

Dr. NAVEET KAUR

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SUMMARY

- Senior Scientist at CSIR-Central Road Research Institute (CRRRI)
- Rich experience in the area of piezoelectric energy harvesting during Ph.D. at IIT Delhi
- Received Distinction in Doctorate from IIT Delhi.
- Secured first rank among all M.E Programs at IIT Delhi
- Research areas of interest include piezo-electric energy harvesting (PEH), structural health monitoring (SHM), earthquake engineering, vibration control devices,



RESEARCH ACCOMPLISHMENTS

- **Publications:** 3 Book, 5 Book Chapters, 22 Int'l Journal & 26 Int'l Conference (Annexure A) 2011-'20
- **Invention Disclosure/Patent/ Design Patent:**
 - 1) Novel Remotely Piloted Aerial Vehicle (Drone) Integrated With Piezo Based Vibro-Integrity Sensing Device (VInSD) For Multipurpose Non Destructive Evaluation Of Concrete And Steel Structures: **VInSD Aerial Inspection Unit (VAIU)** 2025
 - 2) Concrete Assessment Device for Drones (**DrCAD**) 2025
 - 3) Novel piezo based device for multipurpose non-destructive evaluation **Vibro-Integrity Sensing Device (VInSD)**, Patent Application numbered 202111057196 2021
 - 4) A novel energy harvesting solution for reinforced concrete structure 2016
- **Trademark** applied for DrCAD 2025
- **Transfer of Technology (ToT) Agreement:** Ph.D. Research resulted in ToT to the industry 2015
- **Seminars and Invited Lectures:** Organized 14 workshops & delivered 49 lectures (Annexure B) 2010-'19
- **Peer Review Activities:** Reviewed several (>30) papers for high IF SCI Intern'l Journals 2014-'22

EDUCATIONAL QUALIFICATION

Indian Institute of Technology (IIT) Delhi, India

PhD in Structures: Completed in May, 2015 2011-'15

M.Tech. in Structures: 1st Rank out of 77 (CGPA: 9.3/10) 2008-'11

Thapar University, Patiala India

B.E. in Civil Engineering: 5th Rank out of 27 (CGPA: 8.42/10) 2003-2007

WORK EXPERIENCE

- **Engineer**, (Laing O'Rourke's, Eigen Tech. Services Pvt. Ltd., Gurgaon, India) 2007-2008
Project 1: Analysis & design of building using STAAD.Pro– 2007 for DLF project, Cyber City, Gurgaon
Project 2: Analysis & design of underground water tanks, Extended Basement Area for Accenture, Gurgaon
- **Structural Engineer**, (Desein Pvt. Ltd., New Delhi) 2008-2011
Project 1: Reviewing of TG foundation & ID, PA fan foundation for 2×800 MW thermal power plant (TPP)
Project 2: Analysis & design of cooling tower blow-down pump house for 2×507.5 MW TPP
Project 3: Analysis & design of critical pipe supports framing plan & thrust block for CW piping line
- **Sr. Project Scientist** (Indian Institute of Technology (IIT) Delhi) 2015
Project 1: Technical advice on building national Horticulture board
Project 2: Experimental investigation of evaluation of UV coated cement fibre boards under wind load

RESEARCH EXPERIENCE

Scientist (CSIR-Central Road Research Institute (CRRRI), India)

2017-Till Date

Established new research lab in the BES Division of CSIR-CRRRI

	Total	Project Leader	Co-PL	Team Member	(*Lakh:
R and D Projects	814.95 lakh*	165.95 lakh	598 lakh	51 lakh	1,00,000 INR
Sponsored R & D Projects	1907.51 lakh	166.38 lakh		1741.13 lakh	1,250 USD)
Consultancy Projects	879.39 lakh	77.88 lakh		801.51 lakh	

DST INSPIRE Faculty (CSIR-Central Road Research Institute (CRRI), India)	<u>2016-'17</u>
<i>Project:</i> Structural Health Monitoring, Energy Harvesting and Piezoelectricity	
Post Doctorate (The Hong Kong Polytechnic University, PolyU)	<u>2015-'16</u>
<i>Project:</i> Structural Condition Monitoring System for PolyU Smart Fish Bridge Established new research lab in the Department of Civil Engineering	
Ph.D., (Feasibility of same PZT patch for integrated SHM and energy harvesting)	<u>2015</u>
- Analytical power estimation model for adhesively embedded/ surface bonded PZT patches - Detailed numerical investigations for parametric study to maximize piezoelectric energy - Demonstration of feasibility of combined energy harvesting & SHM on real-life steel/ RC bridges - Determination of fatigue characteristics of concrete using PZT patches	
M.Tech., (Structures)	<u>2011</u>
<i>Project 1:</i> Investigat'n of earthquake response of high-rise shear-type buildings with friction dampers	
Optimizing damping parameters by developing FORTRAN program based on Newmark's Beta method	
<i>Project 2:</i> Investigat'n of Tuned Mass Damper in Base-Isolat'd Build'g under Near-Fault Earthquake	
B. E. Project, (Analysis & Design of Industrial Structures)	<u>2006</u>

AWARDS & RECOGNITIONS

- 16th CIDC Vishwakarma Award for Scientist/ Academician" on 11th April 2025.
- Best Paper Award: IEEE International Conference, Feb 28th –Mar 01st, 2025
- 2nd Runners-Up in the category of "Best Case Study on Research for New Technologies and Innovation in Corrosion Management" at the 2nd CII National Corrosion Management Practices - Competition & Awards held on March 5, 2025.
- Jury Member : Served as the Jury member of 3rd Civil Engineering & Construction Review (CE & CR) Awards 2024
- Management Council of CSIR-CRRI 2023-25
- Review Board for 1st International Conference RAID 2024 Recent Advances in Infrastructure development, NIT Calicut, February 12, 13, 2024.
- Panelist for International Online Workshop on "How Structural Health Monitoring Works?", December 14, 2023 Indian Structural Health Monitoring Society (ISHMS) along with National Infrastructure Disaster Management (NIDM)
- Women Achiever of CSIR for the year
- Session Chair for International Conference on Condition Assessment Rehabilitation and Retrofitting of Structures (CARRS-2023), IIT Hyderabad, December 11-13, 2023
- Published an Article in NBM&CW-India's #1 magazine for construction and infrastructure industry on "Women forging milestones in Construction Industry". New Building Materials and Construction World (NBM&CW), March 8, 2024
- Selected as Jury member for the 3rd CE & CR Awards 2024
- World Record for largest World clock Assembly and Display Event: Lead a team of 15 volunteers from CSIR-CRRI to organise the event on Earth Day April 22, 2023
- Council Member of Indian Road Congress (IRC)
- IABSe Membership: Received the membership of International Association for Bridge and Structural Engineering
- Vice President and Founding Member of Indian Structural Health Monitoring Society. This society is the first of its kind in India, dedicated to promoting research in the field of SHM both domestically and internationally.
- 'Rashtriya Gaurav Award': Applied for 'Rashtriya Gaurav Award' by India International Friendship Society (IIFS), non Govt. Society of Repute, May 2022
- Appeared on Media- Amrit Vichar channel expressing my views about the role of CRRI Scientists and research in improving the nation's infrastructure, October, 2022
- Dainik Jagran- All India Edition: Article published on my research done in the field of Drone technology for bridge inspection in the Dainik Jagran in All India Edition in several languages, March 2023
- CSIR-Young Scientists Conclave Meet: Nominated among top young CSIR Scientists to present work in front of DG-CSIR and all the Directors of CSIR

2023

2021

- Co-Chair of Intn'l Conference organised by IIT Delhi Co-Chairperson(Technical) in the Core organising Committee of International Conference on 'Futuristic Technologies 2021' 2022
- Invited Speaker, HeaMES 2022:3rd International Conference on Health Monitoring of Civil & Maritime Structures, HeaMES 2022, 8th - 9th June 2022 | Edinburgh, UK 2021
- INSPIRE Faculty: Selected for prestigious 'INSPIRE Faculty Award' by DST, Govt. of India. 2021
- CSIR Young Scientist Award: Nominated for 'CSIR Young Scientist Award'-2019
- Reporting Officer: Selected as Reporting Officer for technical officers of Bridge Division, CRRI 2022
- Assistant Professor: Recognized as 'Assistant Professor' at Academy of Scientific & Innovative Research (AcSIR) 2011
- NBCC Prize of Excellence: For securing 1st rank(among 77) in Civil Engineering M.Tech. batch
- Best Oral Presentation: Among all research scholars at IIT Delhi on Research Scholars' Day 2015
- Who's Who in the World®: Biography selected for inclusion in the Marquis 33rd Edition 2016
- In Media: Interview was featured in 'Yo!Success', an online magazine. 2016
- Guest Faculty, IGNOU: Lecture broadcasted all over India on National Television, 'GyanDarshan' 2014
- Awarded Third rank in Hindi Technical Paper Competition during Hindi Pakhwara 2018
- Invited as Evaluator: Evaluated projects for 26th National Children Science Congress, KVS 2018
- Team Leader, VSSDL*: Delivered video demonstrations for explaining and improving experiments 2013-14
- Stanford Uni., USA: Delivered talk for 9th International Workshop on SHM (IWSHM-9) 2012
 - The video demonstration of my research work has been *selected among the 19 best across the world* for an event '*SHM in Action*' in IWSHM-9, 12th September
- Honoured as Guest Faculty, MHRD, Govt. of India sponsored QEEE Pilot Program 2014
- Won financial sponsorship for Asia Pacific Summer School: Interacted and shared ideas with 50 international participants 2012
- Presenter, UK India Educational & Research Initiative: Presented my work at Bath University 2014
- MHRD Scholarship: Received Ministry of Human Resource & Developmet scholarship for Ph.D. 2011-'15
- Rashtrapati Guide: Highest award for Bharat Scouts & Guides awarded by President of India 2002

MEMBERSHIP

International

- Member of International Association for Bridge and Structural Engineering (IABSE)
- Member of American Society of Civil Engineers (ASCE)

National

- **Vice President and Founding Member of Indian Structural Health Monitoring Society**: First society in India dedicated towards improving and propagation research in the field of Structural Health Monitoring
- Member of Indian Road Congress (IRC)
- Member of Indian Geotechnical Society (IGS)

SOFTWARE SKILLS

STAAD Pro - 2008, COMSOL, SAP 2000, ANSYS, NISA, ABAQUS, MATLAB, FORTRAN

REFERENCES

Prof. Suresh Bhalla,
 Professor,
 Department of Civil Engineering,
 Indian Institute of Technology (IIT) Delhi,
 New Delhi – 110 016, INDIA.
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[E-Mail: sbhalla@civil.iitd.ac.in](mailto:sbhalla@civil.iitd.ac.in)

Prof. Satish Chandra,
 Director CSIR-CRRI (2016-2021),
 Professor,
 Indian Institute of Technology (IIT) Roorkee,
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ANNEXURE A
LIST OF PUBLICATIONS

BOOK

1. Aleena VK, **Kaur N.**, Bhalla, S. (2024), “Singly Curved Thin Piezo Transducers for Energy Harvesting and Structural Health Monitoring”, Edition 1, BP International, ISBN 978-93-48006-36-3 (Print), ISBN 978-93-48006-50-9 (eBook), DOI: <https://doi.org/10.9734/bpi/mono/978-93-48006-36-3>
2. Bhalla, S., **Kaur N.**, Visalakshi, T., Moharana, S., Balguvhar, S. (2021), Proceedings of the International Conference on Futuristic Technologies, 22-24 January, New Delhi, FT21 Conference
3. Bhalla, S., Suresh, R., Moharana, S. Visalakshi, T. and **Kaur N.** (2016) “Piezoelectric Materials: Applications in SHM, Energy Harvesting & Biomechanics”, **WILEY ATHENA Publications**

BOOK CHAPTER

1. Anand, K., Aggarwal, D., Goyal, S. and **Kaur, N.** (2020) “Evaluating the Hydration of Cement Mortar Blended with Calcinated Clay using Piezoelectric based Sensing Technique”, **RILEM Book series, Springer 978-981-15-2806-4**, pp. 571-580 Vol 25 (*This was originally part of 3rd International Conference on Calcined Clays for Sustainable Concrete*)
2. Singh, A., **Kaur N.** and Bhalla, S. (2020) “Waste to Energy: Piezoelectric energy harvesting from Vehicular Movements”, **Lecture Notes in Civil Engineering-Springer** (*This was originally part of the Proceedings of 3rd National Conference on Recent Advances in Traffic Engineering*)
3. Chhabra, R., Negi, P., **Kaur, N.** and Bhalla, S. (2018) “Monitoring of Concrete Hydration using Resin Jacketed Embedded PZT Sensors”, **Lecture Notes in Civil Engineering-Springer**, Vol. 33 (*This was originally part of International Conference on Geomatics in Civil Engineering*)
4. **Kaur, N.** and Bhalla, S. (2014), “New Paradigms in Piezoelectric Energy Harvesting from Civil Structures”, **Advances in Structural Engineering - Springer 978-81-322-2190-6/1**, pp. 2601-2614. (*This was originally part of the Proceedings of Structural Engineering Convention, December 22-24th, 2014*)
5. Negi, P., **Kaur, N.**, Bhalla, S. and Chakraborty, T. (2014), “Experimental Strain Sensitivity Investigations on Embedded PZT Patches in varying orientations”, **Advances in Structural Engineering - Springer 978-81-322-2190-6/1**, pp. 2615-2620. (*This was originally part of the Proceedings of Structural Engineering Convention, December 22-24th, 2014*)

JOURNAL (TOTAL IMPACT: 73.240; CITATIONS: 759; H-INDEX: 15)

1. Aleena VK, **Kaur, N** Bhalla S, (2025) “Investigating the Potential of Single-Curved Thin Piezoelectric Transducers for Energy Harvesting and Structural Health Monitoring” **Journal of Visualized Experiments**, World's first peer reviewed scientific video journal, Vol 14, 225, doi: 10.3791/68141.
SCI Journal with Impact Factor: 1.2

2. Verma, G, Goel, R, Kaur, N, Singh, MK, Rangappa, SM and Siengchin, S (2025) “Understanding behaviour of graphene in natural fibre composites: A comprehensive review”, **European Polymer Journal**, Vol 232, 113959, ISSN 0014-3057.
SCI Journal with Impact Factor: 5.800 [\[Link\]](#)
3. **Kaur, N.**, and Negi, P., (2025) “In-situ strength assessment of rapid set concrete in real-time using resonant peak parameters of embedded PZT transducers”, *Nature*, **Scientific Reports-Nature**, Vol **15**, 11281.
SCI Journal with Impact Factor: 4.380 [\[Link\]](#)
4. “ Sreenitya, S, **Kaur, N. and and Bhalla, S.** (2025) andDevelopment and Performance Evaluation of Enhanced Piezoelectric Sensor cum Energy Harvester Based on Flexural Strain Amplification in Real-life Field Conditions”, **Sensors, MDPI**, Vol 25(4), 1063. [\[Link\]](#)
SCIE Journal with Impact Factor: 3.4
5. Negi, P., **Kaur, N.**, and Kumar P (2024) “Performance of Piezo-Bond Systems under Extremely High Compressive Strains: Experimental and Numerical Insights”, **Journal of Intelligent Material Systems and Structures**, Vol 35(5). [\[Link\]](#)
SCI Journal with Impact Factor: 2.400
6. Aleena VK, **Kaur N**, Bhalla S and Bagalwar S, (2023) “Efficacy of thin curved piezo transducers for structural health monitoring and energy harvesting when embedded in RC Structures”, **Energy Reports**, Vol 9, pp. 2506-2524. [\[Link\]](#)
SCI Journal with Impact Factor: 4.700
7. Anand, K, Goyal, S, **Kaur, N** and Reddy, M.S. (2023), “Viable FA based Bacterial Cells as Sustainable Solution for Corrosion Prevention in RC Structures”, **Construction and Building Materials**, Vol. 365, 130056 [\[Link\]](#)
SCI Journal with Impact Factor: 7.400
8. **Kaur N**, Gola D, Goel R, and Kumar P (2023) “Investigation of distresses observed in a highly skewed multi-cell bridge”, **Journal of Civil Structural Health Monitoring**, Vol. 13, 1517–1535 DOI: 10.1007/s13349-022-00606-z. [\[Link\]](#)
SCI Journal with Impact Factor: 3.600
9. **Kaur N.**, Goyal, S., Anand, K and Sahu, G.K. (2021) “A cost-effective approach for assessment of pre-stressing force in bridges using piezoelectric transducers”, **Measurement**, Vol 168, 108324. [\[Link\]](#)
SCI Journal with Impact Factor: 5.200
10. **Kaur, N.** and Negi P. (2020) “Feasibility of using resin jacketed piezo sensors for monitoring of concrete strength via Electro-mechanical Impedance Technique”, **Current Science**, Vol. 119(8).
SCI Journal with Impact Factor: 0.754
11. **Kaur, N.**, Dasari, M. and Singamsetty, S. (2020) “An experimental study on piezoelectric energy harvesting from wind and ambient structural vibrations for wireless structural health monitoring”, **Advances in Structural Engineering**, Vol. 23(5), pp. 1010-1023.
SCI Journal with Impact Factor: 2.438
12. **Kaur, N.**, Bhalla, S. and Maddu, S.C.G (2019) “Damage and retrofitting monitoring in reinforced concrete structures along with long-term strength and fatigue monitoring using embedded Lead Zirconate Titanate patches”, **Journal of Intelligent Materials and Smart Structures**, 30(1), 100-115. [\[Link\]](#)
SCI Journal with Impact Factor: 2.582
13. **Negi, P.**, Chhabra R, **Kaur, N.** and Bhalla S. (2019), “Health Monitoring of Reinforced Concrete Structures under Impact using Multiple Piezo-based Configurations”, **Construction & Building Materials**, Vol 222, pp. 371-389 [\[Link\]](#)
SCI Journal with Impact Factor: 7.693

14. S. Bhalla and **Kaur, N.** (2018) “Prognosis of Low-Strain Fatigue Induced Damage in RC Structures using Embedded Piezo-Transducers as Global cum Local Vibration Sensors”, **International Journal of Fatigue**, Vol. 113, pp. 98-112. [\[Link\]](#)
SCI Journal with Impact Factor: 3.673
15. Negi, P., Chakraborty, T., **Kaur, N.** and Bhalla, S. (2018) “Investigations on Effectiveness of embedded PZT patches at varying orientations for monitoring concrete hydration using EMI technique”, **Construction & Building Materials**, Vol. 169 (Apr), pp. 489-498. [\[Link\]](#)
SCI Journal with Impact Factor: 7.693
16. Kaur, N. and Negi, P. (2018), “गतिवानवाहनोंसेऊर्जाउत्पन्नकरनेवालेपीज़ोइलेक्ट्रिकएनर्जीहार्वैस्टरकानिर्माण”, **सड़कदर्पण**, Vol 17, December.
17. Kaur, N., Li, L., Bhalla, S., Xia, Y., Ni, P. and Adhikari, S. (2017) “Integration and Evaluation of Multiple Piezo Configurations for Optimal Health Monitoring of RC Structures”, **Journal of Intelligent Materials and Smart Structures**, Vol. 28(19), pp. 2717- 2736. [\[Link\]](#)
SCI Journal with Impact Factor: 2.582
18. Kaur, N., Li, L., Bhalla, S. and Xia, Y. (2017) “A Low-Cost Version of EMI Technique for Damage Detection In RC Structures using Multiple Piezo Configurations”, **Advances in Structural Engineering** Vol. 20(8), 1247- 1254 [\[Link\]](#)
SCI Journal with Impact Factor: 2.438
19. **Kaur, N.** and Bhalla, S. (2016), “Numerical Investigations on Energy Harvesting from Adhesively Bonded Thin PZT Patches in Surface Bonded/Embedded Configurations”, **Sensors and Actuators A: Physical**, Vol. 241, pp. 44-59. [\[Link\]](#)
SCI Journal with Impact Factor: 4.291
20. **Kaur, N.** and Bhalla, S. (2015), “Combined Energy Harvesting and Structural Health Monitoring Potential of Embedded Piezo Concrete Vibration Sensors”, **Journal of Energy Engineering, American Society of Civil Engineers (ASCE)**, Vol. 141(4), pp. 1-18. [\[Link\]](#)
Remained among top3 ‘Most Read Article’ from Feb 2016 to Nov 2016.
SCI Journal with Impact Factor: 1.944
21. **Kaur, N.**, Bhalla, S., Panigrahi, R. and Shanker, R. (2015), “Experimental evaluation of Miniature Impedance Chip for Structural Health Monitoring of Prototype Steel/RC Structures Based on EMI Technique”, **Experimental Techniques**, Vol. 40, No. 3 (May/ June), pp. 981-992. [\[Link\]](#)
SCI Journal with Impact Factor: 0.806
22. Negi, P., **Kaur N.**, Bhalla, S. and Chakraborty, T. (2015) “Experimental Strain Sensitivity Investigations on Embedded PZT Patches in Varying Orientations”, **The Indian Concrete Journal**, Vol. 89(1), pp. 87-90. (*This paper was originally part of the Proceedings of Structural Engineering Convention, December 22-24th, 2014*) [\[Link\]](#)
Scopus Identified Journal with SJR: 0.250
23. **Kaur, N.** and Bhalla, S. (2014), “Feasibility of Energy Harvesting from Thin Piezo Sensor Patches via Axial Strain Actuation Mode”, **Journal of Civil Structural Health Monitoring**, Vol. 4(1), pp 1-15. [\[link\]](#)
Scopus Identified Journal with SJR: 2.130
24. **Suresh, R.**, Bhalla, S., Singh, C., **Kaur, N.**, Hao, J. and Anand, S. (2014), “Combined Application of FBG and PZT Sensors for Plantar Pressure Monitoring at Low And High Speed Walking”, **Technology and Health Care**, Vol. 23(1), pp. 47-61 [\[Link\]](#)
SCI Journal with Impact Factor: 0.787

25. **Kaur, N.**, Matsagar, V.A. and Nagpal, A.K. (2012), “Earthquake Response of Mid-Rise to High-Rise Buildings with Friction Dampers”, **International Journal of High-Rise Buildings**, CTBUH, Vol. 1(4), pp. 311-332. [\[Link\]](#)

INTERNATIONAL JOURNAL (UNDER REVIEW)

26. Kaur, N, Goel R, Kumar P, Joshi A (2024), “Field and numerical studies to assess the structural behavior and material characteristics of highly skewed distressed PSC Road-Over-Bridge under temperature load”, **Journal of Performance of Construction Facilities**, ASCE, *Under Review*
SCI Journal with Impact Factor: 2.3
27. Bangar, B, Khare, RK, Kaur N and Kumar P (2024), “Assessment of losses in bridges under seismic events: A financial perspective”, **Earthquake and Structures**, *Under Review*
Scopus, SCIE Journal with Impact Factor: 1.4

INTERNATIONAL CONFERENCE

1. Sharma, B, Pal, S, **Kaur, N** and Kumar, P (2025), "Finite Element Analysis of Concrete Bridge Under Moving Load Across and Along the Span" IEEE International Conference on Innovation In Computing & Engineering ICE 2025, Shiv Nadar University, New Delhi, Feb 28th –Mar 01st.
2. Kumar, N, Kumar, P and **Kaur, N** (2025), "Development of Drone based Concrete Homogeneity Testing Device suitable for Inaccessible Structures" IEEE International Conference on Innovation In Computing & Engineering ICE 2025, Shiv Nadar University, New Delhi, Feb 28th –Mar 01st .
3. **Kaur, N** (2024), “Uncharted Skies: Exploring evolution with Drone Technology" -International conference on Smart and Sustainable construction with Futuristic Technologies (NIRMANA-2024) organised by InstructE, Bangalore, 12th – 13th September
- 4.
5. Bende, S., **Kaur, N.**, Kumar, P., and Pal, S. (2024), “Numerical parametric study of Interfacial shear stress between Concrete and Fiber-Reinforced Polymer (FRP) on an inclined plane”1st International Conference on Recent Advances in Infrastructure Development (RAID-2024), Department of Civil Engineering, NIT Calicut, 12th - 13th February.
6. Sharma, B., Pal, S., **Kaur, N.**, and Kumar, P. (2024), “Finite Element Analysis of Concrete Bridge Under Moving Load Across and Along the Span” International Conference on Civil, Environment and Construction Technology: Ecological Resilient & Sustainable Development Goals Integration – Research Agenda (CECT-2024), Department of Civil Engineering, Graphic Era (Deemed to be) University, Dehradun, 17th -18th May.
7. Bende, S., Pal, S., **Kaur, N.**, and Kumar, P. (2024), “A comparative analytical study of influence of varying thickness of FRP on flexural capacity of RCC beams strengthened with Fiber-Reinforced Polymer (FRP)” International Conference on Civil, Environment and Construction Technology: Ecological Resilient & Sustainable Development Goals Integration – Research Agenda (CECT-2024), Department of Civil Engineering, Graphic Era (Deemed to be) University, Dehradun, 17th -18th May.
8. G. K. Sahu, G.K., Goyal, J.K., Goel, R., Garg, R.K. and Golla, D.P. and **Kaur, N.** (2021), “A case study on distressed major bridge on NH-8B, Gujarat”, National Conference on Recent Trends on Innovations in Civil and Mechanical Engineering, TMU, Moradabad, 26th-27th November.

9. Anand, K., Aggarwal, D., Goyal, S. and **Kaur, N.** (2019) “Evaluating the Hydration of Cement Mortar Blended with Calcinated Clay using Piezoelectric based Sensing Technique, Proceedings of the 3rd International Conference on Calcined Clays for Sustainable Concrete, India Habitat Centre, New Delhi, India, 15th-17th October.
10. Singh, A., **Kaur N.** and Bhalla, S. (2018) “Waste to Energy: Piezoelectric energy harvesting from Vehicular Movements”, **3rd National Conference on Recent Advances in Traffic Engineering**, Sardar Vallabhbhai National Institute of Technology Surat, Gujarat, India, 11th -12th August.
11. Chhabra, R., Negi, P., **Kaur, N.** and Bhalla, S. (2018) “Monitoring of Concrete Hydration using Resin Jacketed Embedded PZT Sensors”, **International Conference on Geomatics in Civil Engineering**, IIT Roorkee, 5th-6th April.
12. Li, L., **Kaur, N.** and Xia, Y. (2016) “Integration of multiple piezo configurations for health monitoring of RC structures”, **7th Cross-Strait Workshop of Structural Monitoring and Control in Civil Engineering**, Department of Civil Engineering, National Taiwan University, 5th-8th July.
13. **Kaur, N.** and Balgavhar S., (2015) “Integrated Piezoelectric Energy Harvesting and Structural Health Monitoring for Transportation Infrastructure”, **6th International Conference on Power Electronics Systems and Applications (PESA)**, *Competition Paper*, December 15th-17th, The Hong Kong Polytechnic University, Hong Kong. [\[Link\]](#)
14. **Kaur, N.** and Bhalla, S. (2015) “Building smart infrastructure by combining SHM and energy harvesting for a smart city”, **20th Annual Convention and National Seminar on Innovative Concepts in Making of Smart Cities, September 1st – 2nd**, **Indian Building Congress**, New Delhi, India, Vol. 22, No. 1, pp. 186-189.
15. Bhalla, S., Srivastava, S., Suresh, R., Moharana, S., **Kaur, N.** and Gupta, A. (2015), “Application of Structural Health Monitoring Technologies to Bio-Systems:Current Status and Path Forward”, **SPIE International Conference on Smart Structures NDE**, March 8th-12th, San Diego, California.
16. Bhalla, S., Suresh, R., Moharana, S., Visalakshi,T., **Kaur, N.** and Naskar,S. (2015), “Multi-Disciplinary Applications of Piezo-Sensors: Structural Health Monitoring, Bio-Mechanics And Energy Harvesting”, **SPIE International Conference on Smart Structures NDE**, March 8th-12th, San Diego, California.
17. **Kaur, N.** and Bhalla, S. (2014), “New Paradigms in Piezoelectric Energy Harvesting from Civil Structures”, **9th Biennial International Workshop on Structural Engineering Convention (SEC) 2014, Indian Association for Structural Engineering (IASE)**, December 20th-21st, IIT Delhi, India, pp. 2601-2614.DOI: [10.1007/978-81-322-2187-6_202](https://doi.org/10.1007/978-81-322-2187-6_202) [\[link\]](#)
18. Negi, P., **Kaur, N.**, Bhalla, S. and Chakraborty, T. (2014), “Experimental Strain Sensitivity Investigations on Embedded PZT Patches in varying orientations”, **9th Biennial International Workshop on Structural Engineering Convention (SEC) 2014, Indian Association for Structural Engineering (IASE)**, December 20th-21st, IIT Delhi, India, pp. 2615-2620.DOI: [10.1007/978-81-322-2187-6_127](https://doi.org/10.1007/978-81-322-2187-6_127) [\[link\]](#)
19. **Kaur, N.** and Bhalla, S. (2014), “Monitoring Strength Gain and Fatigue Damage of RC Structure Using Embedded PZT Sensors”, **7th ISSS International Conference on Smart Materials, Structures and Systems**, July 8th-11th, Indian Institute of Science (IISc.) Bangalore, India.

20. Singamsetty, S., **Kaur, N.**, and Bhalla, S. (2014), “Energy Harvesting from Structural Vibrations Using Piezo transducers: A Parametric Study”, **3rd International Conference on Sustainable Innovative Techniques In Architecture, Civil and Environmental Engineering (SITACEE - 2014) organized by "KrishiSanskriti"**, April 26th-27th, Jawaharlal Nehru University, New Delhi, India, pp. 331-334. [\[Link\]](#)
21. **Kaur, K.**, Singamsetty, S., Dasari M. and Bhalla, S. (2014), “Piezoelectric Energy Harvesting Potential Through Built Up and Simple Configurations under Mechanical Vibrations”, **9th International Symposium on Advanced science and Technology in Experimental Mechanics (9th ISEM)**, November 1st–6th, Hotel JaypeeSiddharth, New Delhi, India.
22. Bhalla, S., **Kaur, N.**, Naskar, S. (2014), “Virtual Smart Structures and Dynamics Lab: Towards Teaching Advanced Concepts Online”, **9th International Symposium on Advanced science and Technology in Experimental Mechanics (9th ISEM)**, November 1st–6th, Hotel JaypeeSiddharth, New Delhi, India.
23. **Kaur, N.**, Bhalla, S., Gupta, N. and Jain, N. (2013), “Integrated Global Vibration and Low Cost EMI Technique for Structural Health Monitoring of RC Structures using Embedded PZT Patches”, **UK-India Education and Research Initiative, UKIERI Concrete Congress, Innovations in Concrete Construction**, March 5th-8th, NIT Jalandhar, Punjab, India, pp. 1620-1629.
24. **Kaur, N.** and Bhalla, S. (2013), “Feasibility for Energy Harvesting from Surface Bonded/Embedded Piezo-Patches in Addition to Structural Health Monitoring”, **9th IWSHM International Workshop on Structural Health Monitoring**, September 10th-12th, Stanford University, Stanford, CA – USA, pp. 2600-2605. [\[link\]](#)
25. Talakokula, V., Dhawan, S.K., Srivastava, S., **Kaur, N.**, Moharana, S., Bhalla, S., Bhattacharjee, B. and Gupta, A. (2013), “Recent Advances in Structural Health Monitoring based on EMI technique at IIT Delhi”, **International Conference on Trends and Challenges in Concrete Structures (TRACCS)**, December 19th-21st, CPWD Training Institute, Ghaziabad, UP, India.
26. **Kaur, N.**, Matsagar, V.A. and Nagpal, A.K. (2011), “Earthquake Response of Medium-Rise to High-Rise Buildings with Friction Dampers”, **18th ICSV International Congress on Sound and Vibration**, July 10th-14th, Rio de Janeiro, Brazil.
27. **Kaur, N.**, Matsagar, V.A. and Nagpal, A.K. (2011), “Tuned Mass Damper on Base-Isolated Building under Near-Fault Earthquakes”, **21stSMiRT International Conference on Structural Mechanics in Reactor Technology**, November 6th-11th, Indian Habitat Centre, New Delhi, India, pp. 2535-2542.

ARTICLE IN MAGAZINE

1. **Kaur, N** (2024) “Women forging milestones in Construction Industry”, New Building Materials and Construction World (NBM&CW), ISSN 0973 0591, Vol. 29, Issue 09.
2. **Kaur, N** (2023) “Remotely Piloted Aerial Vehicle (RPV) based bridge Health Monitoring”. New Building Materials and Construction World (NBM&CW), ISSN 0973 0591, Vol 28, Issue 12

ANNEXURE B
SEMINARS AND INVITED LECTURES

1. Organised as the [Course Coordinator](#) “Three day training Programme on “Design of Bridge and Foundation with emphasis on long span bridges”, MPRRDA, Bhopal, Sep 12-14, 2023
2. Organised Day 4 ‘[Young Researchers Conclave](#)’ for the One Week One Lab (OWOL) Event of CSIR-CRRI, July 16-22, 2023
3. Organised as the [Course Coordinator](#) “Customised training on Design of Bridges and Foundation’ for MPRRDA, Bhopal, Feb 1-3, 2023
4. Organised [5th Dr. P. Raychaudhuri Memorial Lecture](#) on will be delivering talk on ‘Bridge Maintenance Management System (BMMS) - Lessons Learned & Way Forward’ by Dr. N. C. Pal, Engineer-in-Chief (Design), Public Works Department, Govt. of Odisha, August 24, 2022
5. Organised [4th Online Dr. P. Raychaudhuri Memorial Lecture](#) on “Potential of Big Data Analytics in Structural Health Monitoring” by Prof. Sudhirkumar Barai, Director, BITS, Pilani, August 24, 2021
6. Organised [3rd Online Dr. P. Raychaudhuri Memorial Lecture](#) on “Lessons to be learnt from bridge failures” by Er. V.N. Heggade, August 24, 2020
7. Organised the [online International Webinar](#) on “Health monitoring of structures through instrumentation”, July 18, 2020
8. Organised [online International Webinar](#) on “Durability, Design and Construction Aspect of Bridges”, BES, CSIR-CRRI and ICI-Ghaziabad, May 29-31, 2020
9. Organised [online International Webinar](#) on “Health Monitoring, Service life prediction and Repair and Rehabilitation” BES, CSIR-CRRI, May 8-11, 2020
10. Organized and participated in [National Hindi workshop](#) on “आधारभूत ढांचा के विकास में विज्ञान और प्रौद्योगिकी का योगदान: 21वीं सदी की चुनौतियां”, CSIR-CRRI, New Delhi, September 6th, 2019.
11. Organized and participated in [workshop](#) on “Advances in Corrosion in Concrete Structures- Science, Prevention and Repair”, CSIR-CRRI, New Delhi, April 24th, 2017.
12. Organized and participated in [workshop](#) on “Experimental Structural Dynamics, Health Monitoring and Non-Destructive Evaluation using Smart Materials”, [IIT Delhi](#), June 14th, 2013.
13. Organized and participated in [workshop](#) on “Advances in Smart Materials and Structural Health Monitoring”, [IIT Delhi](#), December 12th, 2010.
14. Organized and participated in two-day seminar on “Advances in Earthquake Engineering”, [IIT Delhi](#), 30th July, 2010 to 31st July, 2010.

International Lectures

1. **Delivered an online talk** on “Structural Health Monitoring and Energy Harvesting using Ceramic based Smart Materials” for 5th Workshop for SIRMA organised by University of **Dublin, Ireland**, September 28, 2022
2. **Delivered online invited talk** on “Residual post-tensioning force and in situ concrete strength estimation in bridges using piezoelectric sensors, 3rd International conference on Health Monitoring of Civil and Marine Structures (HeaMES) 2022 endorsed by International society of Intelligent Infrastructure (ISHMII), Edinburg, Scotland (in 2020), June 8, 2022
3. **Delivered a lecture** on “Structural Health Monitoring using Piezo Transducers” at the **Hong Kong Polytechnic University, Hong Kong**, February 24th, 2016.
4. **Delivered a lecture** on “Structural Health Monitoring using Piezo Transducers”, **University of Bath, U.K.**, for possible research collaboration, 2014
5. **Delivered an invited talk** on “Feasibility for Energy Harvesting from Surface Bonded/Embedded Piezo-Patches in Addition to Structural Health Monitoring” for 9th IWSHM International Workshop on Structural Health Monitoring, **Stanford University, Stanford, CA – USA**, *Video demonstration* of my research work has been selected among the **19 best across the world for an event ‘SHM in Action’ in IWSHM-9**, September 10th-12th, 2013
6. **Delivered a talk on** (2011), “Earthquake Response of Medium-Rise to High-Rise Buildings with Friction Dampers”, 18th ICSV International Congress on Sound and Vibration, **Rio de Janeiro, Brazil**, July 10th-14th, 2011

Invited Lectures

7. **Delivered lecture** on “Recent Advances in SHM: Drones, Non-Contact techniques and AI-ML”, IIT Delhi, Technical lecture series organised by Indian Structural Health Monitoring Society (ISHMS), March 20, 2024
8. **Delivered lecture** on “Drone Technology for Structural Health Monitoring” as Invited Speaker, International Conference on Condition Assessment Rehabilitation and Retrofitting of Structures (CARRS-2023), IIT Hyderabad, December 11, 2023
9. **Delivered progress review presentation** for the GAP 4597 project on “Research scheme to study the corrosion of various reinforcement bar materials / structural steel including anti-corrosive coatings, concrete treated with surface coating under different environment exposure conditions”, Review by Ministry of Road and Transport Highway, October 4, 2023
10. **Delivered online lecture** on “Bridge classification and selection criteria, Three day training Programme on “Design of Bridge and Foundation with emphasis on long span bridges” organised by MPRRDA at Bhopal, Sep 12, 2023
11. **Delivered a lecture** on “Structural Health Monitoring and Audit of Structures: Science Behind instrumentation of Bridges”, NIDM Campus, Rohini, Delhi, National Training programme on

Urban Risk Mitigation-Focus on seismic and Fire Safety”, organised by National Institute of Disaster Management, Ministry of Home Affairs, Government of India, August 8, 2023

12. **Delivered a lecture** on “Remotely Piloted Aerial Vehicle”, iconnect 43 Robotics for civil Infrastructure Inspection and Manufacturing, organized by Ministry of Science and Technology and Ministry of Earth Sciences, July 8, 2023
13. **Delivered lecture** on “Bridge classification and selection criteria”, training programme on ‘Design of Bridges and Foundation’ for MPRRDA Bhopal (MP), Feb 1, 2023
14. **Delivered an online talk** on “Structural Health Monitoring and Energy Harvesting using Ceramic based Smart Materials” Mohindra University, May 19, 2022
15. **Delivered an online talk** on "Structural Health Monitoring and Energy Harvesting using Ceramic based Smart Materials” **CSIR-Young Scientist Conclave: Selected as a ‘Young Scientist’** to present research in front of DG-CSIR and directors of all CSIR labs, May 21, 2021
16. **Delivered an online talk** on “Artificial Intelligence and Machine Learning for Drone based monitoring of Structures” for possible research collaboration with ‘Intel’ Geo Spacial April 23, 2021
17. **Delivered an hybrid (online/offline) talk** on ‘Integration of Vibro-Integrity Sensing Device (VInSD) with Remotely Piloted aerial Vehicle’ Expression of Interest to choose industry partner. Four industries participated in the talk, April 12, 2021
18. **Delivered an online lecture** on “Digital Era of Structural Health Monitoring”, keynote speaker for Concrete Day Celebrations organised by ICI-Chandigarh, September 19th, 2020.
19. **Delivered an online lecture** on “Futuristic Technologies for Self-Powered Sensors” for one week e-workshop on “Retrofitting and Rehabilitation of Structure” organised by Mahakal Institute of Technology, Ujjain under TEQIP – III on August 30, 2020.
20. **Delivered an online lecture** on “Science behind the Health Monitoring of Structures”, for International Webinar organized by ICI-Ghaziabad and Bennett University, July 18th, 2020.
21. **Delivered an online lecture** on “Structural Health Monitoring-Science behind the safety of the structures”, Indian Association of Structural Engineers (IAStructE), May 4th, 2020.
22. **Delivered a talk** on ‘Advanced Sensing and Energy Harvesting Solutions for Infrastructure in Smart Cities’, Centre for SeNSE, IIT Delhi, March 5, 2020
23. **Delivered a lecture** on “Structural Health Monitoring and Energy Harvesting using Piezo electric materials, Indian Association of Structural Engineers (IAStructE), Indian Habitat Centre, New Delhi, November 28th, 2019.
24. **Delivered a lecture** on “Structural Health Monitoring using Piezo Transducers: Introduction” at the Power Management Institute (PME), NTPC, Noida, October 6th, 2016.
25. **Delivered a lecture** on “Integrated Structural Health Monitoring and Energy Harvesting Potential of Thin Piezo Patch” at IIT Delhi during Research Scholar’s Day, awarded for **Best Oral Presentation** among all research scholars at IIT Delhi, April 10th, 2015.
26. **Delivered a lecture** on “Introduction to Virtual Smart Structures and Dynamic Lab at IIT Delhi”, **The School of Engineering and Technology (SoET)-IGNOU, broadcasted on National**

Television Channel, ‘Gyan Darshan’, Indira Gandhi National Open University (IGNOU), April 20th, 2014.

27. **Delivered a lecture** on “Virtual Smart Structures and Dynamic Lab”, QEEE pilot program sponsored by **Ministry of Human Recourse and Development (MHRD), Govt. of India, IIT Delhi**, March 25th, 2014.
28. **Delivered a lecture** on “Integrated Structural Health Monitoring and Energy Harvesting from Thin Piezo Sensor Patch via Axial Strain Actuation Mode”, **Workshop** on *Quality Control of Concrete and Construction Materials Through Testing and Experimental Structural Dynamics, Structural Health Monitoring and Non-Destructive Evaluation using Smart Materials*, **IIT Delhi**, June 14th, 2013.
29. **Delivered a lecture** on “Integrated Structural Health Monitoring and Energy Harvesting from Thin Piezo Sensor Patch via Axial Strain Actuation Mode”, **Workshop** on *Experimental Structural Dynamics, Structural Health Monitoring and Non-Destructive Evaluation using Smart Materials*, **IETE, New Delhi**, October 26th, 2013.

Lectures at CSIR-CRRI

30. **Delivered lecture** on “Structural Health Monitoring: Science behind Instrumentation”, Training programme on Quality Assurance, Health Assessment, and Rehabilitation Techniques, December 11-15, 2023, December 14, 2023
31. **Delivered a lecture** on “To Study the Corrosion of Various Reinforcement Bar Materials / Structural Steel including Anti-Corrosion Coatings, Concrete Treated with Surface Coating Under Different Environmental Exposure Conditions”, 131st RC meeting organised at CSIR-CRRI, November 29, 2023
32. **Delivered online lecture** on “General Design Features of Bridges-IRC:5”, An online training program ‘Design of Bridge Structure and Foundation’ organised by CSIR-CRRI, October 9, 2023
33. **Delivered a lecture** on “Investigation and Recommendation for the distressed ROB at Ch. 307 b/w Udaipur and Chittorgarh on NH-76”, 130th RC meeting organised at CSIR-CRRI, August 9, 2023
34. **Delivered an online talk** on “Artificial Intelligence and Machine Learning for Drone based monitoring of Structures” for possible research collaboration with ‘Eagle Screening Eagle’ earlier ‘Proceq’, March 15, 2023
35. **Delivered a lecture** on “Structural Health Monitoring-Science behind the instrumentation of Bridges”, Training programme on Quality Assurance, Inspection of Bridges, Assessment and Rehabilitation of Bridges’, CSIR-CRRI, Feb 20, 2023
36. **Delivered online lecture** on “General Design Features of Bridges-IRC:5”, An online training program ‘Design of Bridge Structure and Foundation’ organised by CSIR-CRRI, December 19, 2022

37. **Delivered a lecture** on “Development of Remotely Piloted Aerial Vehicle (RPAV) for monitoring of structures”, Presented before research Council at CSIR-CRRI, November 4, 2022
38. **Delivered a talk** on “संरचनाओं के स्वस्थ की जाँच का डिजिटल युग”, Hindi Workshop on occasion of **Platinum Jubilee celebrations**, Dec 8, 2021
39. **Delivered an online lecture** on the “NDT Techniques and Case studies” for an online training program ‘Quality assurance and rehabilitation’ organised by CSIR-CRRI on November 16, 2021
40. **Delivered an online lecture** on the “NDT Techniques and Case studies” An online training program ‘Quality assurance and rehabilitation’ organised by CSIR-CRRI, Sep 16, 2021
41. **Delivered a talk on** “Investigation of distress in three cell skew bridge at Ch. 53 at NH-11, Bikaner Phalodi Section”, Presented before Research Council at CSIR-CRRI, Aug 28, 2021
42. **Delivered an online lecture** on the “NDT Techniques and Case studies” for an online training program ‘Quality assurance and rehabilitation’ organised by CSIR-CRRI on Dec 29, 2020
43. **Delivered lecture** on “लोड प्रतिरोध का अनुकूलन करके पीजोइलेक्ट्रिक ऊर्जा में वृद्धि” for Rashtriya Hindi Karyashala 2019 at CSIR-CRRI on Sep 6, 2019
44. **Delivered a lecture** on “New techniques for condition survey of Bridges”, Training Programme on R&D initiatives in field of Road and Bridges Construction, CSIR-CRRI, New Delhi, August 23rd, 2019.
45. **Delivered a lecture** on “Practical examples of Structural Health Monitoring using Piezo Transducers”, Training Programme on Design of Bridge Structure and Foundation, CSIR-CRRI, New Delhi, October 11th, 2018.
46. **Delivered lecture** on “IRC: 5-2015, Standard Specifications and Code of Practice for Road Bridges, Section I: General Features of Design”, Training Programme on Design of Bridge Structure and Foundation, CSIR-CRRI, New Delhi, October 8th, 2018; June 14th, 2019; July 22th, 2019; November 4th, 2019
47. **Delivered a lecture** on “Crack Repair by Stitching”, Training Programme on Quality Assurance, Health Assessment and Rehabilitation of Bridges, CSIR-CRRI, New Delhi, June 27th, 2018.
48. **Delivered a lecture** on “Practical examples of Structural Health Monitoring using Piezo Transducers”, Training Programme on Quality Assurance, Health Assessment and Rehabilitation of Bridges, CSIR-CRRI, New Delhi, June 26th, 2018.
49. **Delivered a lecture** on “Integrated Structural Health Monitoring and Energy Harvesting Potential of Piezo Patch” at the CSIR- CRRI, New Delhi, July 26th, 2016

ANNEXURE C
PROJECT DETAILS

Sl.	Title of Project	Project Category	Funding Agency	Cost of Project	Role as defined
R and D PROJECTS (Total: 814.95 lakh; PL: 165.95 lakh; Co-PI: 598 lakh; Member: 51 Lakh)					
1.	Technological Solutions for Enabling Smart Infrastructure: Integrating Piezoelectric Energy Harvesting and Structural Health Monitoring in a Smart City	Grant-in - Aid Project, GAP-4558	DST	38.33 lakh	Project Leader Project Status: Completed (4.03.2016 to 03.03.2022)
2.	Development of Remotely Piloted Arial Vehicle Bridge Monitoring System (RPAV-BMS)	Collaboration Project CLP-4625	M/s Matrix Geo Private Ltd.	14.75 lakh	Project Leader Project Status: Completed (1.04.2018 to 31.12.2020)
3.		In house Project, OLP-0623	CSIR-CRRI	45.225 lakh	Project Leader Project Status: On going (1.04.2018 to 30.06.2023)
4.	Determination of in-situ early strength of rapid setting concrete using piezo sensors	In house Project, OLP-0611	CSIR-CRRI	4.85 lakh	Project Leader Project Status: Completed (10.06.2018 to 09.06.2019)
5.	Research scheme to study the corrosion of various reinforcement bar materials/ structural steel including anti-corrosion coatings, concrete treated with surface coating under different environment exposure conditions	Grant-in aid GAP 4597	Ministry of Road and Transport Highway	62.7996 lakh	Project Leader Project Status: Ongoing (1.09.2015 to 31.09.2024)
6.	Development of prefabricated plastic panels for road construction	FBR Project MLP-0630	CSIR	298 lakh	Co-Principle Investigator Status: Completed (24.9.2020 to 31.03.2023)
7.	Facility creation for the condition assessment and testing for the structural safety audit of bridges in the form of Mobile Bridge Inspection Unit (MBIU)	FCP Project FCP512405	CSIR	300 lakh	Co-Project Leader Project Status: Ongoing (24.6.2024 to 31.03.2025)
8.	Technologies for robust structural health monitoring of critical infrastructure (Vertical 1) and Conservation and restoration of heritage structures (Vertical 2)	Mission Mode Project HCP-0018 (Vertical 2)	CSIR-CRRI and CSIR-CBRI	51 lakh	Team Member Project Status: Completed (1.04.2018 to 31.03.2020)

SPONSORED R & D PROJECTS (Total: 1907.51 lakh; PL: 166.38 lakh Member: 1741.13 lakh)					
9.	Structural audit of intersections, minor bridges and underpasses at different locations of Yamuna Expressway (from Greater Noida to Agra, 170 km approx.) in Uttar Pradesh	SSP-4783	Funding Agency: JAYPEE Private Limited	118 Lakh	Project Leader Status: Ongoing (Oct 2024 to Oct 2026)
10.	Structural Investigation of distressed ROB at the CH. 307 on the UCHIT Expressway on NH-76	SSP-4700	Funding Agency: UCHIT Expressway Private Ltd.	38.94 Lakh	Project Leader Status: On going (Jan 2023 to Dec 2024)
11.	Investigation of Pedestal at Pier and Strengthening of distresses Pier and Pier Cap P107, P108 and P109 at Dwarka Expressway	SSP-4685	Funding Agency: L&T Ltd. Dwarka Express , Pkg3, Gurugram	9.44 Lakh	Project Leader Status: <u>Completed</u> (Dec 2021 to Mar 2023)
12.	Condition Assessment and Suggestions of remedial measures of Major and Minor Bridges of Odisha Road Network using Modern test procedure of Bridges under Public Works Department, Govt. of Odisha in the state of Odisha	SSP 4733	Funding Agency: Public Works Department , Govt. of Odisha	1412.499 Lakh	Project Member Ongoing (Aug, 2023 to July 2025)
13.	Technical assistance during construction of one 4-Lane bridge on the Agra Canal at km 4.200 near Madan Pur Khadar, New Delhi.	SSP-4696	Funding Agency: UP Irrigation Department	20.06 Lakh	Project Member Ongoing (Sep 2022 to Aug 2024)
14.	Structural Safety Audit and Rehabilitation of Sree Sankaracharya Bridge on Pariyar River, Kalady and Edavannakkadavu Bridge, Malappuram in the state of Kerala.	SSP-4682	Funding Agency: KHRI, Public Works Department ,Government of Kerala	61.36 Lakh	Project Member Project Status: On going (October 2021 to Feb 2022)
15.	Instrumentation of ROB at Railway Km 130.4 on NH-148N in between Bandikul Junction and Biwai Junction, Rajasthan under BhartmalaProyojna (Pkg 5, Delhi – Mumbai Expressway) of NHAI	SSP4687	Funding Agency: UP Irrigation	47.20 Lakh	Project Member Project Status: On going (Nov 21 to Nov 2024)
16.	Condition survey, Structural Evaluation and remedial measures of 9 nos. of completed/ongoing bridges projects under Rural Development Department,	SSP-4656	Rural Development Department , Govt of Odisha	52.51 lakh	Project Member Project Status: On going (Dec 2020 to Feb 2022)

	Govt of Odisha				
17.	Condition Assessment, Structural Evaluation and Suggestion for remedial measure/strengthening of one ROB and one Bridge no. 237 at Rihand, STPP of NTPC Ltd. in the state of UP	SSP-4671	Funding Agency: DG (TAC-Civil), NTPC Ltd. UP	29.50 Lakh	Project Member Project Status: On going (May 2021 to Dec 2021)
18.	Inspection of Structures of 4-Laning of Porbandar-Jetpur Section on NH-8A from Km 001+960 to Km 117+600 in the state of Gujarat.	SSP-4675	Funding Agency: Porbandar Jetpur Tollway Pvt Ltd., Gujarat	118 Lakh	Project Member Project Status: On going (July 2021 to Dec 2021)
CONSULTANCY PROJECTS (Total: 879.39 Lakh; PI: 77.88 Lakh; Team Member: 801.51 Lakh)					
19.	Evaluation of Distresses and Suggestion for remedial measures of Hero Honda Chowk Flyover and Underpass (3+3) at Km 36.175 on Delhi – Gurugram Section of National Highway 8 in the State of Haryana	CNP-2997	NHAI	35.40 lakh	Project Leader Status: Ongoing (15.3.2025 to 14.11.2026)
20.	Customised training Programme on “Training on Bridge and Foundation design with a focus on Long Span Bridges”	CNP-2899	Madhya Pradesh Rural road Development Authority	14.16 lakh	Project Leader Status: Ongoing (18.8.2023 to 14.8.2024)
21.	Customised training Programme on “Conceptual training on Bridge and Foundation design”	CNP-2841	Madhya Pradesh Rural road Development Authority	14.16 lakh	Project Leader Status: <u>Completed</u> (15.1.2023 to 14.1.2024)
22.	Investigation of distressed multiple cell bridge at ch.53+005 on NH-11, Bikaner-Philodi Highway	CNP2660	IRCON International Limited	14.16 lakh	Project Leader Status: <u>Completed</u> (16.12.2020 to 15.12.2021)
23.	Structural Safety audit of Science Centre Building, Lodhi Garden, New Delhi	-	Allotted by the DRRI as requested by CSIR		Project Leader Project Status: <u>Completed</u> (Oct, 2021 to Mar 2022)
24.	Evaluation of Structural Health of Deck Slab of Rob at Nandnagri, Delhi	TSP-1131	Funding Agency: DTTDC, New Delhi	9.44 Lakh	Project Member Project Status: On going (Dec 2021 to Dec 2021)
25.	Investigation of Cracks in Highly skewed 4-Lane Underpass at Ch.44.523 of Green Field Alignment of Delhi Vadodara Expressway near Khanpur Ghati (Sohna End)	CNP-2816	NHAI, Gurugram	29.50 Lakh	Team Member Project Status: On going (Nov 22 to March 24)

26.	Quality Audit of Structures of Six-Laning of Shamlaji to Motachiloda Section, NH-8 Ahmedabad, Gujarat	CNP-2804	NHAI Ahmedabad, Gujarat	70.80 Lakh	Team Member Project Status: On going ()
27.	Investigation of three Existing distressed bridges on various roads of PWD, Uttarakhand.	CNP-2795	Public Woks Department, Uttarakhand	29.50 Lakh	Team Member Project Status: On going (Sep 2022 to Dec 2023)
28.	External party Quality checking of construction of 60m long bridge and 60m approach road of inner Ring Road at Fatehbad Road, Agra.	CNP-2774	Agra Development Authority	25. 60592 Lakh	Team Member Project Status: On going (May 2022 to March 2024)
29.	Investigation on dissressed Kolaghat Bridge in District Shahjanpur, UP for its restoration.	CNP-2766	UP State Bridge Corporation	108.56 Lakh	Team Member Project Status: On going (May 2022 to June 2023)
30.	Technical Audit of failure of 4 lane bridge over river Yumuna near Village Manjawali, DisttFridabad	CNP 2688	PWD, Haryana	37.76 lakh	Team Member Project Status: Completed (Mar 2021 to Dec 2021)
31.	Review of DPR's of Maharashtra, Sikkim and Uttarakhand States for NRDA	CNP-2751	Funding Agency: NRIDA	6.50 Lakh	Project Member Project Status: On going (Feb 2022 to Dec 2022)
32.	Third Party Technical Assistant in construction of two bridges over Agra Canal at Chainage Km 17.000 and 22.515 near Faridabad	CNP 2651	UP Irrigation	31.66 lakh	Team Member Project Status: On going (Oct 2020 to Nov 2022)
33.	Technical Assistance during construction of four bridges on the left bank along the Agra Canal at Kms 13.000, 14.590,, 14.960 and 15.290 near Delhi	CNP-2754	Funding Agency: UP Irrigation	23.60 Lakh	Project Member Project Status: Completed (March 2022 to Feb 2022)
34.	Structural Safety Audit of major bridges at km 938+485 over the river Godavari Near Rajamundry in the state of Andhra Pradesh	CNP-2572	Dwantham Tollway Pvt Ltd.	29.5 lakh	Team Member Project Status: Completed (Jan 2019 to Dec 2020)
35.	Structural Safety Audit of Structures on 4 Lane NH connectivity to ICTT Vallarpadam stretch between Kalamassery (Chainage 0+000) to Vallarpadam (Chainage 17+150) on NH 966A in the state of Kerala	CNP 2564	NHAI	59 lakh	Team Member Project Status: Completed (Oct 2019 to Mar 2021)

36.	Structural Safety Audit of major bridges at Km 114+759 and at 67+047 of four –laning of Porbander –Jetpur Section on NH 8B in the State of Gujarat	CNP-2563	PorbanderJetpur Tollway Private Limited	29.50 lakh	Team Member Project Status: Completed (Oct 2019 to Dec 2020)
37.	Quality Audit of all structures of the '4 laining of JetpurSomnath Section of NH 8D from Nm0/000 to Km127/000 in the state of Gujrat DBFOT Toll basis under NHDP-Phase-III" and also test on 14 km distressed road stretches of the section	CNP-2550	National Highway Authority of India	194.7 lakh	Team Member Project Status: Completed (Sept 2019 to March 2021)
38.	Third party technical assistant of two bridges on Agra canal at Ch km 6.82, 28.0 near Faridabad.	CNP-2478	UP Irrigation	23.60 lakh	Team Member Project Status: On going (Feb 2019 to Feb 2021)
39.	Structural Safety Audit and Rehabilitation Measures of Mithaipul, Teliwara, Sadar Bazar, Delhi	CNP-2514	Public Works Department	11.80 lakh	Team Member Project Status: <u>Completed</u> (October 2019)
40.	Assessment of Compressive Strength of Concrete of RE Facia Panels of Chandikhole - Jagatpur- Bhubaneswar Section on NH-5 from Km 417.00 to Km 418.00 and from Km 0.000 to Km 62.000 in the state of Odisha	CNP-2426	National Highways Authority of India PIU Bhubaneswar	31.22 lakh	Team Member Project Status: <u>Completed</u> in August 2018
41.	Structural safety Audit of structures in Samakhyali-Gandhidham Section in the state of Gujarat	CNP-2388	NHAI	60 lakh	Team Member Project Status: Completed (Mar 2019 to Dec 2020)
42.	Investigation of Excessive Vibrations at King's Canyon (B2) Building ASF Insignia SEZ Gurgaon : Part (II): Remedial Measures	CW 12609	ASF Insignia SEZ Pvt. Ltd.	5.1 lakh	Team Member Project Status <u>Completed</u> : (July 2013 to Oct 2013)
43.	Investigation and Remedial Measures for Excessive Vibrations in PNB Building at Parliament Street	CW09692	Punjab National Bank	9.77 lakh	Team Member Project Status <u>Completed</u> : (Nov 2012 to Aug 2013)