSN: 2348-7550, Volume 11, Issue 11, November 2022.

Name: Anuj Bhardwaj

e-mail: ab384@snu.edu.in

Specialization/Area of Research: Transportation Planning

Topic of Research: Non-Motorized Transport Infrastructure Assessment for Sustainability

PhD Advisor: Dr. Shalini Rankavat

LinkedIn ID: www.linkedin.com/in/anuj-bhardwaj-b51753167

Scopus/ Google Scholar ID: https://scholar.google.com/citations?hl=en&user=i-d5o3oAAAAJ

**Publications**


- Bhardwaj, A., & Rankavat, S. (2025). Mapping proximity based on the 15-minute city concept: a case study of an Indian city. Sustainable Transport and Livability, 2(1). https://doi.org/10.1080/29941849.2025.2560809
- Bhardwaj, A., Rankavat, S. (2025). Treatment of Recycled Coarse Aggregate Using Hybrid Technique for Rigid Pavements Incorporating Fly Ash. In: Srinivasan, V., Jain, U., Anjaneyulu, M.V.L.R., Parida, M. (eds) Recent Advancements in Sustainable and Safe Transportation Infrastructure - Vol. 1. CTSEM 2024 2024. Lecture Notes in Civil Engineering, vol 621. Springer, Singapore. https://doi.org/10.1007/978-981-96-1984-9_6
- Bhardwaj, A., Rankavat, S., Varma, D.S.K. (2024). Exploring Pedestrian Dynamics at Metro Station for Effective Transportation Planning: Jaipur Case Study. In: Manoj, M., Roy, D. (eds) Urban Mobility Research in India. UMI2023 2023. Lecture Notes in Civil Engineering, vol 551. Springer, Singapore. https://doi.org/10.1007/978-981-97-8116-4_28
- Varma, D.S.K., Rankavat, S., Bhardwaj, A. (2023). Comprehensive Analysis of Post-COVID-19 Changes in Behavior and Perception of Public Transit Users in the Urban Region of a Medium-Sized City of India- Noida/Greater Noida Region (Delhi NCR). In: Verma, A., Chotani, M.L. (eds) Urban Mobility Research in India. UMI 2022. Lecture Notes in Civil Engineering, vol 361. Springer, Singapore. https://doi.org/10.1007/978-981-99-3447-8_15

Name: Apoorva Yadav

e-mail: ay855@snu.edu.in

Specialization/Area of Research: Water Resources Engineering

Topic of Research: Evaluation of crop response to water and nutrient stress using UAV remote sensing

PhD Advisor: Dr. Hitesh Upreti and Dr. Gopal Das Singhal

LinkedIn ID: https://www.linkedin.com/in/apoorva-yadav-5241111a4/

Scopus/ Google Scholar ID:
https://scholar.google.com/citations?user=b-fJ-DEAAAAJ&hl=en

## Publications

### Conferences

**Yadav, A.**, Ghanshyam, G., Upreti, H., Das Singhal, G., 'Effect of different nitrogen treatments on chlorophyll content and yield of wheat crop'. *International Association of Hydrological Sciences (IIT Roorkee)*.

**Yadav, A.**, Adwait**,** A., Upreti, H., Das Singhal, G., 'Estimation of Wheat Canopy Cover Percentage using Random Forest Algorithm'. *GeoSmart India 2025, New Delhi.*

**Yadav, A.,** Adwait, A., Upreti, H., Das Singhal, G., 'Monitoring Wheat Growth and Yield Response to Nitrogen Treatments Through UAV-Derived Spectral Reflectance'. *30th International Conference on Hydraulics, Water Resources, River and Coastal Engineering, NIT Rourkela.*

## Awards and Recognitions

Name: AWADHESH SRIVASTAVA

e-mail: as470@snu.edu.in

Specialization/Area of Research: Structure Engineering

Topic of Research: Bendable concrete

PhD Advisor: Dr NITIN B. BURUD

LinkedIn ID: https://www.linkedin.com/in/awadhesh-srivastava-9374b21ab/

Scopus/ Google Scholar ID: https://www.scopus.com/authid/detail.uri?authorId=59682517700

**Publications**

- Kumar, A., Singh, S. K., Mishra, A., & **Srivastava, A.** (2026). Effect of polyethylene terephthalate granules on nano-CaCO3-blended concrete. *Challenge*, *17*(1), 1-12.
- **Srivastava, A**., Mishra, A., & Singh, S. K. (2025). Effect of nano TiO2 and reinforcement of polypropylene fiber in standard concrete: an experimental and numerical approach. *Canadian Journal of Civil Engineering*, *52*(5), 929-945.
- **Srivastava, A**., Mishra, A., & Singh, S. K. (2025). Effect of nano TiO2 and reinforcement of polypropylene fiber in standard concrete: an experimental and numerical approach. *Canadian Journal of Civil Engineering*, *52*(5), 929-945.

Name: Monika Saini

e-mail: ms963@snu.edu.in

Specialization/Area of Research: Structural Health monitoring

Topic of Research: Effect of Corrosion on Cold Formed Steel Structures

PhD Advisor: Dr. Sumedha Moharana & Dr. Ghanshyam Pal

LinkedIn ID: https://www.linkedin.com/in/monika-saini-5216ba1b8

Scopus/ Google Scholar ID: https://scholar.google.com/citations?user=UTvwXqQAAAAJ&hl=en

**Publications**

**Awards and Recognitions**

**Name:** Mudit Yadav

**e-mail:** my686@snu.edu.in

**Specialization/Area of Research:** Environmental Engineering /Air pollution and health risk assessment

**Topic of Research:** Interlinking indoor air quality with outdoor ambient air under different scenarios and human health implications

**PhD Advisor:** Dr. Sailesh Narayan Behera

**LinkedIn ID:** https://www.linkedin.com/in/mudit-yadav-00b253187/

**Google Scholar ID:** https://scholar.google.com/citations?hl=en&user=40UrJc0AAAAJ&view_op=list_works&sortby=pubdate

**Publications (Journal Articles/ Book Chapters)**

Singh, S., Kumar, V., **Yadav, M**., & Sharma, A (2026). Data-driven Engineering Approaches to Air Pollution Control: Insights from PM2.5 Seasonal Trends, Trace Elements, and Health Impact Assessment—A Case Study. 165-180. https://doi.org/10.1002/9781394373550.ch13

Kumar, V., Behera, S. N., **Yadav, M**., He, J., Padhi, S. K., Parida, B. R., ... & Balasubramanian, R. (2025). Emission Profiles of Airborne Particulate Size-Segregated Carbonaceous Fractions of Stationary Diesel Engine and Impact Assessment of their Depositions in Human Lungs. Emission Control Science and Technology, 11(2), 20. https://doi.org/10.1007/s40825-025-00271-w

**Yadav, M**., Behera, S. N., & Betha, R. (2025). Spatio-temporal variations of air pollutants and human health exposure impacts during 2023 haze through respiratory deposition analysis in Delhi-NCR, India. *Journal of Hazardous Materials Advances, 17, 100575. https://doi.org/10.1016/j.hazadv.2024.100575*

Behera, S. N., **Yadav, M**., Kumar, V., & Rout, P. R. (2023). Various perspectives on occurrence, sources, measurement techniques, transport, and insights into future scope for research of atmospheric microplastics. *Microconstituents in the environment: occurrence, fate, removal and management, 203-225. https://doi.org/10.1002/9781119825289.ch9*

Kumar, V., **Yadav, M**., & Behera, S. N. (2022). Characterization of PM2. 5-bound trace elements, source apportionment, and assessment of associated human health risks during summer and winter in Greater Noida, the National Capital Region of India. *Frontiers in Environmental Science, 10, 949913.* *https://doi.org/10.3389/fenvs.2022.949913*

Jaisankar, D., Behera, S. N., **Yadav, M**., & Upreti, H. (2021). Current Trends and future Challenges for solid waste management: generation, characteristics, and application of GIS in mapping and optimizing transportation routes. *In Urban Mining for Waste Management and Resource Recovery (pp. 17-41). CRC Press.*

Name: Manoj Yadav

e-mail: my354@snu.edu.in; manojgdyadav@gmail.com

Specialization/Area of Research: Water Resources Engineering/ Remote Sensing for agricultural monitoring

Topic of Research: Monitoring and mapping of crop water use using multi-source satellite remote sensing

PhD Advisor: Dr. Hitesh Upreti

LinkedIn ID: www.linkedin.com/in/manoj-yadav-50a6b716a

Google scholar ID: https://scholar.google.com/citations?user=AxFB6DQAAAAJ&hl=en

**Publications**


- Upreti, H. and **Yadav, M.** (2026). Evaluation of Penman-Monteith estimates of evapotranspiration derived using field-collected stomatal conductance observations, EGU General Assembly 2026, Vienna, Austria, 3–8 May 2026, EGU26-20031, https://doi.org/10.5194/egusphere-egu26-20031
- Giri G., **Yadav, M.**, Upreti H., & Singhal G. D., (2026). Improving Wheat Yield Simulation by Integrating UAV-Based Multispectral Data in the AquaCrop Model for Crop Seasons with Varying Temperature and Rainfall Patterns. Irrigation Science,44, p.59. https://doi.org/10.1007/s00271-026-01103-7
- **Yadav, M.** and Upreti H., 2025. Conductance-based evapotranspiration estimates for wheat crops grown under different irrigation treatments. Theoretical and Applied Climatology, 156(10), p.508. https://doi.org/10.1007/s00704-025-05738-y
- **Yadav, M.,** Narakala, L. M., Chinthamaneni, S., and Upreti, H. (2025). Mapping field-scale crop water stress for wheat using satellite remote sensing data by formulating lower baseline using a novel approach, EGU General Assembly 2025, Vienna, Austria, 27 Apr–2 May 2025, EGU25-810, https://doi.org/10.5194/egusphere-egu25-810
- Muni Narakala, L., **Yadav, M.,** Giri, G., Upreti, H., & Singhal, G. D. (2025). Data-Driven Prediction of Canopy Temperature Using Artificial Neural Networks. 41st IAHR World Congress https://doi.org/10.64697/978-90-835589-7-4_41WC-P1911-cd
- Upreti, H., Sriyodh, C., and **Yadav, M.** (2025). Assessment of phenology of winter wheat using Sentinel 2 multispectral data for varying sowing dates, EGU General Assembly 2025, Vienna, Austria, 27 Apr–2 May 2025, EGU25-19560, https://doi.org/10.5194/egusphere-egu25-19560

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- **Yadav, M.**, Sriram Theerdh, M., Giri, G., Upreti, H., Das Singhal, G., & Muni Narakala, L. (2024). Estimation of Leaf Area Index for Wheat Crop Using Sentinel-2 Satellite Data. In World Environmental and Water Resources Congress (pp. 948-959). https://doi.org/10.1061/9780784485477.084
- Giri, G., **Yadav, M.,** Upreti, H. and Das Singhal, G., (2023). Estimation of Crop Water Requirement Using Field Water Balance and Soil Moisture Data. In International Conference on Hydraulics, Water Resources and Coastal Engineering (pp. 203-218). Singapore: Springer Nature Singapore. https://doi.org/10.1007/978-981-97-7474-6_16

**Awards and Recognitions**

- Qualified Graduate Aptitude Test in Engineering (GATE) in 2017 and 2018
- Awarded with 'Research Scholar Grant' for Attending the International Conference at Shiv Nadar Institution of Eminence, Delhi-NCR.

Name: Ashu Singhal

e-mail: as325@snu.edu.in

Specialization/Area of Research: Geotechnical Engineering, Characterization of Soil Spatial Variability.

Topic of Research: Some Studies on Soil Spatial Variability and it's Effect on Geotechnical System Response, Deep Learning based Characterization of Soil Spatial Variability, Critical Evaluation of Different Approaches to Characterize the Randomly Varying Soil Domain.

PhD Advisor: Dr. Gyan Vikash

LinkedIn ID: https://www.linkedin.com/in/ashu-s-4878841b6?utm_source=share&utm_campaign=share_via&utm_content=profile&utm_medium=android_app

Scopus/ Google Scholar ID: NA

**Publications:**

- **Singhal, A.,** Vikash, G., "Uncertainties in LU Decomposition-Based Random Field Modeling of Soil Spatial Variability"- ICE- Geotechnical Research (2026)**.**
- **Singhal, A**., Vikash, G., and Singhai, S. (2023) "Insights on 2D versus 3D Modelling of Strip Loading on Spatially Varying Random Soil Domain"- ASCE Geo-Congress 2023: Geotechnical Data Analysis and Computation (131-141), https://doi.org/10.1061/9780784484692.014

Name: Rajesh Kumar Behera

e-mail: rb902@snu.edu.in

Specialization/Area of Research: Hydraulics Engineering

Topic of Research: Reduction of Local Scour Around Bridge Pier Using Various Countermeasure Techniques

PhD Advisor: Dr. Gopal Das Singhal

LinkedIn ID: https://www.linkedin.com/in/rajesh-kumar-behera-b97925119

Google Scholar ID: https://scholar.google.com/citations?user=cBoXuu8AAAAJ&hl=en

**Publications**

- **Kumar Behera, R.**, Padhi, E., & Singhal, G. D. (2026). Recent trends in local scour countermeasure for bridge piers. *Engineering Science and Technology, an International Journal*, 77, 102367. https://doi.org/10.1016/j.jestch.2026.102367 **(Q1, IF=5.4)**

**Awards and Recognitions**

Name: Surender

e-mail: su591@snu.edu.in

Specialization/Area of Research: Earthquake Engineering

Topic of Research: GeoAI and machine learning-based quantitative framework for deciphering active deformation from Geomorphodynamics in Himalayan region

PhD Advisor: Dr Jagabandhu Dixit

LinkedIn ID: https://www.linkedin.com/in/surender-bishnoi-62a145173

Google Scholar ID: https://scholar.google.com/citations?user=WljmesgAAAAJ&hl=en

Name: Ajay Patel

e-mail: ap184@snu.edu.in

Specialization/Area of Research: Structural Health Monitoring (SHM)

Topic of Research: Comprehensive study of adhesive debonding effect on piezo structural Interaction: An Experimental, Analytical and Numerical Approach

PhD Advisor(s): Dr. Sumedha Moharana and Prof. Suresh Bhalla

LinkedIn ID: https://www.linkedin.com/in/ajay-patel-07b472114/

**Publications:**

Patel, A., and Moharana, S. (2026). "Coupled numerical and experimental analysis of central adhesive debonding in PZT patch–host structure systems using EMI technique." In *Proceedings of the International Conference on Condition Assessment, Rehabilitation & Retrofitting of Structures (CARRS 2026)*, Springer, Cham (in press).

Patel, A., and Moharana, S. (2025). "Monitoring of corrosion on mild steel coupon using piezo impedance based structural health monitoring (PISHM): A periodical study of experimental mass loss and coupled finite element analysis." *Procedia Structural Integrity*, 71, 196–202. https://doi.org/10.1016/j.prostr.2025.08.027

Patel, A., Parida, L., and Moharana, S. (2024). "Influence of adhesive bonding and debonding detection on aluminum beam using electro-mechanical impedance (EMI) technique." *Civil Structural Health Monitoring (CSHM)*, *Lecture Notes in Civil Engineering*, Vol. 516, Springer, Cham. https://doi.org/10.1007/978-3-031-62253-3_18

**Awards and Recognitions:**

Qualified GATE in Civil Engineering (2017, 2019, 2020, 2021 and 2022)

PG-GATE Fellowship from UGC (2017)

Name: Vikalp Chauhan

e-mail: vc651@snu.edu.in

Specialization/Area of Research: Hydraulics Engineering

Topic of Research: Study of Submerged Vanes for Sediment Control and Riverbed Dredging in Inland Navigation Fairway Development

PhD Advisor: Dr. Gopal Das Singhal

LinkedIn ID: http://www.linkedin.com/in/vikalp-chauhan-7300091b7

Google Scholar ID:
https://scholar.google.com/citations?hl=en&user=531A4PIAAAAJ

Scopus ID: 57734626300

**Publications**

1. Chauhan, V, Singhal, GD and Chavan, R (2023) A review of sediment deflection in rivers using submerged vanes. *ISH Journal of Hydraulic Engineering*, 29(4):514-530. https://doi.org/10.1080/09715010.2022.2084352. (Scopus/ Cite Score 4.3)
2. Chauhan, V, Padhi, E, Chavan, R and Singhal, GD (2023) A review of bridge scour mitigation measures using flow deflecting structures. *ISH Journal of Hydraulic Engineering*, 1-14. https://doi.org/10.1080/09715010.2023.2213202. (Scopus/ Cite Score 4.3)
3. Chauhan, V, E Padhi, R Chavan, and GD Singhal (2025) Leveraging macro roughness and tapered submerged vanes for riverbed dredging to develop inland navigation fairway. *Innovative Infrastructure Solutins*, 10 (5):169. https://doi.org/10.1007/s41062-025-01967-2. (SCIE/Cite Score 2.6/IF 2.4)
4. Chauhan, V, E Padhi, and GD Singhal (2025) Numerical modeling for optimized sediment deflection with variable submergence over a row of submerged vanes. *Discover Applied Sciences*, 7 (5):379. https://doi.org/10.1007/s42452-025-06899-1. (SCIE/ Cite Score 6.5/ IF 2.8)
5. Chauhan, V, Padhi, E and Singhal, GD (2025) Study of leading-edge dual-tapered submerged vanes for vortex lift-augmented sediment control in rivers. *Water Supply*, *25*(9):1329-1345. https://doi.org/10.2166/ws.2025.079. (SCIE/ Cite Score 4.2/ IF 1.9)

6. Chauhan V., Chavan, R., and Singhal, G.D. (2022). "Numerical Modeling for Optimization of the Aspect Ratio of Submerged Vanes for the Purpose of Sediment Deflection in Rivers" in " 9th ISHS". *Proceedings of the 9th IAHR International Symposium on Hydraulic Structures – 9th ISHS*, 24-27 October 2022, IIT Roorkee, Roorkee, India. Palermo, Ahmad, Crookston, and Erpicum Editors. Utah State University, Logan, Utah, USA, 10 pages https://doi.org/10.26077/b079-8746.
7. Chauhan V, Padhi E, Singhal, GD (2025). Bridge Pier Scour Mitigation with Submerged Vanes and a Triangular Prism. In: Pandey, M., Umamahesh, N.V., Ahmad, Z., Oliveto, G. (eds) Hydraulics and Fluid Mechanics, Volume 2. HYDRO 2023. Lecture Notes in Civil Engineering, vol 560. Springer, Singapore, pp 63-82 https://doi.org/10.1007/978-981-97-8895-8_5

**Awards and Recognitions**

Received best paper award on the theme “Fluvial Hydraulics” in Hydro 2023 International Conference organized at NIT Warangal.

Paste y

our passport

Name: Nishank Agrawal

e-mail: na886@snu.edu.in

Specialization/Area of Research: Hydraulics, Hydraulic jump type stilling basin

Topic of Research: Local scour protection by upgrading the Stilling basin design

PhD Advisor: Dr. Gopal Das Singhal and Dr. Ellora Padhi (External)

LinkedIn ID: www.linkedin.com/in/nishank4all

Scopus/ Google Scholar ID:
https://scholar.google.com/citations?hl=en&user=51Bguw4AAAAJ

## Publications

- Agrawal, N., & Padhi, E. (2025). Impacts of bed roughness and orientation on hydraulic jump: A review. *Water Science and Engineering*, 18(1), 90–101. https://doi.org/10.1016/j.wse.2024.03.003
- Agrawal, N., Padhi, E., Singhal, G. D., & Larrarte, F. (2025). Hydraulic jump analysis: Influence of negative steps and end sills on jump profile for both smooth and dunal corrugated beds. *Physics of Fluids*, 37(8). https://doi.org/10.1063/5.0284062
- Agrawal, N., Padhi, E., Larrarte, F., & Singhal, G. D. (2026). Impact of Bed Roughness and Submergence on Velocity Profiles and Flow Structures in Hydraulic Jumps. *Scientific Report,* 16, 11676. https://doi.org/10.1038/s41598-026-44480-x

## Book Chapter

- Agrawal N and Padhi E (2024). Efficiency of Submerged Jumps on Corrugated Rough Beds for Energy Dissipation: Experimental and Computational Insights. In the Proceedings of *River Corridor Research and Management*, IIT Guwahati. (In Press)

***Conferences***

- Padhi E, Agrawal N, and Singhal GD (2026). Energy Dissipation and Scour Dynamics Induced by Hydraulic Jumps on Smooth and Corrugated Beds. In the Proceedings of River Flow 2026, 13th International Conference on Fluvial Hydraulics – IAHR, Thessaloniki Greece.
- Agrawal N, Padhi E, and Singhal GD (2025). Enhanced energy dissipation using a hybrid stilling basin design downstream of ogee spillways. Proceedings of 41st IAHR world congress, Singapore. (Presented)

- Agrawal N, Padhi E, and Singhal GD (2024). Numerical Investigation of Hydraulic Jumps over a Negative Step with a Corrugated Bed and End Sill. In the Proceedings of *HYDRO*, CWPRS Pune.
- Agrawal N and Padhi E (2022). Bank scour protection using spur dyke in a meandering channel under low flow velocity. In the Proceedings of *ISHS 2022*, Roorkee, India. https://doi.org/10.26077/60b8-4263
- Padhi E and Agrawal N (2022). Investigation on near bed flow features over a water-worked gravel bed. In the Proceedings of *ISHS 2022*, Roorkee, India. https://doi.org/10.26077/3268-7a17

**Awards and Recognitions**

Name: Babita Pandey

E-mail: bp769@snu.edu.in

Specialization/Area of Research: Environmental Engineering

Topic of Research: Integrated Treatment Strategies for Removal of Emerging Contaminants from Landfill Leachate

PhD Advisor: Dr. Susant Kumar Padhi

LinkedIn ID: https://www.linkedin.com/in/babita-pandey-a0884a22b?utm_source=share_via&utm_content=profile&utm_medium=member_ios

Scopus/ Google Scholar ID: https://scholar.google.com/citations?hl=en&user=Auh5VT8AAAAJ&view_op=list_works&gmla=AEk_c1vWcGlFwX4ZSzTZMQWC0qmrmQiNY3cb8rks3_It39eA0_EvdZ25NGDwuAmZTu1fSt37-1GXuNNCCBOH3whK

**Publications**

- Sustainable Thermal Insulation in Bricks Using Plastic Waste and Agro-Industrial Byproducts, Vikash Kumar Gautam , Rajiv Ranjan Singh , Babita Pandey, Current Natural Sciences & Engineering ,Volume 2, Issue 5, 2025, 789-796 .
- A study on streambed hydraulic conductivity of banas river, rajasthan, Saurabh Singh, Ashish Kumar Sewaliya, Babita Pandey, Ankit Malav, International Journal of Advance and Innovative Research ,Volume 6, Issue 2 (XXX): April – June, 2019.
- Variation of Vertical Permeability of Fine Soil using Fine Chalk Powder, Saurabh Singh , Babita Pandey and Ashish Sewaliya, Journal of Civil Engineering and Environmental Technology" for the topic "", Volume 5, Issue 1;January-March, 2018,pp. 1-4
- Forecasting of Monthly and Annual Rainfall at Rajasthan Region , Saurabh Singh and Babita Pandey, Journal of Civil Engineering and Environmental Technology" for the topic " Volume 5, Issue 2; April, 2018, pp. 55-66.

**Awards and Recognitions**

- Chancellor Trophy awarded by the Honourable Deputy Chief Minister of UP, Brajesh Pathak for the Session 2019-2021on Convocation Day, 2022.

- Secured First Position in Mtech (Energy and Environmental Engg) for the session 2019-2021 on Convocation Day, 2022 with a gold medal.

Name: N Pravin Diliban

e-mail: pn420@snu.edu.in

Specialization/Area of Research: Building Physics

Topic of Research: Towards Net-Zero Energy Housing for Present and Future Climates in India

PhD Advisor: Dr Manoj Kumar Singh

LinkedIn ID: https://www.linkedin.com/in/pravin-d-nadarajah-54a08980/?skipRedirect=true

Scopus/ Google Scholar ID: https://www.scopus.com/authid/detail.uri?authorId=58856940800 / https://scholar.google.com/citations?user=6Z2zw5gAAAAJ&hl=en

## Publications

### Journal Publications (Research Articles)

- Integrating bioclimatic features in building energy modelling to study thermal performance of a naturally ventilated hostel building in the composite climate zone of India. Thakur A., **Nadarajah P.D**., Singh M.K., Tewari P., Zaki S.A. journal of Advances in Building Energy Research https://doi.org/10.1080/17512549.2026.2654580.**Impact Factor 2 Q2**
- **Nadarajah P.D**., Lakmal H.K.I.S., Singh MK., Zaki S A., Ooka R., Rijal H.B., Mahapatra S., **Identification and Application of the Best-Suited Machine Learning Algorithm Based on Thermal Comfort Data Characteristic: A Data-Driven Approach**., Journal of Building Engineering. 10.1016/j.jobe.2024.110319 **Impact Factor 6.4 Q1**
- Možina M., Pajek Luka., **Nadarajah P.D**., Singh M K., Košir Mitja., **Defining the calibration process for building thermal performance simulation: A case study of a single-family log house**., Advances in Building Energy Research. 10.1080/17512549.2024.2350944. **Impact Factor 2 Q2**
- Nafiz M., Zaki S A., **Nadarajah P D**, Singh M.K., **Influence of psychological and personal factors on predicting individual's thermal comfort in an office building using linear estimation and machine learning model**, *Advances in Building Energy Research (2024)*. 10.1080/17512549.2024.2340449. **Impact Factor 2. Q2.**

- Možina M., Pajek L., **Nadarajah P D**., Singh M K., Košir M., **Future-proofing a naturally ventilated log house: A case study of adaptive thermal comfort under climate change impact.,** *Energy and Buildings (2024)*, doi.org/10.1016/j.enbuild.2024.113951. **Impact Factor 7.201. Q1.**
- **Nadarajah P.D.,** Singh M.K., Mahapatra S., Pajek Luka., Možina M., **Bioclimatic Classification for Building Energy Efficiency using Hierarchical clustering: A case study for Sri Lanka**, *Journal of Building Engineering (2024)* doi.org/10.1016/j.jobe.2023.108388. **Impact Factor 6.4 Q1**

**Conference Papers / Proceedings**

- Singh M.K., **Nadarajah P.D**., Ooka R., Rijal H.B., Zaki S.A., "**Adaptive thermal comfort in the naturally ventilated offices of cold and cloudy climate of North-East India",** E3S Web of Conferences, vol. 689, p. 06005, Jan. 2026, doi: 10.1051/e3sconf/202668906005.
- **Nadarajah P. D**., Singh M K., Mahapatra S., "**Data-Driven Bioclimatic Zoning in Sri Lanka: PCA and Clustering Analysis., SLIIT-3rd International Conference on Engineering and Technology"** 22nd to 25th July, Malabe, Colombo, Sri Lanka, doi:10.54389/ROBV9147
- Singh M. K., **Nadarajah P.D**., Kumar S., Mathur J., "**Characteristics of thermal comfort in the warm and humid climate of North-East India**". Comfort At The Extremes 2023, CEPT University, Ahmedabad, India, doi:10.1051/e3sconf/202339601037
- **Nadarajah P.D**, M. K. Singh, and S. Mahapatra, "**Improving Sri Lankan Buildings' Energy Efficiency Through Bioclimatic Classification and Potential Assessment"**, E3S Web of Conferences, vol. 396, p. 01038, Jun. 2023, doi: 10.1051/e3sconf/202339601038.

**Awards and Recognitions / Invited Lectures**

- (2025) Invited Guest Lecture – "Thermal Comfort and Building Energy Efficiency: A Thermodynamics and Heat Transfer Perspective". Department of Industrial and Mechatronics Engineering, NSBM Green University, Sri Lanka, 10 September 2025.
- (2024) Second Place – Poster Presentation. One-day International Symposium on "Clean Air, Clean Water, Clean Energy: Circular Economy", organised by ASHRAE India

Chapter, 16 September 2024. Presented in the presence of ASHRAE President M. Dennis Knight.

- (2024) Best Paper Award – "Data-Driven Bioclimatic Zoning in Sri Lanka: PCA and Clustering Analysis". 3rd SLIIT International Conference on Engineering and Technology (SICET 2024), Malabe, Sri Lanka, 25 July 2024.
- (2019) Maulana Azad Scholarship Scheme for Nationals of Sri Lanka. Indian Council for Cultural Relations, Ministry of External Affairs, Government of India. Awarded for M. Tech in Energy Technology at Tezpur University (2019–2021).

Name: D. Sai Kiran Varma

e-mail: dv848@snu,edu.in

Specialization/Area of Research: Transportation Planning

Topic of Research: Transit-Oriented Development (TOD) Framework for Rapidly Urbanising Indian Cities

PhD Advisor: Dr Shalini Rankavat

LinkedIn ID: https://www.linkedin.com/in/dskvarma/

Scopus/ Google Scholar ID: https://scholar.google.com/citations?user=aD9nFHEAAAAJ

**Publications**

- Jha, M. K., Jaiswal, R., Varma, D. S. K., Rankavat, S., Bachu, A. K., & Jha, P. K. (2025). A Machine Learning Approach to Traffic Congestion Hotspot Identification and Prediction. Future Transportation, 5(4), 161. https://doi.org/10.3390/futuretransp5040161
- Bhardwaj, A., Rankavat, S., & Varma, D. S. K. (2023). Exploring Pedestrian Dynamics at Metro Station for Effective Transportation Planning: Jaipur Case Study. In Urban Mobility India (pp. 405–419). Singapore: Springer Nature Singapore.
- Varma, D. S. K., Rankavat, S., & Bhardwaj, A. (2022). Comprehensive Analysis of Post-COVID-19 Changes in Behavior and Perception of Public Transit Users in the Urban Region of a Medium-Sized City of India—Noida/Greater Noida Region (Delhi NCR). In Urban Mobility India (pp. 309–320). Singapore: Springer Nature Singapore.
- Varma, D. S. K., & Bawitlung, A. B. L. (2016). MATLAB Adaptive Study of Traffic Related Accidents and Travel Demand Forecasting Case Study: Jalandhar. Indian Journal of Science and Technology, 9, 44.