

Dr. Bibhuti Bhushan Bhardwaj

Assistant Professor & HoD (i/c)

Department of Civil Engineering

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 S/o- Naba Kr. Sarma, Flat 2C, H/no. 11, Ashrayam Apartment, Income Tax Colony Road, Bongaon, Beltola, Guwahati, Dist: Kamrup (M), Assam, PIN-781028 INDIA

RESEARCH INTEREST

Recycled Aggregates, Sustainable Rigid Pavement, Pavement Management System

PERSONAL DETAILS

Father's name: Mr. Naba Kumar Sarma

Mother's name: Mrs. Tutumani Devi

Category: General

Gender: Male

Date of Birth: 6th August, 1991

Place of Birth: Mangaldai, Assam

ACADEMIC DETAILS

Degree/Exam	Institute/Board	Year	Score
Ph.D	Indian Institute of Technology (IIT) Madras	2021-25	9.75/10
M.Tech in Transportation Engineering	Indian Institute of Technology (IIT) Guwahati	2014-16	9.82/10
B.Tech in Civil Engineering	Tezpur Central University	2009-13	9.13/10
HSSLC/10+2 (Science)	Cotton College, Guwahati (AHSEC)	2007-09	81.00%
HSLC (Matriculation)	Mangaldai Govt. H. S. School (SEBA)	2007	86.17%

SCHOLASTIC ACHIEVEMENTS

- Secured Rank 5 in the recruitment drive conducted by Assam Public Service Commission (APSC) for the position of Assistant Professor (Technical) in the Government Engineering Colleges of Assam, July 2024
- Secured All India Rank 56 in Assistant Professor (Civil) recruitment drive by NPIU under TEQIP-III in December 2017
- Secured 1st position, M.Tech in Transportation Systems Engineering, batch 2014-2016, Indian Institute of Technology- Guwahati
- Secured Gold Medal, B.Tech in Civil Engineering, batch 2009-2013, Tezpur Central University, Assam
- Qualified GATE-2014 with a percentile of 99.2 (All India Rank: 763, Score: 706)
- Qualified GATE-2013 with a percentile of 97.9 (All India Rank: 1437, Score: 588)
- Secured Highest Marks (100%) in General Mathematics throughout Assam in HSLC (SEBA)

SCHOLARSHIPS

1. Prime Minister's Research Fellowship (PMRF) during Ph.D at IIT Madras
2. Chief Minister's scheme for financial assistance to meritorious students of Assam for the year 2015-16, awarded by Govt. of Assam (Rs. 1,00,000/- lumpsum)
3. MHRD scholarship during M.Tech, IIT Guwahati (July 2014- June 2016)
4. Merit scholarship during B.Tech, under the Merit Scholarship Scheme of the Government of India, MHRD (August 2009-July 2011)
5. Institute scholarship of Tezpur Central University during B.Tech for being in the top 5 among the students of all branches (August 2011- May 2013)

PUBLICATIONS (IN JOURNALS)

1. **Bibhuti Bhushan Bhardwaj** and Surender Singh (2024) "*Evaluation of the failure planes in concrete containing reclaimed asphalt pavement (RAP) aggregates*", **Cement and Concrete Composites**, Volume 145, 105334, DOI: <https://doi.org/10.1016/j.cemconcomp.2023.105334> (IF: 13.1, CiteScore: 22.5, Q1)
2. **Bibhuti Bhushan Bhardwaj**, Surender Singh, and Alexander S. Brand (2026), "*A strategic framework for using Reclaimed Asphalt Pavement (RAP) aggregates in concrete pavements*", **Construction and Building Materials**, Volume 514, 145628, DOI: <https://doi.org/10.1016/j.conbuildmat.2026.145628> (IF: 8.0, CiteScore: 13.9, Q1)
3. **Bibhuti Bhushan Bhardwaj**, Surender Singh, and Sumukh Swaroop C.R. (2025), "*Role of Asphalt Binder Film Thickness on the Behaviour of RAP-incorporated Concrete*", **Construction and Building Materials**, Volume 473, 141012, DOI: <https://doi.org/10.1016/j.conbuildmat.2025.141012> (IF: 8.0, CiteScore: 13.9, Q1)
4. **Bibhuti Bhushan Bhardwaj**, Suraj Sadasivan, Surender Singh, and Monu Kumari, (2025), "*Tolerance Level of Bricks in Recycled Concrete Aggregates*", **Transportation Research Record**, DOI: <https://doi.org/10.1177/03611981251327201> (IF: 1.8, CiteScore: 3.4, Q2)
5. **Bibhuti Bhushan Bhardwaj**, Surender Singh, and Bukke Pote Naik (2024) "*Suitability Assessment of Alternative Sands for Concrete Pavement Applications*", **Journal of Materials in Civil Engineering**, Volume 36, Issue 5, American Society of Civil Engineers, **ASCE**, DOI: <https://doi.org/10.1061/JMCEE7.MTENG-17163> (IF: 3.0, CiteScore: 5.8, Q1)
6. **Bibhuti Bhushan Bhardwaj** and Surender Singh (2025), "*Elucidation of Asphalt Characteristics influencing Cement Mortar constituted with Reclaimed Asphalt Pavement (RAP) Aggregates*", **Journal of Materials in Civil Engineering**, American Society of Civil Engineers, **ASCE (In press)**, DOI: <https://doi.org/10.1061/JMCEE7/MTENG-21904> (IF: 3.0, CiteScore: 5.8, Q1)
7. Mamatha Kosuri, Surender Singh, and **Bibhuti Bhushan Bhardwaj** (2023), "*Optimization of Slurry Impregnation Technique for Upcycling Carbonated Recycled Concrete Aggregates for Paving Concrete Applications*", **Journal of Materials in Civil Engineering**, Volume 35, Issue 5, American Society of Civil Engineers, **ASCE**, DOI: [https://doi.org/10.1061/\(ASCE\)MT.1943-5533.0004712](https://doi.org/10.1061/(ASCE)MT.1943-5533.0004712) (IF: 3.0, CiteScore: 5.8, Q1)

JOURNAL PAPERS UNDER REVIEW

8. **Bibhuti Bhushan Bhardwaj**, Umashankar Biswal, Arun Shanmugavel, Narayan Somnath Bhosale, Surender Singh, Subhadeep Banerjee, and B. Padmanabha, “*Effect of Inherent Properties of Waste Foundry Sand on Pavement Performance*”, under review in the Journal of **Road Materials and Pavement Design**.

PUBLICATIONS (IN CONFERENCE PROCEEDINGS)

1. Thoker, A.M., **Bhardwaj, B.B.**, and Vivek (2025), “*Suitability Assessment of Walnut Shell Powder as an Alternative to Fine Aggregates in Concrete Pavement Applications*”, Proceedings of 2nd International Conference on Transportation Infrastructure Projects: Conception to Execution (**TIPCE 2025**), Transportation Engineering Group, Department of Civil Engineering, IIT Roorkee, September 18–21, 2025 [**in press**]
2. **Bhardwaj, B.B.** and Singh, S. (2025), “*Effect of Bitumen Aging on the Performance of RAP-inclusive Rigid Pavements*”, Proceedings of 7th Conference on Transportation Research Group of India (**CTRG 2025**), Department of Civil Engineering, IIT Guwahati, December 2025 [**in press**]
3. **Bhardwaj, B.B.**, Goswami, S., Dutta, S., Mazumder, S.A., Paul, S., Sharma, H. J., and Akhter, S. (2021). “*Development of an android application to compute priority score for road sections*”, Weentech Proceedings in Energy 7 (1), pp 206-216, 3rd International Conference on Innovative Development in Engineering Applications (**IDEA 2021**), Gaya College of Engineering, Gaya, India, 08-10 Feb, 2021 [ISSN: 2059-2353]
4. **Bhardwaj, B.B.**, Choudhary, R., and Julaganti, A. (2018). “*Effect of production temperature on permanent deformation characteristics of WMA mixes*”, Proceedings of 2nd International Conference on Civil Engineering for Sustainable Development - Opportunities and Challenges (**CESDOC 2018**), Assam Engineering College, Guwahati, India, 18-19 Dec, 2018
5. **Bhardwaj, B.B.** and Sapkota, G. (2018). “*Assessment of hill cut slopes using C-Programming*”, Proceedings of 2nd International Conference on Civil Engineering for Sustainable Development - Opportunities and Challenges (**CESDOC 2018**), Assam Engineering College, Guwahati, India, 18-19 Dec, 2018

PRESENTATIONS IN CONFERENCE & WORKSHOPS

1. **Bhardwaj, B. B.** and Singh, S. "Assessment of intermolecular interaction of RAP aggregates with varied cement-mortar phases", 77th Réunion Internationale des Laboratoires et Experts des Matériaux (RILEM) Annual Week, **Vancouver- Canada, Sep. 4 - 8, 2023 (Oral)**
2. **Bhardwaj, B. B.** and Singh, S. "Assessment of Mineralogical Effect of Aggregates on the Bonding Potential with Asphalt using Surface Free Energy Approach", 2nd International Conference on Transportation Infrastructure Projects: Conception to Execution (TIPCE), Transportation Engineering Group Dept. of Civil Engineering, **IIT Roorkee, Sep. 14 – 17, 2022 (Oral)**

3. **Bhardwaj, B. B.**, Sumukh, S.C.R., and Singh, S. "*The Role of Asphalt Film-Thickness around RAP-Aggregates on the Fresh-State Properties of Rigid Pavements*", 2nd International Conference on Net-Zero Emission Technologies for Sustainable Development: Challenges & Opportunities (N0ET-2023), **IIT (ISM) Dhanbad, Dec. 16-17, 2023 (Oral)**
4. **Bhardwaj, B. B.** and Singh, S. "*Impact Assessment of Different Surface Free Energy Components on Work of Adhesion between varied Aggregate types and VG-40 bitumen*", 14th International Conference on Transportation Planning and. Implementation Methodologies for Developing Countries (TPMDC), **IIT Bombay, Dec. 19-21, 2022 (Oral)**
5. **Bhardwaj, B.B.**, Mahanta, K.K. and Kashyap, B.R., "*Prediction of Pavement Condition Index using Non-Linear Regression*", 7th Conference on Transportation Research Group of India (CTRG 2025), Department of Civil Engineering, **IIT Guwahati, December 2025 (Poster)**.
6. **Bhardwaj, B.B.** and Singh, S. "*Evaluation of bond strength at different interfaces in RAP-incorporated concrete systems*", Poster presentation at the workshop of Technologies for Low Carbon and Lean Construction (TLC2), **IIT Madras, Jan. 30 – Feb. 03, 2023 (Poster)**
7. **Bhardwaj, B.B.** and Singh, S. "*Analyzing key factors influencing interfacial bond strengths in RAP-concrete via SFE and POTS approach*", National workshop on Recent Advances in Pavement and Traffic Engineering, **IIT Madras, Dec. 01-02, 2023 (Poster)**
8. **Bhardwaj, B.B.**, Devi, H. C., Boruah, B. B., Borah, R., Hazarika, B. J., Agarwalla, S., and Terang, B. (2018). *Design of signalized traffic intersections on Guwahati bypass road*, 2nd International Conference on Civil Engineering for Sustainable Development- Opportunities and Challenges (CESDOC), **Assam Engineering College, Guwahati, Dec. 18-19, 2018 (Oral)**

SPONSORED RESEARCH

Principal Investigator (P.I.) of the project titled, "*Methodology for prioritization of secondary road network sections for planning and maintenance works*"; was granted ₹19,75,000/- by AICTE under the Collaborative Research Scheme of MHRD, Govt. of India (TEQIP-III), 18th June 2019 to 30th June 2021 (Status: **Successfully completed**)

INVOLVED CONSULTANCY PROJECTS (as Research Scholar)

- Investigation of possible causes for frequent potholes in Atal Setu bridge, Panaji, Goa (January 2022-May 2022)
- Job mix design of dry lean concrete for resurfacing of runway and taxi track at INS Rajali, Arrakkonam, Tamil Nadu (December 2021-January 2022)
- Performance evaluation of Dalmia cement in concrete for special applications- Metro rail, Highways, Pile caps (May 2022-August 2022)

MEMBERSHIP

- Life-time member of Indian Road Congress (**IRC**) [ID: eLM-101962]
- Staff member of Réunion Internationale des Laboratoires et Experts des Matériaux (**RILEM**) [ID: 44201]

PROFESSIONAL EXPERIENCES

1	Designation	Assistant Professor & HoD (i/c)	Department	Civil Engineering
	Organization	Assam Skill University	Duration	2 years 1 month (till now)
	Time Period	22 nd of January, 2024 till now (Pay: Level 10, Basic: ₹ 61,200/-+ allowances)		
	Nature of work	Developed all the major laboratories of the department worth Rs. 15 crore and started the course B.Tech in Civil Engineering with Honours in Digital Transformation in Construction in collaboration with L&T EduTech Programs/Courses taught: <ul style="list-style-type: none"> • B.Tech in Civil Engineering • Certificate Course on Road Construction Technology 		
2	Designation	Assistant Professor (Contractual under TEQIP-III project of MHRD)	Department	Civil Engineering
	Organization	Assam Engineering College	Duration	3 years and 7 months
	Time Period	2 nd of January, 2018 to 1 st August, 2021 (Pay: Consolidated ₹ 74,200/-)		
	Nature of work	Prepared the Self-Assessment Report (SAR) for the year 2018 and 2020 for accreditation of undergraduate civil engineering program under National Board of Accreditation (NBA) , Assam Engineering College Courses taught: <ul style="list-style-type: none"> • Transportation Engineering-I (CE 514) • Engineering Survey-I (CE 313) • Engineering Survey-II (CE 415) • Construction Management (CE 812) • Transportation Engineering-II Lab (CE 613L) • Engineering Survey-I Lab (CE 313L) • CAD Lab (CE181318) • Engineering Graphics and Design (CE181103) 		
3	Designation	Deputy Engineer	Department	Traffic & Transportation
	Organization	LEA Associates South Asia Pvt. Ltd., Fatasil Ambari	Duration	1 year and 1 month
	Time Period	28 th of November, 2016 to 1 st of January, 2018 (Pay: ₹ 37,500/-)		
	Nature of work	Assignments: <ul style="list-style-type: none"> • Development of Pavement Management System in ORACLE database • Traffic & axle data collection and analysis • Collection and processing of Road Inventory and Condition data using HAWKEYE-1000 • Road network creation using ArcGIS v10.4 		
4	Designation	Assistant Professor	Department	Civil Engineering
	Organization	ADAMAS University, Barasat	Duration	3 months
	Time Period	8 th of August, 2016 to 27 th of November, 2016 (Pay: ₹ 21,600/-+ allowances)		
	Nature of work	Department in Charge and Courses taught: <ul style="list-style-type: none"> • Fundamentals of Civil Engineering (CET 304) • Geotechnical Engineering (EETEL-1) • Water Resources Engineering (CE 702) • Hydraulic Structures (CE 704B) 		
5	Designation	Graduate Engineer Trainee	Department	Central Civil
	Organization	Jindal Steel & Power Ltd., Odisha	Duration	3 months
	Time Period	2 nd of July, 2013 to 2 nd of October, 2013 (Pay: ₹ 36,667/-)		
	Nature of work	Site engineer for the project: Construction of a 1700.00 m long concrete road surrounding the Coal Gasification Plant, JSPL, Angul		

OTHER EXPERIENCES

- **Teaching Assistant** for the IIT Madras Centre for Outreach and Digital Education (CODE) program for the Course named Construction Technology and Management in Cohort 1 (2023), Cohort 2 (2024), and Cohort 3 (2025).
- Appointed as **Head of the Department** (in charge) of the Department of Civil Engineering, Assam Skill University from 27th March, 2025, till now.
- **Examination Superintendent** for B.Tech, M.Tech and MCA end semester examinations of Assam Engineering College; **Sessions:** December 2019, March 2021, and July 2021
- **Deputy Centre Superintendent** of Assam Engineering College centre for the following examinations- CTET 2019 (December), NEET (UG) 2020, and ICRB 2020
- Appointed as **Observer** by Assam Science & Technological University (ASTU) for CEE-2024 examination at Nalbari centre
- Appointed as **Observer** by National Testing Agency (NTA) for NEET (UG)-2019 examination in Sarla Birla Gyanjyoti School, North Guwahati centre
- Member of **Internal Quality Assurance Cell (IQAC)** of Assam Skill University, 24th July 2024-till now.
- Coordinator of **Management Information Systems (MIS)** tool for UG program of civil engineering in Assam Engineering College (August 2019 to July 2021)
- **Presiding Officer**, Panchayat Election Assam-2018, Polling Booth: Dekachang High School (B), Sontali-Tupamari, Kamrup (R)

COURSES / WORKSHOPS (as Resource Person)

1. Invited as a speaker in the thematic panel on Circular Economy at the regional conference on “**Urban Strategies for Clean Air,**” co-organized by the Centre for Science and Environment and the West Bengal Regional Chapter of the Institute of Town Planners India, held at Hotel Hindusthan International, Kolkata, on June 26, 2025, for the discussion and lecture on the topic—“**Adequacy of current standards for recycled products and the road ahead to push their uptake.**”
2. Resource Person for a course on “**3D-Printing & Design**”, organized by Dept. of Civil Engineering, **Assam Engineering College**, 14th Dec’23-16th March’2024
3. Resource person for a One Week Faculty Development Program on “**Advancing Careers Through Technology, Management, and Skill-based Learning**” organized by **Assam Skill University**, 3rd-7th March, 2025
4. Resource Person for a course on “**Pavement Analysis & Design**”, organized by Dept. of Civil Engineering, **Assam Engineering College**, 25th April-16th July, 2023 (*online*)
5. Resource Person for the thirteen-day course on “**3D Printing & Design**” funded by TEQIP-III, organized by Assam Engineering College, 27th Jan-8th Feb, 2021
6. Resource Person for Ten-day online workshop on “**MS-Office**” funded by TEQIP-III, organized by Department of Civil Engineering, Assam Engineering College, 27th May-5th June, 2020

7. Resource Person at Rural Connectivity Training and Research Centre (RCTRC), Guwahati, funded by Assam Road Research & Training Institute (ARR&TI) and delivered lectures on “**Planning, Execution and Maintenance of PMGSY roads at World bank and ADB states**”, 25th February, 2019
8. Resource person at Assam Road Research & Training Institute, Guwahati, funded by Road Rehabilitation Project (RRP)|The World Bank and delivered a lecture on “**Construction and Maintenance of Flexible and Rigid Pavements- New materials and technology for rigid pavements in rural roads**”, 26th August, 2018

COURSES / WORKSHOPS (as Participant)

1. Participated in a 6-day Faculty Development Program (FDP) on “**Construction Skill Development**” organized by Indian Institute of Infrastructure & Construction, Kollam, Kerala, May 05-10, 2025
2. Participated in a One Week FDP on “**Advancing Careers Through Technology, Management, and Skill-based Learning**” organized by Assam Skill University, March 03-07, 2025
3. Participated in a One Week FDP on “**Data Analytics**” organized by Assam Skill University in collaboration with SAS Institute (India) Pvt. Ltd., September 23-27, 2024
4. Completed a one-week induction program for officers/employees of Assam Skill University organized by Shri Vishwakarma Skill University, Haryana, May 20-24, 2024
5. Completed a one-week course on “**Direct Trainer Skills (DTS)**” organized by Department of Personnel & training at Administrative Staff College, Khanapara, Assam, February 12-16, 2024
6. Completed an 8-week AICTE-FDP module on “**Orientation Towards Technical Education and Curriculum Aspects**” of National Initiative of Technical Teacher Training (NITTT) on *Swayam*, February 2021
7. Completed an 8 week AICTE-FDP module on “**Professional Ethics and Sustainability**” of National Initiative of Technical Teacher Training (NITTT) on *Swayam*, February 2021
8. Completed a 2-Week course on “**Digital Transformation in Teaching Learning Process (DTITLP)**” organized by NPIU, and conducted by **IIT Bombay** on *Swayam*, January 17-February 7, 2020
9. Participated in the “**Faculty Induction Workshop**” organized by Continuing Education Cell & Centre for Educational Technology, **IIT Kharagpur**, February 6-10, 2018
10. Completed a course on “**3-D Printing & Design**” by The National Association of Software and Service Companies (NASSCOM) in collaboration with **IIT Hyderabad** under the “Train the trainer” program of NPIU, November 28- December 02, 2020
11. Participated in a TEQIP-III training program on “**Advanced Pedagogy & Digital Tool for TEQIP-III faculty members**” organized by **IIT Kharagpur**, July 01-05, 2019
12. Participated in a pedagogy workshop on “**Effective Teaching**”, organized by Center of Education Technology, **IIT Guwahati**, June 03-07, 2019
13. Participated in an FDP on “**Disaster Management Mitigation and Responses**”, organized by Civil Engineering Department, **Assam Engineering College**, August 10-14, 2020

14. Participated in an online workshop on “**STAAD-Pro**” organized by Department of Civil Engineering, **Nalla Malla Reddy Engineering College, Hyderabad**, July 13-18, 2020
15. Participated in One-week online short-term course in “**Emerging Trends in Highway Engineering Infrastructure Development**” organized by Dept. of Civil Engineering, Dr. B.R Ambedkar **National Institute of Technology Jalandhar**, June 23-27, 2020
16. Participated in the International Webinar on “**Recent Trends in Concrete Pavement**” organized by **CSIR-Central Road Research Institute**, New-Delhi in association with Indian Concrete Institute (ICI) Ghaziabad, June 19-20, 2020
17. Participated in a 3-Day training course on “**Introduction to Road Safety Engineering**” organized by **Intercontinental Consultants & Technocrats Pvt. Ltd.**, New Delhi in collaboration with Multi-Skilling & Sustainability Centre of Assam Engineering College, February 12-14, 2020
18. Participated in a workshop on “**Data Analysis using SPSS-A foundation course for researchers**” jointly organized by Department of Bioengineering & Technology, **Gauhati University** and Rehoboth Academic Services at Gauhati University, January 31, 2020
19. Participated in an FDP on “**3-D Printing**”, organized by Mechanical Engineering Department, **Assam Engineering College**, November 25-29, 2019
20. Participated in an FDP on “**Industrial & Fire Safety Engineering**”, organized by Civil Engineering Department, Assam Engineering College, November 4-8, 2019
21. Participated in a 3-Day Workshop on “**Application of GIS in Civil Engineering**”, organized by Civil Engineering Department, Assam Engineering College, September 9-11, 2019
22. Participated in an FDP on “**Recent Advances in Concrete Technology**”, organized by Civil Engineering Department, **Assam Engineering College**, July 15-19, 2019
23. Participated in a One-day sensitization workshop on “**Collaborative Research Scheme**”, organized by **Dibrugarh University Institute of Engineering & Technology** under TEQIP-III, April 12, 2019
24. Participated in a course on **Urban Traffic Modelling and Control**, organized by the Department of Civil Engineering, **IIT Guwahati** in collaboration with GIAN and TEQIP, September 04-08, 2018
25. Participated in a course on **Optimization Methods for Engineering Planning and Design** by GIAN program, **IIT Guwahati**, May 04-08, 2016
26. Participated in a three-day workshop on **Pavement Design, Evaluation and Material Characterization (PAVE)** organized by Transportation Engineering Section, Civil Engineering Department, **IIT Kharagpur**, December 21-23, 2015
27. Participated in an executive course on **Improving Road Safety & Accessibility** organized as a part of the **3rd Conference of the Transportation Research Group (CTRG)** of India, Kolkata, December 17, 2015
28. Completed a certificate course in **Advanced AutoCAD in Tool Room & Training Centre (MSME)** at Bamunimaidam, Guwahati, December, 2010
29. Completed a six-month certificate course in **Basic French**, certified by the Department of English and Foreign Language, **Tezpur Central University**, 2011

LANGUAGE PROFICIENCY

	Assamese	English	Hindi	Bengali	Sanskrit	French
Writing						
Speaking						
Reading						

EVENTS ORGANIZED AS COORDINATOR

• Conferences	2	• Expert Lectures	6
• Workshops	5	• Industrial Visits	4
• Seminars/Webinars	4	• FDPs	5

DECLARATION

I hereby declare that the details and information given in this curriculum vitae are complete and true to the best of my knowledge.

-Dr.Bibhuti Bhushan Bhardwaj

This CV was last updated on: 18.02.2026