# Dr. PARDEEP KUMAR / डॉ. प्रदीप कुमार

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#### SUMMARY

- Senior Technical Officer (2) at CSIR-Central Road Research Institute (CRRI)
- Recognized as 'Assistant Professor' at Academy of Scientific & Innovative Research (AcSIR)
- Rich experience in the area of analysis & design of bridges, evaluating the existing load carrying capacity & retrofitting of distressed bridges with FRP and NDT techniques
- Secured first rank among all M.E Programs in Department of Civil Engineering and Delhi University in M.E. and received Priyakant Divetia Gold Medal.
- Research areas of interest include evaluation load carrying capacity and retrofitting of distressed bridges, NDT and analysis & design of bridges



### RESEARCH ACCOMPLISHEDMENTS

- <u>Publication</u>: 14 International Journal & 9 International and national conferences/seminars
- <u>Invention Disclosure/Patent:</u> Novel piezo-based device for multipurpose nondestructive evaluation Vibro-Integrity Sensing Device (VInSD), patent numbered 202111057196
- <u>Peer Review Activities</u>: Review-board (a) Journal Advance Concrete Technology, Japan

## EDUCATIONAL QUALIFICATION

• Indian Institute of Technogym (IIT), Delhi, India

PhD in Rehabilitation of Distressed Reinforced Concrete Structures- "Study on
Reinforced Concrete (RC) Beams Flexurally Strengthened with Carbon and Aramid
Fiber Reinforced Polymer (FRP) Strand Sheets"

2009-2011

2013-2020

Delhi Technical University formally known as Delhi College of Engineering
 M.E. (Structures)- "Experimental Study of RC Beams Strengthened with CFRP Fabric under Pure Torsion"

Awarded Gold Medal for securing first position in all Civil Engineering branches by Delhi University

•	Institutions of Engineers (India), Kolkata	1996
	A.M.I.E (Section A and B)	
•	Thapar Polytechnic Patiala, Punjab	2020
	3-Year Diploma in Civil Engineering	
	Securing second position in the State of Punjab in civil engineering diploma	

### WORK EXPERINCE

• Site Engineer (M/s Gurpreet Singh Govt Contractor, Sangrur, Punjab) 1990-1997

### RESEARCH EXPERINCE

•	Junior	Technical	Assistant	(Bridge	and	Structures	Division,	CSIR-CRRI,	New	1997-2002
	Delhi)									
•	Senior	Technical	Assistant	(Bridge	and	Structures	Division,	CSIR-CRRI,	New	2002-2007
	Delhi)									

	Delhi)	
•	Technical Officer (Bridge and Structures Division, CSIR-CRRI, New Delhi)	2007-2010

•	Senior Technical	Officer(1)	(Bridge ar	nd Structures	Division,	CSIR-CRRI,	New	2010-2015
	Delhi)							

•	Senior Technical	Officer (2	) (Bridge	and	Structures	Division,	CSIR-CRRI, New	2015-2020
	Delhi)							

• Senior Technical Officer (3) (Bridge and Structures Division, CSIR-CRRI, New 2020-Cont Delhi)

### Ph.D. (Dissertation)

Study on Reinforced Concrete (RC) Beams Flexurally Strengthened with Carbon and	2020
Aramid Fiber Reinforced Polymer (FRP) Strand Sheets	

### M.E, (Dissertation)

Experimental Study of RC Beams Strengthened with CFRP Fabric under Pure Torsion	2011
B. E. Project	

Comparison of different Methods of Buildings Design 1995

	<u>R&amp;D Projects-47 Nos.</u>	Consultancy Projects-87 Nos.
As Project Leader	1	1
As Co-PI	-	2
As Team Member	46	84

### RECOGNITIONS

- <u>IABSe Membership:</u> Received the membership of the International Association for Bridge and Structural Engineering for the Year 2021
- <u>Assistant Professor</u>: Recognized as 'Assistant Professor' at Academy of Scientific & Innovative Research (AcSIR)

- Technical & Purchase Committee and Technical Sub Committee member for purchasing of equipments above 25 Lakhs.
- Committee Member of disposal of equipment's less than Rs. 10000.
- ICI, Ghaziabad Chapter Life membership No.11016
- Institution of Engineers Life membership No. AM-111830-S
- IRC E-Life Membership ELM-103064
- Indian Structural Health Monitoring Society ISHMS Lifetime Fellow Membership FL 2023 006

### SOFTWARE SKILLS

<ul> <li>OPEN BRIDGE DESIGNER</li> </ul>	COMSOL
• RM ENTERPRISES	AUTOCAD
• STAAD PRO	• RIVET
• ETAB	
MIDAS CIVIL	

#### **RESEARCH PAPER**

#### **Journals**

- 1. Negi, P., Kaur, N., and **Kumar Pardeep** (2023) "Performance of Piezo-Bond Systems under Extremely High Compressive Strains: Experimental and Numerical Insights", Journal of Intelligent Material Systems and Structures, Submitted on September 25, 2023 and under Review. **SCI Journal with Impact Factor: 2.774**
- 2. **Kumar P**, Satya M, Bihsnoi S, (2023), "Modified Double Lap shear test for Concrete-FRP Interfacial Bond Behaviour, submitted in Journal of Construction and Building Materials
- 3. Kaur N, Gola D, Goel R, and **Kumar Pardeep** (2022) "Investigation of distresses observed in a highly skewed multi-cell bridge", Journal of Civil Structural Health Monitoring, Published online on dated October 19, 2022, SCI Journal with Impact Factor: 3.338, DOI 10.1007/s13349-022-00606-z
- 4. **Kumar Pardeep**, Bishnoi Shashank and Bhattacharjee Bishwajit (2020), "Influence of CFRP Strand Sheet on Flexural Strengthening of Reinforced Concrete Beam", Journal of Advanced Concrete Technology Vol. 18, PP-778-793, 2020 (IF-1.543-5y). <a href="https://doi.org/10.3151/jact.18.778">https://doi.org/10.3151/jact.18.778</a>
- 5. Kayal S., **Pardeep Kumar**, Sushil Kumar (2018), "Comparative study of behaviour of bamboo reinforced concrete beams with that of steel reinforced concrete beams under the influence of static and fatigue loading in the non linear range" Journal of the Bridge and Structural Engineer (ING-IABSE), Vol. 48, No. 1, March, 2018
- 6. डा॰ वी वी एल के राव , सुशील कुमार, योगेंद्र कुमार एवं <u>प्रदीप कुमार</u> (2017) "सीमेंट कंक्रीट संरचनाओं मे चावल भूसी राख का उपयोग-एक विकल्प" , सड़क दर्पण, अंक 13, वर्ष सितम्बर 2016, प्रष्ठ17-11 https://issuu.com/iabse.secretariat/docs/19\_2018\_march\_vol\_48\_no\_1
- 7. **Kumar Pardeep**, Sharma S.K. and Lakshmy P. (2015), "Effect of CFRP fabric in enhancing the torsional capacity and twist angle of strengthened RCC beams" Journal of Bridge and Structural Engineers, IABSE, special publication on Repairs and Rehabilitation of
  - https://issuu.com/iabse.secretariat/docs/8\_2015\_june\_vol\_45\_no2

Structures, Vo. 45, No. 2, June 2015, pp-70-76.

8. Lakshmy P., Goel Rajeev, Sharma S.K. and **Kumar Pardeep** (2015), "Performance Evaluation of North Carriageway of Second Thane Creek Bridge through Load Testing" Indian Concrete Journal (ICJ), June-2015, Vol. 89, No. 6, pp 13-23.

- 9. <u>प्रदीप कुमार,</u> कुमार शिश भूषण एवम डॉक्टर राजीव कुमार गर्ग (२०१५), "21वीं सदी का पर्यावरण के अनुकूल सीमेंट टर्नरी ब्लेंडेड सीमेंट (टी.बी.सी.)", सड़क दर्पण, सी.एस.आई.आर.- सी.आर.आई., वर्ष सितम्बर 2015, अंक १२, पी.पी. 11-17.
- 10. <u>प्रदीप कुमार</u>, कुमार शिश भूषण, डॉ लक्ष्मी परमेश्वरन एवम डॉक्टर राजीव कुमार गर्ग (२०१५), ""उन्नत कम्पोजिट सामग्री (एफ.आर.पी.) व्यथित पुलों के अनुरुपांतर के लिए एक विकल्प"", सड़क दर्पण सी.एस.आई.आर.-सी.आर.आई., वर्ष सितम्बर 2015, अंक १२, पी.पी. 19-22.
- 11. Kayal, S., Kumar, S. and **Kumar, Pardeep**. (2007). "Evaluation of suitability of Bamboo culms use as Structural Reinforcements in Concrete", Journal of **Bridge and Structural Engineering, IABSE**, Vol. 37, No. 3, September, pp 14-30.
- 12. Kayal, S., Kumar, S., **Kumar, P**. (2002). "Behaviour of Micro-concrete T-Beam Bridge Girder Models Under the Influence of Flexure, Shear and Torsion" Highway Research Bulletin, Indian Roads Congress, No. 66, June, pp.81-98.
- 13. Kayal, S., Kumar, S., **Kumar**, **Pardeep**, and Ahuja, A. (2005). "Smart Materials and Its Applications A Review", Bridge and Structural Engineer, International Association of Bridge and Structural Engineers, Vol. 35, No. 2, June 2005, pp. 19-30.
- 14. Lakshmy, P., Farhat A., **Kumar**, **P**. and Kayal, S. (2003). "Properties of Concrete for Thermal Flow Analysis of Bridges," Bridge and Structural Engineer, ING-IABSE, vol.33, no.3, September 2003, pp 31-51.

#### **Conferences / Seminars**

- 15. Kumar Pardeep, Sharma S.K., and Parameswaran L. (2011), "FRP's uses for Torsional Capacity enhancement of Reinforced Concrete Structures Experimental Study", 26th Indian Engineering Congress Conference organized by Institute of Engineers (Kolkata), Karnataka state Centre, December 15-18, 2011.
- 16. **Kumar Pardeep**, Sharma S.K., Parameswaran L. and Verma Alok (2011), "Study on Analytical Models of Reinforced Concrete (RC) Beams strengthened with FRP under Pure Torsion", One day conference on Repair, Restoration & Rehabilitation of Concrete Structures, organised by Indian Concrete Institute (ICI), Tamilnadu Chennai Centre, 20th September, 2011, pp 78 -83.
- 17. **Kumar Pardeep** and Verma Alok (2011) "Rehabilitation of RC beams using FRP An Overview" National Conference on Repair and Rehabilitation of Concrete Structures organized by ICI, Ghaziabad, May 06-07, 2011, pp-272-282.

- 18. Sharma, S. K., Kumar S., Kumar N., **Kumar P.** and Rao, M.V.B (1999) "Stress concentration at the end of bonded FRP plate in strengthened beam" International Seminar on Highway Rehabilitation and Maintenance, New Delhi 12-13 Nov. 1999, pp.(II)119 -131
- 19. Dr. S. Kayal, Pardeep Kumar and M.V.B, (1999), "Advances in Bridge Engineering Material" published in National Conference on Advances and Innovation in Bridges Engineering held at I.I.T. Madras on dated August 12-14, 1999.
- 20. S.K.Sharma, Sushil Kumar, Narendra Kumar, Pardeep Kumar and M.V.B.Rao, (1999), "FRP an alternative to timber flooring of bridge deck" published in the seminar on Innovation in Bridge Engineering held at New Delhi on May 21-22, 1999 organized by IIBE,New Delhi.
- 21. Sharma, S. K., Kumar Sushil, Kumar N., Kumar P. and Rao, M.V.B. (1999) "Fibre Reinforced Plastics –An Alternative to timber flooring of bridges" National Seminar on Innovations in Bridge Engineering, May 21-22,1999, New Delhi,pp.245-256
- 22. Dr. S. Kayal, Pardeep Kumar and M.V.B, (1999), "Application of Innovative Material in Bridges-An Overview" published in the seminar on Innovation in Bridge Engineering held at New Delhi on May 21-22, 1999 organized by IIBE, New Delhi.
- 23. Dr. S. Kayal, Pardeep Kumar, M.V.B and Dr. A.K. Gupta, (1997), "Emergency Bridges: A Status Report" published in International Seminar on Emergency Bridges, Nov. 21-23, 1997 organised by IIBE held at Pune.

### RESEARCH PROJECT

### IN-HOUSE RESEARCH PROJECT

- 1. Study of Flexural Behaviour of RC Beams Strengthened using CFRP Strand Sheet under static and cyclic loading. (Project Leader OLP-0586)
- 2. Determination of In-Situ Early Strength of Rapid Setting Concrete using Piezo Sensors. (Team Member OLP-0611)
- 3. Experimental investigation of Hybrid Composite Beam system (Team Member OLP-0610 -Rs. 18.50 Lakhs)
- 4. Development of Remote Pilot Arial Vehicle Bridge Monitoring System (RPAV-BMS)-(Team Member-OLP-0623-Rs. 15.25 Lakhs)
- 5. Development of specifications for rice husk ash for use as cementitious material through laboratory study. (Team Member OLP-0529)
- 6. Assessment of Temperature Distribution Across the Cross-Section of Box-Girder Using Mathematical Model" March 2005. (Team Member OLP-0010)
- 7. Development of appropriate technology with respect to Bridges in the context of hilly region. (Team Member OLP-0067)
  - Part 1. Beneficiation of soft aggregates for use in Bridges

Part –II Comparative Study of Behaviour of Bamboo Reinforced Concrete Beams with that of Steel Reinforced Concrete Beams under the influence of Static and Fatigue Loading

### GOVERNMENT AIDED RESEARCH PROJECT

- 8. Development of prefabricated plastic panels for road construction approved under FBR projects from CSIR (Team Member –MLP-0630-Rs. 300 Lakhs)
- 9. Development of Remote Pilot Arial Vehicle Bridge Monitoring System (RPAV-BMS)-(Team Member-CLP-4625– Rs. 60 Lakhs)
- 10. Scrutiny supervision at state technical agency (STA) location (2001-2002) PMGSY. I have visited four STA locations of four states and trained the STA people on scrutiny of detailed design packages of cross- drainage works to be implemented in their respective states. (Team Member –GAP-8001)
- Intelligent Remote Health Monitoring System (IRHM) for Bridge System. (Team Member
   GAP 4539-Rs. 84.00 Lakhs)
- 12. A Study of corrosion susceptibility of steel reinforcement protected with anti-corrosive coating /special treatments in ordinary and high performance concrete. (Team Member-GAP-4597-Rs. 62.79 Lakhs)

- 13. Technological Solution for Enabling Smart Infrastructure: Integrating Piezoelectric Energy Harvesting and Structural Health Monitoring in a Smart City. (Team Member -GAP-4558-Rs. 52.88 Lakhs)
- 14. Preliminary and final scrutiny of detailed design and drawing of proposed packages for rural roads under PMGSY- I have scrutinized proposed packages from 18 states. (Team Member –GAP-4605)
- 15. Creation of Complete Range of Independent Testing Facilities for Expansion Joints at Central Road Research Institute, New Delhi. (Team Member –GAP-4486)
- 16. Technologies for Robust Structural Health Monitoring of Critical Infrastructure (Vertical 1) and Conservation & Restoration of Heritage Structure (Vertical 2)- For Vertical 2. (Team Member –HCP-0018)
- 17. 12th five year plan project: Innovative technologies for health assessment and damage mitigation of structures (i-heal) ESC-0110:- Novel techniques for protection of structures against corrosion. (Team Member –ESC-0110)
- 18. 12<sup>th</sup> five year plan project: Autonomous Underwater Robotics (UnWaR) :- Robot for Underwater Inspection of Bridges-Ongoing. (Team Member –ESC-0113)
- 19. Development of the limit-state design of R.C.T-Beam with cross diaphragm for DST(Team Member)
- 20. Application of advanced Composite fiber reinforced plastics materials in strengthening/rehabilitation of concrete bridges (M.O.S.T.). (Team Member –B-26)
- 21. Usage of HPC for pavement and bridges made with indigenously available materials (M.O.S.T.). (Team Member –B-32)
- 22. 100% Scrutiny Proposal under Pradhan Mantri Grahamin Sadak Yojna (PMGSY) for the years 2000-2001 and 2001-2002

### SPONSERED RESEARCH PROJECT

- 23. Assessment of Structural Integrity of 4 numbers of PSC Girders and suggestions for strengthening measures of Major Bridge (at Km 22+005) over Arpa river of Bilaspur-Pathrapali Location on NH 130 in the state of Chhattisgarh. (Team Member-SSP-4686-Rs. 27.14 Lakhs)
- 24. Investigation of Pedestal at Pier and strengthening of distresses Pier and Pier Cap P107, P108 and P109 at Dwarka Expressway. (Team Member-SSP-4685-Rs. 9.44 Lakhs)
- 25. Structural Safety Audit and Rehabilitation of SreeSankaracharya Bridge on Pariyar River, Kalady and Edavannakkadavu Bridge, Malappuram in the state of Kerala. (Team Member-SSP-4682-Rs. 61.36 Lakhs)

- 26. Inspection of Structures of 4-Laning of Porbandar-Jetpur Section on NH-8Afrom Km 001+960 to Km 117+600 in the state of Gujarat. (Team Member-SSP-4675-Rs. 118 Lakhs)
- 27. 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. (Team Member-SSP-4671-Rs. 29.50 Lakhs)
- 28. Evaluation of AC Crystacrete a crystalline durability admixture of Apple Chemie India Pvt. Ltd. (Team Member SSP-4660-Rs. 12.98 Lakhs)
- 29. Condition survey, Structural Evaluation and remedial measures of 9 nos. of completed/ongoing bridges projects under Rural Development Department, Govt. of Odisha. (Team Member SSP-4656-Rs. 52.51 Lakhs)
- 30. Condition survey, Structural Evaluation and remedial measures of 10 nos. of completed/ongoing bridges projects under Rural Development Department, Govt. of Odisha. (Team Member SSP-4655-Rs. 52.51 Lakhs)
- 31. Condition survey, Structural Evaluation and remedial measures of Ganga Bridge at Varanasi. (Team Member SSP-4654-Rs. 29.50 Lakhs)
- 32. External Technical Audit of 4 Laning of Rewa-Katni-Jablpur Section of NH-7 of Package 1 (from km 242.600 to km 311.000) and Package -2 (from 311.000 to 359.500 & km 378.500 to km 397.000) in the state of Madhya Pradesh under NHDP IV on EPC mode. (Team Member SSP-4641-Rs. 41.30 Lakhs)
- 33. Visual Inspection of seventeen Flyovers, PWD Delhi. (Team Member-SSP-4628).
- 34. An Independent review of Signature Bridge project for technical and contractual issues. (Team Member-SSP-4560)
- 35. Uttarakhand Disaster Recovery Project- Study of Pedestrian Suspension Bridges of Various spans to wind and human induced Vibration. (Team Member-SSP-4545)
- 36. Collection and analysis of bridge condition & inventory data by MBIU or any other equipment for the purpose of the major/minor bridges on all NHs including those with NHAI for a period of three years. (Team Member-SSP-4551)
- 37. Quality Assurance during Construction and Subsequent performance evaluation of road and bridges for link road connecting NH-24 and NH-58. (Team Member-SSP-4521)
- 38. Performance evaluation of protective surface coatings for cement concrete. (Team Member-SSP-4519)
- 39. Study of corrosion susceptibility of steel reinforcement protected with anti-corrosive coating / special treatment in ordinary and high performance concrete. (Team Member-SSP-4488)
- 40. Instrumentations and Evaluation Rohari Bridge (Span 35.04 Through Bridge) on iron-ore route of increased axle load of freight wagons in western central railway. (Team Member-SSP-4476)

- 41. Instrumentations and Evaluation Bhojako Bridge (Span 31.90 Under slung Bridge) on ironore route of increased axle load of freight wagons in western central railway. (Team Member-SSP-4474)
- 42. State-of-the-Art-Report on Studies for Aerodynamic Stability of Cable Stayed Bridge Decks. (Team Member-SSP-0014)
- 43. Instrumentation and Evaluation of two span of Kalisindh Bridge near Kota on Western Central railways for increase in axle load of freight wagons. (Team Member-SSP-4475)
- 44. Application of Advance Composite Fibre Reinforced Plastic Material in Strengthening / Rehabilitation of Concrete Bridges. March 2001. (Team Member-SSP 1002)
- 45. Evaluation and monitoring of two bridges on iron-ore route of increased axle load of freight wagons in eastern railway. (Team Member-SSP-4467)
- 46. Evaluation and monitoring of two bridges (Bridge no. 322A at Panipat Ambala section and bridge no. 176A at Ambala-Karnal section) between Ambala Sirhind section for increased axle load of freight wagons. (Team Member-SSP-4463)
- 47. Evaluation of the steel (at Tata-Nagar) and arch bridge (at Sini) for increasing load of freight wagons on iron ore routes on southern-eastern railway, southern-eastern railway, Kolkata. (Team Member-SSP-4461)

### **CONSULTANCY PROJECT**

- 48. Evaluation of Structural Health of Deck Slab of Rob at Nandnagri, Delhi. (PL-TSP-1131-Rs. 9.44 Lakhs)
- 49. Assessment of elastomeric bearing pads for bridges and suggesting remedial /modifications for tracks of CPM 4 of DMRC (Phase 3). (Co PL- CNP-2134)
- 50. Analysis and Design of two bridges (4-lane singe span) on Gurgaon Canal at RD 9800 (Palla Bridge) and 20780 (Atmadpur bridge) at Faridabad. (Cp-PL-CNP-2104)
- Third Party random check during the construction RPS drain from Maharishi Balmiki Road to parking near BRTS corridor and Khanpur drain from Khanpur JJ colony to M.B. Road in South Zone, Delhi (TSP-691)-Co-PL-Completed in December 2015. (Co-PL-TSP-691)
- 52. 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 (Team Member CNP-2754-Rs. 23.60 Lakhs)
- 53. Review of DPR's of Maharashtra, Sikkim and Uttrakhand States for NRDA. (Team Member CNP-2751-Rs. 6,50,442)
- 54. Review of DPR's of Karnataka, Maharashtra, Manipur and Sikkim States for NRDA. (Team Member-CNP-2742-Rs. 10,13,96)

- 55. Structural Evaluation and remedial measures of the Bridges/Flyovers of National Highway from Raisinghnagar to Poogal (from design Ch. 101.00 to Ch. 263.460) under Phase-1 of Bharatmala Pariyojna, along the International Boarder at Rajasthan. (Team Member-CNP-2731-Rs. 29.50 Lakhs)
- Design of Sheet Piles for Supporting the adjoining soil and building during construction of Underpass portion of RUB at LC-25 crossing on Gurugram-Dhanwanpur, Gurugram. (Team Member-CNP-2705-Rs. 8.26 Lakhs)
- 57. Third party technical assistant of two bridges on Agra canal at Ch km 6.82, 28.0 near Faridabad. (Team Member-CNP-2478-Rs. 35.40 Lakhs)
- 58. Technical Audit of failure of 4-lane Bridge over river Yamuna near Village Manjawali, Distt Faridabad. (Team Member-CNP-2688-Rs. 37.76 Lakhs)
- 59. Investigations using NDT of the 2 Lane ROB in lieu of Level crossing No. 19-C on Subhana Kosil Nahar Kanina Road near Kosil Railway Station on Hisar Bhalleda Railway Line Km 28/1/2 at Kosil District Rewari for suggesting Rehabilitation Measures. (Team Member-CNP-2677-Rs. 59 Lakhs)
- 60. Investigation of distress multiple cell bridge at Ch. 53+605 on NH-11, Bikaner-Philodi Highway. (Team Member-CNP-2660-Rs. 14.16 Lakhs)
- 61. Condition Assessment, Structural Evaluation and suggestions for remedial measures of Indravati Bridge at Km 294+600 on NH-30 in the Raipur-Jagadlpur Stretch in the state of Chhattisgarh. (Team Member-CNP-2657-Rs. 29.50 Lakhs)
- 62. Third Party Technical Assistant in construction of two bridges over Agra Canal at Chainage Km 17.000 and 22.515 near Faridabad. (Team Member-CNP-2651-Rs. 31.66 Lakhs)
- 63. Inspection of PoT-PTFE Bearings and Pin/Metallic Bearings of ROB (1x18.527+1x24.0+1x18.527m) in Virhadra New Rishikesh Shivpuri Section in the State of Uttarakhand. (Team Member-CNP-2631-Rs. 11.80 Lakhs)
- 64. Proof Checking of Design and Drawings of Gantry for Mounting CCTV Camera at DND Flyover, New Delhi. (Team Member-CNP-2618-Rs. 5.90 Lakhs)
- 65. Technical guidance for one bridge of NF Railway having loss of camber and negative Camber. (Team Member-CNP-2598-Rs. 12.36 Lakhs)
- 66. Performance Evaluation of Embedded HILTI Anchors in Tension and shear under the Externally Applied Static Loading. (Team Member-CNP-2290)
- 67. Structural Design of Six-Lane bridge on Gurgaon Canal at RD 4115, connection sector-6,7,8 to Sector-3, Ballabhgarh. (Team Member CNP-2599)
- 68. Structural Safety Audit of major bridges at km 938+485 over the river Godavari Near Rajamundry in the state of Andhra Pradesh. (Team Member CNP-2572)

- 69. Structural safety Audit of major bridges at km 114+759 and at 64+047 of Four-Laning of Porbander-Jetpur Section on NH 88 in the state of Gujarat. (Team Member CNP-2563)
- 70. Quality Audit of all structures of the "4 laning of Jetpur-Somnath Section of NH 8D from km 0/000 to km 127/000 in the state of Gujrat on DBFOT Toll Basis under NHDP-Phase-III" and also test on 14km distressed road stretches of the section. (Team member –CNP-2550)
- 71. Design Review of Superstructure of ROB at km 214+600 of Raibarareli-Banda section of NH-232. (Team Member -CNP-2547)
- 72. Design of Bridge at RD-33300 Kheri Bridge across Gurgaon Canal Feeder, Faridabad (Team Member-CNP-2537)
- 73. Assessment and Rehabilitation scheme for Shashti Bridge across Ganger river, Mirjapur (Team member CNP-2491)
- 74. Technical Audit of Grade Separator at Rani Jhanshi Road, Delhi. (Team Member -CNP-2486)
- 75. Third party technical assistant of two bridges on Agra canal at Ch km 6.82, 28.0 near Faridabad. (Team Member-CNP-2478)
- 76. Technical Audit of 2.36 km long elevated 2-lane fly over in the city of Agartala. (**Team Member-**CNP-2451)
- 77. Structural Safety Audit of 2.36 km long elevated 2-lane fly over in the city of Agartala. (**Team Member-**CNP-2443)
- 78. Design of two lane single span bridge at RD 7150 on Gurgoan canal at Faridabad. (Team Member CNP-2431)
- 79. Inspection during strengthening work on Farakka Barrage, West Bengal. (Team Member-CNP-2419)
- 80. Design of single span two lane bridge on Gurgaon canal feeder at RD 50844 in Faridabad. (Team Member-CNP-2400)
- 81. 3rd Party Quality Audit for H.L. Bridge Over river Gurupriya near Janbai in the district of Malkangiri, Odisha.-(**Team Member-**CNP-2393)
- 82. Design of single span six lane bridge on Gurgaon canal at RD13700m connecting Sector-25 and 55 and Sohna road in Faridabad. (Team Member-CNP-2389)
- 83. Detailed Inspection of ROB at Sambhua Crossing on Kanpur-Hamirpur Road of NH-86. (Team Member-CNP-2380)
- 84. Visual Inspection of Eight Flyovers, PWD Delhi. (Team Member-CNP-2358)
- 85. Quality Assurance of Construction of Structures on Inner Ring Road (Phase-II) from Fatehabad Road to dewari Road, Agra. (Team Member-CNP-2335-Rs. 58.15 Lakhs)
- 86. Safety Audit of advertisement structures of DND Flyway. (Team Member-CNP-2308)

- 87. Load Testing of Gheroli Bailey Bridge in Betalghat Block-Nainital, Uttrakhand. (Team Member-CNP-2296)
- 88. Detailed Study of Seven Spans of Grade Separator in km 9&10 (Govt. Polytechnic Junction) in Lucknow City, U.P. (Team Member-CNP-2255)
- 89. Design of single span two lane bridge on Gurgoan canal at RD 2245m connecting Sector-3 and 8 Village Sihi in Faridabad. (Team Member-CNP-2238)
- 90. Assessment of Structural Safety of EWS Pratap Vihar Multistoried Housing Complex of Ghaziabad Development Authority using NDT. (Team Member-CNP-2235)
- 91. Detailed investigation of existing bridges/flyovers regarding the structural stability security audit in New Town, Kolkata. (Team Member-CNP-2223)
- 92. Assessment of damages in distressed span P1-P2 (outer carriageway) of bridge on 4-lane divided carriageway connecting NH-24 and NH-28 around Lucknow City using NDT and to suggest remedial measures. (Team Member-CNP-2208)
- 93. Evaluation of the quality of construction of the two 4-lane bridges and one 6-lane bridge across Agra canal at km 10.150, 13.300 and 30.118 in Faridabad. (Team Member-CNP-2202)
- 94. Evaluation of condition of Ranjit Singh Flyover Connecting Barakhamba Road and Mata Sundari Road, New Delhi. (Team Member-CNP-2184)
- 95. Assurance of Quality of construction of 4 Bridges over Agra canal in Faridabad. (Team Member-CNP-1948)
- 96. Project Monitoring and Assurance of Construction of Additional Three-lane Grade Separator on Nh-58 near Meerut Tirah, Ghaziabad (U.P). (Team Member-CNP-2088)
- 97. Detailed Investigation of Bridge over River Damodar at 3rd Kilometer of Burdhman Arambagh Road (Krishak Setu). (Team Member-CNP-2068)
- 98. Structural Analysis, Design and Drawing of Foot Over Bridge on Palam Drain Road Dwarka, New Delhi. (Team Member-CNP-2039)
- 99. Design of Pedestrian Subway for MES at Dwarka, New Delhi. (Team Member-CNP-1959)
- 100. Witnessing of load testing of span P2-P3 as third party for construction of Road Bridge over River Choti Ganga on Ara-Chapra (Bihar). (Team Member-CNP-2055)
- 101. Quality Assurance of Construction of Structures on Inner Ring (Phase-1) from Kuberpur to Fetahbad Road, Agra. (Team Member-CNP-2045)
- 102. Assessment of Load Carrying Capacity of the Bridge at RD 07.150 km over Agra Canal in Faridabad. (Team Member-CNP-2002)
- 103. Project Monitoring and Assurance of Quality Construction of additional Two-Lane Bridge over Hindon on NH 58E in Ghaziabad. (Team Member-CNP-1989)

- 104. Assurance of Quality of construction of 4 Bridges over Agra canal in Faridabad. (Team Member-CNP-1948)
- 105. Assurance of quality construction of corridor of elevated road on outer ring road Madhuban Chowk to Makurba Chowk. (Team Member-CNP-1919)
- 106. Assurance of quality construction of corridor of elevated road on outer ring road Mangolpuri to Madhuban Chowk. (Team Member-CNP-1918)
- 107. Design of 6 Lanes three nos. of bridges along Gurgoan vanal feeder in Faridabad. (Team Member-CNP-1910).
- 108. Design of skew bridges 2- lane each of two Carriageway Bridge on Gurgoan canal at RD Sector 55-56 at Faridabad. (Team Member-CNP-1888)
- Aerodynamic Studies of Proposed 4 Lane Cable Stayed Bridge over Bardhman Yard. (Team Member-CNP-1833)
- 110. Consultancy service for distress diagnostic and rehabilitation of PSC girder bridge on Maskaro river, Chilkana – Gandred Route near Saharanpur (UP). (Team Member-CNP-1792)
- 111. Quality Assurance of PSC bridge over river Hindan NH-58E, Mohan Nagar, Ghaziabad. CNP-1780
- Proof Checking of design and drawing of proposed PSC bridge over river Hindan NH-58E, Mohan Nagar, Ghaziabad. (Team Member-CNP-1779)
- 113. Construction of 2 ways of 3 lanes each side of the bridge (6 lanes) at km 89.050 on Agra canal, linking Mithapur/Jaitpur to Delhi Agra National Highway. (Team Member-CNP-1713)
- 114. Assessment of load carrying capacity of Bailey bridge at downstream of KHEP Dam (Koteshwar Dam). (Team Member-CNP 1712)
- 115. Non-Destructive Testing of broken concrete electric poles in the premise of Neb Sarai Police Station, New Delhi. (Team Member-CNP-1709)
- 116. Assessment of Structural Integrity of Piles and Quality Control of Construction of a Four Lane Prestressed concrete girder bridge at RD 450 across Gurgoan Canal Feeder Sponsored by WS, Sub-Division Faridabad. (Team Member-CNP-1548)
- 117. Performance Evaluation of Four Span of Grade Separator and Two Span of ROB through Load Testing sponsored by UP, PWD. (Team Member-CNP-1540)
- Design of Prefab / Precast Concrete Segmental Culvert over Palam Drain (Sitapuri Drain).(Team Member-CNP- 1495)
- 119. Load testing and corrosion study of span P-5 of Zuari Bridge on NH-17 in Goa. April, 2007. (Team Member-CNP-1382)

- 120. Investigation and Rehabilitation of Ravi and Basanter Bridge on Pathankot -Jammu Road (NH-1A). (Team Member-CNP-1264)
- Long Term Performance Monitoring of Lok Nayak Setu (Near Yamuna Bridge), Delhi.
   (Team Member-CNP-1194)
- 122. Investigation of Expansion Joints of Bhisham Pitamaha flyover at Sewa Nager, New Delhi, (Team Member-CNP-1177)
- 123. Long Term Performance Monitoring of ITO Bridge, Delhi. (Team Member-CNP-1094)
- 124. Quality Assurance Health Monitoring of a 6 Lane Roadway Bridge over the Palam Drain at Dwarka. (Team Member-CNP-1095)
- 125. Design and Quality Control of 6 nos. Bridges & 12 nos. Culverts in Dwarka.
- 126. Quality Control and Supervision of Bridge at RD-3565, Gurgoan Canal Feeder, Faridabad. (Team Member-CNP- 1096)
- 127. Load Testing of the second thane Creek Bridge Mumbai on South Carriage way. (Team Member-CNP-1264)
- 128. Design of Budiya Nallah Culvert and Retaining wall at AFNHB, Faridabad. (Team Member-CNP-1291)
- 129. Road Condition Survey for Core Network of Mizoram. (Team Member-CNP-1195)
- 130. Preliminary Inspection of Bridges Between Pathankot Jammu Road (NH-10) sponsored by EE, Madhopur Division, CPWD, Pathankot, Punjab. (Team Member-CNP-1071)
- 131. Preliminary Inspection of 8 Bridges on Pathankot-Jammu (NH-8) Road.
- 132. Survey work of Master Plan of Road at Dwarka report submitted in November 2000 to 2004, DDA, New Delhi.
- 133. Design and R\Testing on Non-Pumpable and pumable Concrete Mix For M 20 and M 30. For DDA WD-9, New Delhi.
- 134. NDT of Two overhead water tank at Modinager for SERC(G).
- 135. Investigation and Rehabilitation of Board Bridge in M.P. for P.W.D.
- Operational rating of Zuari Bridge on NH-17 (Span P5), Goa for P.W.D. (GOA). (Team Member-CNP-784)