

CURRICULAM VITAE

1. **Name and Photograph** : Dr. LAKSHMY PARAMESWARAN



2. **Designation and complete** : Chief Scientist

Address

Bridge Engineering and Structures Division

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Professor (Engineering Science)

Academy of Scientific and Innovative

Research (AcSIR) @ CSIR-CRRI, New Delhi.

3. **Areas of Interest:** : Structural Engineering, Bridge Engineering,
Wind Engineering

4. **Educational Qualification** :

Degree	Year	University/Institute	Grade
Ph.D (Civil Engineering)	2002	IIT Roorkee (Thesis: Analysis of Wind Induced Oscillations in Cable stayed Bridge)	Degree Awarded
M.E(Structural Engineering)	1985	Coimbatore Institute of Technology, Bharatiyar University	First Class/First Rank
B.Sc (Engg.) Civil Engineering	1984	College of Engineering, Thiruvananthapuram University of Kerala	First Class with distinction

5. Professional Experience :

Sr. No.	Period	Name of Organization	Position Held
1	1-1-2012 to Till date	CSIR-CRRI, New Delhi	Chief Scientist (Sc. G) Head Bridges & Structures upto March 2013 Chairperson(Academics) upto August 2014
2	1-1-2007 to 31-1-2011	CSIR-CRRI, New Delhi	Sr. Principal Scientist (Sc. F) with additional charge of Head, Bridges& Structures Div. Since July 2009 Chairperson(Academics)since 2009
3	1-1-2001 to 31-12-2006	CSIR-CRRI, New Delhi	Principal Scientist (Sc. EII)
4	13-3-1996 to 31-12-2000	CSIR-SERC, Ghaziabad	Senior Scientist (Sc. EI) Head, Wind Engineering Division (1997-2000)
5	13-3-1991 to 13-3-1996	CSIR-SERC, Ghaziabad	Scientist (Sc. C)
6	13-3-1987 to 13-3-1991	CSIR-SERC, Ghaziabad	Junior Scientist (Sc. B)

6. Membership to Professional Bodies

Sr. No.	Designation	Organization
1.	Fellow	Indian Association of Structural Engineering
2.	Member	International Association of Bridge & Structural Engineers (IABSE)
3.	Life Member	Indian Society of Earthquake Technology
4.	Life Member	Indian Concrete Institute (ICI)
5.	Life Member	Indian Society of Wind Engineering (ISWE)
6.	Life Member	Indian Society for Construction Materials & Structures
7.	Life Member	Indian Roads Congress
8.	Life Member	Indian Geotechnical Society

7. Achievements

a. Honours and Awards

Sl No.	Honours and Awards
1	1990, BOYSCAST Fellowship from Department of Science and Technology (for pursuing R&D in the area of “Disaster Mitigation” abroad)
2	1991, Visiting Scholar, Whiting School of Engineering, Johns Hopkins University, USA (for six months)
3	1991, Member, Panel of Women Experts Maintained by Commonwealth Secretariat
4	1994, Certificate of Merit from Institution of Engineers (India) for the paper “Computer Analysis of Tall RC Chimney” (Jointly with Sri. S.K. Agarwal)
5	2003- 2011, Member Secretary, Loads & Stresses Committee B-2), Indian Roads Congress, New Delhi
6	2006, Commendation Certificate from IRC (for Outstanding Performance as Member Secretary of Loads & Stresses Committee for the period 2003-2005)
7	2008, Best Paper Medal of the Indian National Group of IABSE for the paper “ Simplified method for pile foundation design of bridges in liquefiable soil”, published in Journal of Bridge & structural Engineer, June 2006 (Jointly with Ganesan, D).
8	2009, Commendation Certificate from IRC (for Outstanding Performance as Member Secretary of Loads & Stresses Committee for the period 2006-2008)
9	2009-continuing, Member, Committee for Empanelment of Bearing and Expansion Joint Manufacturers and Suppliers, Ministry of Road Transport & Highways, Govt. of India.
10	2009-2014 Member, Instrumentation Committee(G-5), Indian Roads Congress, New Delhi
11	2009-continuing, Member, Steel and composite Structure Committee(B-5), Indian Roads Congress, New Delhi
12	2010-2012, Member, Council, Indian Roads Congress, New Delhi

13	2010-continuing, Member, Civil Engineering Division Council, CED, Bureau of Indian Standards, New Delhi
14	2010-continuing, Member, Peer Review Committee of NRRDA,(for reviewing Sections pertaining to Bridges in Specifications and Standard Data Book for Rural Roads)
15	2012-continuing, Member, Bridge Specification & Standards Committee, Indian Roads Congress, New Delhi
16	2012-continuing, Member, Concrete (Reinforced & Prestressed) Structures Committee(B-4), Indian Roads Congress, New Delhi
17	2012-continuing, Member, Rural Roads Committee (H-5), Indian Roads Congress, New Delhi.
18	2012, Eminent Women Engineer Award conferred by Women in Science and Engineering (India) for outstanding achievements in the area of engineering
19	2012-continuing, Member, Identification, Monitoring Research Application Committee (IMRA), Highway Research Board, IRC, New Delhi
20	2013, Member (Bridge Expert), Standing Technical Advisory Committee (STAC), Pune Municipal Corporation, Pune.
21	2013, Commendation Certificate from Indian Roads Congress for outstanding performance as Member Secretary of Loads & Stresses Committee (B-2) and Member Instrumentation Committee (G-5) for the period 2009-20011.
22	2013-continuing Member, Project Review Committee(PRC), INSDAG, Kolkatta
23	2016- Continuing, Member, Research Advisory Council (RAC), NCCBM, Ballabgarh.
24	2013- continuing Member, Board of Studies, Department of Civil and Environmental Engineering, NCU University, Gurgaon (Formerly known as ITM University)
25	2015-continuing, Co-Convenor, Loads & Stresses Committee (B-2), Indian Roads Congress, New Delhi
26	2015-2017, Member, Maintenance and Rehabilitation (B-8) Committee, Indian Roads Congress, New Delhi

27	2014-continuing, Member, Specialized Bridge Structure including Sea links (B-9) Committee, Indian Road Congress, New Delhi.
28	2015-continuing, Member, Mechanisation Committee (G-4), Indian Roads Congress, New Delhi.
29	Member, Editorial Board of International Journal of Construction Materials and Structures (IJCMS) ISSN-2321-223.
30	Reviewer for the following Journals Materials Journal, American Concrete Institute Structures Journal, American Concrete Institute Journal of Indian Roads Congress Journal of Wind and Engineering Journal of Institution of Engineers (I) Journal of Advances in Engineering Software, Elsevier The Bridge & Structural Engineer, Journal of ING-IABSE

b. Research Projects

In-house R&D and Network Projects (Completed)

Sr. No.	Project Title	Role
1.	Assessment of temperature distribution across the cross section of Box girder using mathematical Model	Project Leader
2.	Study of thermal effect on rigid pavement – through instrumentation of campus road of CRRI, New Delhi.	Project Leader
3.	Simplification of Design Live Loads on Highway Bridges.	Member
4.	Development of Specification for Rice Husk Ash for use as cementitious admixture through laboratory study.	Member
5.	Development of Correlation between Corrosion of Steel in Concrete Measured by Galva Pulse	Member
6.	Behavior of Shear Deficient Beams Strengthened by Embedded Reinforcement	Member
7.	Design, Analysis and Health Assessment of Special Structures Including Bridges (10 th FYP Project), Nodal Lab : CSIR-SERC Chennai	Task Leader

8.	Development of Management System for Maintenance Planning and Budgeting of High Speed Corridors (11 th FYP Project), Nodal Lab: CSIR-CRRI, New Delhi	Module Leader
9.	Innovative Technologies For Health Assessment And Damage Mitigation of Structures , Nodal Lab CSIR-SERC, Chennai	Nodal Officer
10.	Development of Robot for Underwater Inspection of Bridge Components (UnWAR, 12FPY Nodal Lab: CMERI, Durgapur)	Nodal Officer
11.	Characterization of Properties of Various Types of Waterproofing Membrane and its Effect on Durability of Reinforced Concrete Slabs	Project Leader

Grant-in-Aid Projects (Completed)

<u>Sl. No.</u>	<u>Grant-In-Aid Projects</u>	<u>Funding Agency</u>
1	Distress diagnostics performance evaluation and bridge management system for concrete bridges (Team Member)	DST, New Delhi
2	Development of a critical infrastructure information system for maintenance of bridges in GIS environment Limited to Ghaziabad District (Team Member)	DST, New Delhi
3	Distress Diagnostic performance evaluation and bridge management system for concrete bridges, Phase-II, Development of one prototype of the visual inspection unit (Jointly with CMERI-CoEFM, Ludhiana) (Co- Principal Investigator)	DST, New Delhi
4	Development of Fibre Drag grating based distribution strain sensor system or concrete Bridges (Jointly with CSIO) (Co-Principal Investigator)	DST New Delhi
5	Creation of complete range of Independent testing facility for Expansion Joints at CRRI, New Delhi (Phase I completed) (Project Leader)	MoRTH, New Delhi

Sponsored Projects (Completed)

Sr. No.	Sponsored Research Projects	Sponsorer
1	Independent Quality Assurance During Construction and subsequent Performance Evaluation of Road and Bridges for Link Road Connecting NH-24 and NH-58 (Team Member)	GDA
2	Investigation for the Use of Structural Steel. Products in Transportation Sector”, submitted to in September 2013 (CO- Project Leader)	NIPPON STEEL AND SUMITOMO METAC Corp., Japan
3	Study for Aerodynamic stability of cable stayed bridge deck (B-25 Research Scheme) (Project Leader)	Ministry of Road Transport & Highways, New Delhi
4	Instrumentation and Evaluation of Ganjal Bridge on WCR (Team Member)	Western-Central Railway
5	Instrumentation and Evaluation of Bhojakh Bridge on WCR (Team Member)	Western Central Railway
6	Instrumentation and Evaluation of Kalisindh Bridge on WCR (Team Member)	Western Central Railway
7	Instrumentation and Evaluation of Rohari Bridge on WCR (Team Member)	Western Central Railway
8	Evaluation of the steel and arch bridge for increased axle load of freight wagons on iron ore routes on southern- eastern railway (Team Member)	South-Eastern Railway
9	Development software for the analysis and design of highway bridges (B-14 Research Scheme) (Team Member)	Ministry of Road Transport & Highways, New Delhi
10	Effect of overloading on Road Infrastructure (T-6) (Team Member)	Ministry of Road Transport & Highways, New Delhi
11	Rational Design Specifications for Wind Resistant Design of Country’s Bridges of Normal Spans and Guidelines for Long Span	Ministry of Road Transport & Highways, Govt. Of India

	Bridges (Project Leader)	
12	Wind Tunnel Studies on 15m Triangular Mast (Sponsored by Department of Telecommunication) (Project Leader)	Department of Telecommunication

Consultancy Projects (Completed)

Sr. No.	Major Project	Sponsorer
1.	Project Monitoring and Assurance of Quality Construction of Additional Two-lane Bridge Over Hindon on NH58E in Ghaziabad (Team Member)	GDA
2.	Assessment of elastomeric bearing pads for bridges and suggesting remedial /modifications for tracks of CPM 4 of DMRC (Phase 3) (Team Member)	DMRC
3.	Assessment of elastomeric bearing pad for bridges and suggesting remedial/modifications for project CC47 of DMRC (Phase-3) (Team Member)	DMRC
4.	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)	UP, PWD
5.	Aerodynamic studies of proposed 4-lane cablestayed Bridge Over Bardhman Yard (Project Leader)	M/sCES, Kolkatta
6.	Design of 6-lane single span bridge on Gurgaon Canal at RD 42000m of Faridabad (Team Member)	Irrigation Department, Faridabad
7.	Detailed Investigation of Bridge Over Damodar at 3 rd km of Burdwan-Aram Bagh Road (Krishek Setu) (Team Member)	PWD, WB
8.	Assurance of Quality Construction of Corridor of Elevated Road on outer Ring Road from Maduban Chowk to Mukarba Chowk (Team Member)	PWD, Delhi
9.	Assurance of Quality Construction of Elevated Road on Outer Ring Road from Mangolpuri to Madhuban Chowk (Team Member)	PWD, Delhi
10.	Long Term Performance Monitoring of ITO Bridge(Team	PWD, Delhi

	Member)	
11.	Distress Diagnostics and Rehabilitation of a PSC girder Bridge on Maskaro Graded Route near Saharanpur(Team Member)	PWD, UP
12.	Load Testing of One Span of North Carriageway of Thane Creek Bridge(Team Member)	PWD, Maharashtra
13.	Study of Vibrations due to Movement of Heavy Vehicular Traffic on the Munrika Flyover on Outer Ring Road(Team Member)	PWD, Delhi
14.	Investigation for the Improvement of condition of road over the Farakka Barrage(Team Member)	Farakka Barrage
15.	Assessment of Load Carrying Capacity of Bailey Bridge at d/s of KHEP Dam (Team Member)	Tehri Hydroelectric Projectr
16.	Strengthening Measures for Kalimati Road Bridge, Jamshedpur (Team Member)	TISCO, Jamshedpur
17.	Performance Evaluation of four span of grade separator and two span of ROB through load testing (Team Member)	UPPWD
18.	Non-Destructive Testing of Broken Concrete poles in the Premises of Neb Sarai Police Station, New Delhi (Team Member)	Delhi Police
19.	Remedial Measure / Rehabilitation of Bridge at RD 21260 m of Supplementary Drain at Sutlan Puri (Team Member)	Irrigation Department, Delhi
20.	Visual inspection of a bridge at Janakpuri(Team Member)	PWD, Delhi
21.	Assessment of structural integrity of piles and quality control of construction of four lane prestressed concrete bridge RD-450across Gurgaon Canal (Team Member)	Irrigation Department, Faridabad
22.	Quality Assurance and Health Monitoring Six Lane Road Way Bridge Over The Palam Drain at Dwarka ,Delhi (Team Member)	Delhi Development Authority
23.	Quality Assurance of the proposed PSC Bridge on over	Ghaziabad

	river Hindon NH-58E, Mohan Nagar. (Team Member)	Development Authority
24.	Quality Audit of Lucknow-Muzzaffarpur NH-Packages 1 to 8 (Team Member)	National Highway Authority of India
25.	Determination of Creep of M-60 Concrete through laboratory studies (Team Member)	Gammon India Limited
26.	Repair and Rehabilitation of Old ITO Bridge over River Yamuna (Team Member)	PWD, Delhi
27.	Checking of construction of work during rehabilitation of flyover at Bisham Pitamaha Marg, Sewa Nagar, New Delhi (Team Member)	PWD, Delhi
28.	Checking of construction work of pedestrian FOB over Bhisham Pitamaha Marg (Team Member)	PWD, Delhi
29.	Nondestructive Evaluation of Soundness of the Welded Connection of Railway Bridge No. 15A in Kirti Nagar (Team Member)	RVNL, New Delhi
30.	Aerodynamic studies on Chimneys of Kutch Panandharo Thermal Power Station (Team Member)	Gujarat Electricity Board
31.	Aerodynamic Studies on Natural Draught Cooling Towers of Kutch Panandharo Lignite Thermal Power Station (Team Member)	Gujarat Electricity Board
32.	Aerodynamic Interference Studies on RC chimneys of Paloncha Thermal Plant (Project Leader)	NBFAL
33.	Aerodynamic studies on RC chimneys of Akrimota Thermal Power Station (Project Leader)	GMDC
34.	Aerodynamic Interference Studies on group of RC chimneys and Natural Draught Cooling Towers of Wanakbori TPS (Team Member)	Gujarat Electricity Board
35.	Aerodynamic Interference Studies on group of RC chimneys and Natural Draught Cooling Towers of Gandhinagar TPS (Team Member)	Gujarat Electricity Board
36.	Aerodynamic Studies of Cable stayed Bridge Over Yamuna at Naini/Allahabad (project Leader)	M/s Span Consultants

37.	CTE Inspection of ROB and RUB at Road No. 68, Delhi (Project Leader)	DTTDC, New Delhi
38.	CTE inspection of Dilli Haat Pitampura (team Member)	DTTDC, New Delhi
39.	Preparation of Guidelines for construction of roads, culverts and bridges in cyclone prone area (team Member)	NDMA, New Delhi
40.	Design of Prefab/ Precast segmental CD cum Road way(2.6Km) over Sitapuri Drain (project Leader)	Delhi Development Authority
41.	Performance Monitoring of Second Road Thane Creek Bridge (Project Leader)	PWD, Maharashtra
42.	Proof Checking of Design and drawing of the proposed PSC Bridge on over river Hindon NH-58E, Mohan Nagar, Ghaziabad Team Member)	Ghaziabad Development Authority
43.	Design of 6 Lane Bridge (2 ways – 3 lanes) on Gurgaon Canal Feeder at RD 54250 connecting the intersecting road of sector 74 & 75 and sector 3 & 4 of Faridabad (team Member)	Irrigation Control, Faridabad
44.	Design of Four lane Single Span Bridge Over Gurgaon Canal at RD 17800 at Faridabad (Team Member)	Irrigation Department, Faridabad
45.	Soil investigation of bridge site and design and drawings of a four lane bridge at RD-450 across Gurgaon canal (Team Member)	Irrigation Department, Faridabad
46.	Structural Feasibility of FOB on Palam Drain Road, Dwarka, New Delhi (team Member)	DDA
47.	Proof checking of structural design of three FOB for PWD (Project Leader)	PWD, Delhi
48.	Design and Construction Control (Phase I) of 6-lane bridge on Gurgaon Canal Feeder at RD 3565 Linking Jatipur Localities to Delhi – Agra – NH2 (Team Member)	Irrigation Department, Faridabad
49.	Design of Budhia Nallah Culvert and Retaining wall at	AFNHB

	AFNHB Project, Faridabad (Project Leader)	
50.	Verification of Design of Railway Towers at Kavali and Ongole for Installations of microwave Antennae By Idea Cellular Ltd. (Project Leader)	Idea Cellular Ltd
51.	Design of Four lane Single Span Bridge Over Gurgaon Canal at RD 17800 at Faridabad (Team Member)	Irrigation Department, Faridabad
52.	Analysis and design of steel microwave towers, GSM towers, VSAT antenna mounts, VHF towers and FM/TV integrated towers of various heights (Thirteen Nos) (Project Leader)	Telecommunication Engineering Centre, AIR and other private Agencies
53.	Proof checking of Designs of Microwave, FM/TV integrated towers, VHF towers, GSM towers, VSAT antenna mounts (Project Leader) (28 Nos)	Department of Telecommunication /AIR
54.	Proof Checking of Designs of Multistorey Buildings (Team Member)	Ghaziabad Development Authority

c. Research Publications

Papers in Journals

1. Lincy Varghese, VVLK Rao and Lakshmy P(2017), “ Comparison of Efficiency of Colloidal nanosilica and Microsilica in cement concrete”, Indian Concrete Journal, Vol. 91, No. 9, pp. 37-46 ISSN 0019-4565
2. Lincy Varghese, VVLK Rao , Lakshmy P (2017), “Effect of nano-silica on drying shrinkage and creep properties of cement concrete”, Advanced Materials Letter Proceedings, VBRI Press 2(1), 56-60.
3. Surya, M, Rao, VVLK, Lakshmy, P.(2015), Mechanical, durability and time dependant properties of recycled aggregate concrete with fly ash – an experimental study, ACI Material Journal, Vol. 112, No. 5, pp. 653-662.

4. Lakshmy P, Rajeev Goel, S.K. Sharma and Pardeep Kumar. (2015), Performance Evaluation of North Carriageway of Second Thane Creek Bridge through Load Testing”, Indian Concrete Journal, Vol. 89, No. 6, pp. 1-11.
5. Pardeep Kumar, S.K. Sharma, Lakshmy P. (2015), Effect of CFRP fabric in enhancing torsional capacity and twist angle of a strengthened RC beam, The Bridge & Structural Engineer, ING-IABSE, Vol. 45, No. 2, pp. 70-76.
6. Rajeev Goel, S.K. Sharma, Lakshmy P. (2015), Condition Assessment and Rehabilitation of an Impact Damaged Concrete Bridge, The Bridge & Structural Engineer, ING-IABSE, Vo. 45, No. 2, pp. 21-28.
7. Lakshmy Parameswaran, (2015), “Recent Developments in design and construction of concrete road bridges”, NBM& CW, India pp.2-5.
8. Lakshmy Parameswaran. (2014), Effect of rebar corrosion on service life of reinforced concrete bridges, Corrosion Combat, NACE International Gateway India Section Vol. 20, No. 2, pp 7-15.
9. VVLK, Rao, Surya, M, Lakshmy Parameswaran. (2014), Recycled Concrete Aggregate : A Sustainable Alternative to Natural Aggregate, International Journal of 3R's, Repair, Restoration & Renewal of Built Environment, Vol. 5, No.1, pp.683-691,ISSN0975-8968.
10. Lakshmy Parameswaran, M. Surya, VVLK Rao. (2014) Experimental Evaluation of Models in IRC: 112 for Prediction of Concrete Properties, The Bridge & Structural Engineer, ING-IABSE, Vol. 45, No. 2., pp. 110-119, June 2014.
11. Alok Bhowmick, Lakshmy Parameswaran, GL Verma. (2014), New Special Vehicle Loading in IRC:6 for Design of Bridges, The Bridge and Structural Engineer, ING_IABSE, Vol. 44, No. 2, pp. 92-101.
12. Lakshmy Parameswaran. (2013), Recent Trends in Repair and Replacement of Bearings and Expansion Joints for Rehabilitation of Bridges, The Bridge & Structural Engineer, ING-IABSE, Vol. 43, No. 4, pp.8-16, Dec. 2013.
13. Lakshmy Parameswaran. (2013), A perspective on Maintenance of Urban flyover, The Bridge & Structural Engineer, ING-IABSE, Vol 43, No.3, pp. 106-116, Sep. 2013.
14. Sharma S.K., Lakshmy P, Goel Rajeev, Kumar Sushil. (2013), Experience from Investigation of Expansion Joints and Bearings in Concrete Bridges, Journal of India Highways, Vol. 41, No. 5, pp67-75, May 2013.

15. Rao V.V.L.K., Surya M, Lakshmy P. (2013), Recycled Concrete Aggregate in Concrete Pavement Construction—An Innovative Approach for Sustainable Development”, Indian Highway Annual Number. IRC, Vol. 41, No. 1, ISSN 0376-7256, pp 57-62, Jan, 2013.
16. Lakshmy P, Rajesh Rana, Y.K. Singh, S.K. Sharma. (2013), Evaluation of strip seal for use in bridge expansion joints, Indian Highways, Vol. 41, No. 9, pp. 40-49.
17. S.K. Sharma, Lakshmy P, Sushil Kumar. (2012), Performance of shear deficient RC beams strengthened using Near Surface Mounted (NSM) CFRP Laminates, Journal of Indian Highways, Vol. 40, No.6, pp105-115.
18. Lakshmy, P, Alok Bhowmick and T. Viswanathan. (2011), New barge impact Provision in IRC:6 for design of bridges located in waterways, Indian Highways, Vol.39, No.10, pp. 17-22.
19. V.V.L. K. Rao, P. Lakshmy and S. Gangopadhyay. (2009), Polyester Fibre Waste as Reinforcing and Mixture in Concrete for use in Road Works, New Building Materials and Construction World, Vol. 15, No. 6, 2009, pp. 174-187.
20. Lakshmy P. (2009), Wind Induced Interference Effect on Pressure Distribution Around a cooling Tower in a Group, Journal of the Bridge and Structural Engineer, ING-IABSE, Vo. 39, No. 4, pp. 31-47.
21. Lakshmy Parameswaran, Krishen Kumar, P.N. Godbole, Trikha, D.N. (2009), Effect of Deck Supports on Buffeting Response of Cable Stayed Bridges Using Time Domain Analysis”, Journal of Wind and Engineering, Vol. 6, No. 1, pp19-31.
22. Lakshmy Parameswaran, Krishen Kumar, P.N. Godbole, D.N. Trikha. (2009) Frequency Domain Analysis of a Cable Stayed Bridge, Journal of the Bridge and Structural Engineer, ING-IABSE, Vol. 39, No. 2, pp. 15-25.
23. Lakshmy Parameswaran, Ram Kumar, G.K. Sahu. (2008) Effect of Carbonation on Concrete Bridge Service Life, Journal of Bridge Engineering, ASCE, Vol. 13, No.1, pp. 75-82. Jan 2008.
24. Lakshmy Parameswaran, D. Ganesan. (2006), Simplified Method for Pile Foundation Design of Bridges in the Liquefiable Soil, Journal of Bridge & Structural Engineer, Vol.36, No.2, pp 35-53. **(Won The Indian National Group of the IABSE Medal)**

25. Lakshmy Parameswaran, P.N. Godbole, D.N. Trikha. (2006), Two dimensional Flutter Analysis of a Suspension Bridge, Journal of Bridge and Structural Engineer, Vol. 36, No:4, pp 47-58.
26. Lakshmy P., Ram Kumar and M.V.B. Rao. (2005), Design of Lead-Rubber Bearing for Use in Seismic Isolation of Highway Bridges, Paper No. 516, Journal of Indian Roads Congress, Vol. 66(2), pp. 345-376. **(Discussion Paper)**
27. Lakshmy P., G.K. Sahu, Farhat Azad, Pardeep Kumar Kayal S. (2003), Properties of Concrete for Thermal Flow Analysis, Journal of Bridge & Structural Engineer, P. ING-IABSE, Vol33 No. 3, September, pp. 31-51.
28. Tamhankar M.G., Lakshmy P., and Bisht, A.S. (1995), Computer Aided Detailing of Steel in Bridges - RC T Girder, Journal of Indian Roads Congress, Paper No. 435, Vol. 56-3.
29. Agarwal S.K, and Lakshmy P. (1994), Computer Analysis of Tall Freestanding Chimneys, Journal of Institution of Engineers India. **(Certificate of Merit from Institute of Engineers(India))**
30. Lakshmy P., and Agarwal S.K. (1993), Dynamic Analysis of Chimneys and Natural Draught Cooling Towers, Bulletin, Indian Society of Earthquake Technology, Paper No. 333, Vol. 30.
31. Lakshmy P., Agarwal S.K., Trikha D.N. (1993), Aerodynamic Behaviour, Field Monitoring and Residual Life of Cable Suspended Bridges, Bridge and Structural Engineer, Vol. 13, No. 4.
32. Agarwal S.K. and Lakshmy P., Wind Resistant Design of RC Chimneys, International Journal of Structures, Vol. 13, No. 1., 1993.
33. Agarwal S.K, Rajeev Garg and Lakshmy P. (1990), Wind Resistant Design of structures, International Journal of Structures”, Vol. 20, No. 1.
34. Lakshmy N., Kumar R., and Sharma S.P. (1989), A 9-Noded Mindlin Plate Element for Bridge Decks, International Journal of Structures, Vol.9 (1), pp, 59-72.

Paper in International & National Conferences

1. VVLK Rao and Lakshmy, P., (2017), “Case Studies on Corrosion Testing in Concrete Structures”, CORCON 2017, Organised by NACE International, September 17-20, 2017, Mumbai

2. Lakshmy P (2017), “ Emerging Trends in Bridge Design, Construction and Maintenance Management”, National Conference on Emerging Trends in Civil Engineering 2017, Organised by Department of Civil Engineering , Government College of Engineering, Salem, 1-2, March 2017 (Key note Address)
3. Lakshmy P,(2016), “ SHM for Structural Health Assessment of Elevated Road Corridor”, ING-IABSE Seminar on Urban Transport Corridor, 21-22 October 2016, Vishakapatnam.
4. Surya M, Lakshmy P and VVLK Rao (2016), Bond Behaviour of Recycled Aggregate Concrete. Proceedings Structural Engineering Convention (SEC 2016), SERC Chennai, Dec 21-23, 2016
5. Lakshmy P.,(2016). “Aerodynamic Issues for design of very long span cablestayed bridges”, Eighth National Conference on Wind Engineering, Dec. 16-17, IIT, BHU, Varanasi.
6. Lincy Varghese, VVLK Rao and Lakshmy P (2016), Effect of Nanosilica and microsilica on bond and flexural behaviour of Reinforced Concrete. Proceedings Structural Engineering Convention (SEC 2016), SERC Chennai, Dec 21-23, 2016. Paper No. 430
7. Rajeev Goel ,P. Lakshmy ,S.K. Sharma ,R.K. Garg ,G. K. Sahu & JK Goyal (2016). Development of Bridge Maintenance Management System in GIS Environment in India Fourth International Conference in Sustainable Construction Materials and Technologies’, Las Vegas, USA, August 7-11, 2016, pp.1753-1761 in CD-ROM
8. Rajeev Goel,S.K. Sharma,J.K. Goyal, Lakshmy Parmeswaran & Rajeev Garg (2016), A Case Study of Strengthening of Distressed Prestressed Concrete Box Girder Bridge Fourth International Conference in Sustainable Construction Materials and Technologies’, Las Vegas, USA, August 7-11, 2016, pp.1742-1752 in CD-ROM.
9. Dinesh Kumar, VVLK Rao and Lakshmy P., (2016). “ Self compacting concrete with Recycled Concrete Aggregates as Repair Material- An Experimental Study”, Concrete 2016-Conference and Exhibition on Repair,

Rehabilitation and Retrofitting of Concrete Structures, September, 9-10, New Delhi.

10. VVLK Rao, Amresh Kumar, Sushil Kumar and Lakshmy P, (2016), Experimental Study on Sacrificial Cathodic Protection of Reinforcement in Concrete Beam”, CORCON 2016, New Delhi.
11. Lincy Varghese, VVLK Rao, Lakshmy P. (2016), “Effect of nanosilica on some properties of cement concrete” International Conference on Material Science and Technology, March 2-4, 2016.
12. Lakshmy Parameswaran, (2015), “Suitability of Various Public Transport Options for Indian Cities”, CAETS Convocation 2015 Pathways to Sustainability- Energy, Mobility and Health Care Engineering, October.
13. Lincy Verghese, VVLK Rao and Lakshmy Parameswaran. (2015), A review on Effect of Nanosilica and Microsilica on Microstructural and Mechanical Properties of Concrete”, Asian Conference on Ecology of Concrete (ACECON 2015) , Oct 8-10, 2015 Kolkatta.
14. Vasvi Aggarwal, Lakshmy Parameswaran. (2015), Effect of Overweight Trucks on Fatigue Damage of Bridges, Advances in Structural Engineering, Springer India, pp.2483-2491.
15. Surya, M Lakshmy, P, VVLK, Rao. (2015), Study on some Properties of Recycled Aggregate Concrete with Flyash, Advances in Structural Engineering, Springer India, pp.1773-1783.
16. VVLK Rao, Lakshmy P, Sushil Kumar, R.K. Garg. (2014), A Laboratory Study on the Performance of Silane based Hydrophobic Coatings on Concrete”, Proceedings, 2nd International Conference on Durability of Concrete (2nd ICDC), December, 4-6, 2014 New Delhi.
17. VVLK Rao, Lakshmy P. (2014), Cathodic Protection for Prevention and Rehabilitation of Reinforcement Corrosion in Concrete Structures, International Conference on Corrosion (CORCON 2014, Mumbai, 12-15, November, 2014.
18. Lakshmy P. (2014), Level of Service Based Maintenance Strategy for Structures of Elevated Transport Corridor”, Proceedings ING-IABSE Seminar on Elevated Transport Corridors, Mysore, pp183-193 June 27-28, 2014.

19. Surya, M, Lakshmy, P, VVLK Rao. (2014), "Durability Properties of Recycled Aggregate Concrete Containing Flyash", Proceedings, 2nd International Conference on Durability of Concrete (2nd ICDC), December, 4-6, 2014 New Delhi.
20. Lakshmy P. (2014), "Evaluation of Properties of Unbonded waterproofing Membranes for Use on Bridge Decks", ICI Workshop on Waterproofing Technologies for Civil Construction, New Delhi, July 18-19, 2014.
21. Lakshmy P. (2014), "Advancements towards Sustainable Road Infrastructure in Delhi", International Conference on Innovation and Advances in Civil Engineering Towards Green and Sustainable System, Coimbatore, April 28-30, 2014.
22. Lincy Varghese, VVLK Rao, Lakshmy, P. (2014), "An overview on Effect of Nanosilica on Durability of Concrete", 2nd International Conference on Durability of Concrete (2nd ICDC), December, 4-6, 2014 New Delhi.
23. Lakshmy Parameswaran (2014), "Mobile Bridge Inspection Unit- Development and Challenges", HRB, IRC Annual Session, Guwahati, 18-22, 2014. (Invited Paper)
24. Lakshmy P. (2014), "Use of Flyash in Bridge Construction – Codal Provisions and Experiences", Workshop for Preparations of Roadmap for R&D Practices for use of Flyash in Roads, Embankments, Bridges and Allied Structures, March 21, 2014, CRRI New Delhi.
25. Lakshmy Parameswaran. (2014), "Precast Bridge Construction in Urban Roads – Challenges and Solutions", International Workshop in Recent Advances in Civil Engineering (ACEiii-2014), Hyderabad, Jan. 3-4, 2014. (Key note Address).
26. G.K.Sahu, Rajeev Goel, VVLK Rao, R.K.Garg, P Lakshmy. (2013), "Health Monitoring of Six-lane Roadway over Palam Drain, Dwarka, New Delhi through Instrumentation", Proceedings, International Conference on Trends and Challenges in Concrete Structures, Ghaziabad, India, Dec., 19-21, pp. 562-575.
27. Rajeev Goel, S.K. Sharma, P. Lakshmy. (2013), "Case Study on Assessment of Load Carrying Capacity of Bridges", Proceedings, International Conference on Trends and Challenges in Concrete Structures, Ghaziabad, India, Dec., 19-21, 2013, pp. 801-808.

28. Surya, M., VVLK Rao, and Lakshmy, P. (2013), Studies on Recycled Aggregates in India- An Overview and Prospectus, Proceedings on R.N.Raikar Memorial International Conference and Dr. Suru Shah Symposium on Advances in Science & Technology of Concrete, 20-21, Dec. 2013, Mumbai, India.
29. Surya, M, Kanta Rao, VVLK, Lakshmy P. (2013), Recycled Aggregate Concrete for Transportation Infrastructure, 2nd Conference of Transportation Research Group(2nd CTRG), Proceedings, Social and Behaviour Sciences, vol. 103, 2 December 2013, pages 1158-1167, Elsevier.
30. Lakshmy P. (2013), Processes in Recycling of Concrete Pavement ICI-CPWD symposium on Technology & Equipment for C&D Waste Recycling, held at New Delhi on November 8-9, 2013. (Invited Paper)
31. VVLK Rao, Surya, M, and Lakshmy, P. (2013), Recycled Concrete Aggregate for Construction and Demolition waste- Needed impetus for its use in concrete, ICI-CPWD workshop on Construction and Demolition of Waste, IIT Madras, during 5-6 Aug 2013.
32. Lakshmy P. (2013), Effect of Rebar Corrosion in Service Life of Reinforced Concrete Bridges, CORCON 2013, September 30-October 3, New Delhi. (Invited Paper)
33. Resmi Ratnakaran, Lakshmy Parameswaran, Kiran Kumar Shetty. (2013), Seismic Response of Pier-Pile foundation system of multi span Elevated Roadway, National Conference on New Horizons in Civil Engineering (NHCE-2013) held at Manipal Institute of Technology, Manipal during April 12-13, 2013.
34. VVLK Rao, Surya, M and Lakshmy, P. (2012), Recycled concrete Aggregate and its use in construction of concrete pavement, Seminar on cement concrete Roads and white topping organised by CRRI and CMA at CRRI, New Delhi on August 24, 2012.
35. M Surya, VVLK Rao and Lakshmy, P. (2012), Properties of recycled aggregate and its use in buildings, 28th National seminar on convention of civil engineers and National Seminar on role of infrastructure with sustainable development" at Roorkee October 12-14, 2012.
36. Lakshmy P. (2012) Bridge Management- Challenges and Solution, Urban Transport Conference, 28-29, August 2012, New Delhi. (Invited Paper)

37. Lakshmy P. (2011), Bridge Maintenance Management System, Bridges India 2011, 18-19 May 2011, New Delhi. (invited Paper)
38. Lakshmy P. (2011), Effect of Heavy Commercial Vehicles on Bridges, Annual session of IRC, Lucknow, November 2011. (Invited Paper)
39. VVLK Rao and Lakshmy, P. (2011), Corrosion of post-tensioned tendons in concrete bridges- Duct detection, Tendon access and Tendon testing, Proceedings, National Conference on Repair and Rehabilitation of Concrete Structures, Noida, May 6-7, 2011.
40. S. K. Sharma , Narendra Kumar, Sushil Kumar, Lakshmy P. (2011), Study of Cracked RCC Beam Strengthened in Shear with CFRP Laminates” Proceedings, National Conference on Repair and Rehabilitation of Concrete Structures, Noida, May 6-7, 2011, pp:248-257.
41. Pardeep Kumar, S.K.Sharma , Alok Verma and Lakshmy P. (2011), Study on analytical Models of reinforced concrete (RC) beams strengthened with FRP under pure torsion, Conference on Repair , restoration and Rehabilitation of Concrete Structures by ICI , Tamilnadu ,Chennai, September 2011.
42. Pardeep Kumar, S.K.Sharma , Sh.Alok Verma and Lakshmy P. (2011), FRP’S uses for torsion capacity enhancement of reinforced concrete structures, 26th IRC Conference on 15-18 Dec,2011 Bangalore.
43. Lakshmy, P. (2010), Development of Distress Diagnostics, and Performance Evaluation of RC Bridge Superstructure, HRB Meeting, Annual Session of Indian Roads Congress, Nagpur, November 11-14, 2010. (invited Paper)
44. Lakshmy P. (2010), An Approach for Management of Bridges Vulnerable to Floods, Proceedings, IRC Seminar on Roads in High Precipitation Areas, Guwahati, 2010.
45. Rajeev Goel, R.K. Garg, P. Lakshmy, Ramkumar. (2010), Assessment of Residual Life of Existing RCC Bridges, Joint IABSE-fib Conference on CODES IN STRUCTURAL ENGINEERING- Developments and Needs for International Practice , Cavtat, Dubrovnik, Croatia May 3-5.
46. Lakshmy P., Alok Bhowmick. (2010), New Wind Provisions for Highway Bridge Design in India, Joint IABSE-fib Conference on CODES IN STRUCTURAL ENGINEERING- Developments and Needs for International Practice , Cavtat, Dubrovnik, Croatia May 3-5.

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48. Lakshmy Parameswaran, D. Ganesan, (2006), Seismic Resistant Design of Pile Foundation of Bridges on Liquefiable Soil, National Seminar on Innovative Load Transfer Devices and Foundations, New Delhi, pp. 48-62.
49. Lakshmy Parameswaran, Ram Kumar (2006), Design of Friction Pendulum Bearing for Seismic Isolation of Bridges, National Seminar on Innovative Load Transfer Devices and Foundations, New Delhi, pp. 366-375.
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52. Lakshmy P., Ram Kumar. (2004), Developments in Jointing of Segments in Precast Concrete Bridges, Proceedings of fib Symposium on Segmental Construction, November 26-29, 2004, New Delhi.
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60. Rajeev Garg and Lakshmy P. (2000), Effect of Strong Wind on Structures and Their Strengthening", National Workshop on Techniques and Materials for Rehabilitation, Retrofitting and Maintenance of Bridges and Buildings, India, (In Hindi).
61. Lakshmy P. (1999), Experimental Vulnerability Detection in Structures, Proceedings International Conference on Space Structures, India, 1999. (Invited Paper)
62. Lakshmy P. (1999), Some Suggestions on Aerodynamic stability Aspects of Cable Stayed Bridges, Advances in Structural Engineering, Proceedings International Conference on Structural Engineering, India, pp. 99-111.
63. Lakshmy P. (1999), Aerodynamic Interference Studies for Design of Power Plant Structures, Advances in Structural Engineering, Proceedings International Conference on Structural Engineering, India, pp. 112-124.
64. Lakshmy Parameswaran. (1999), Interference Studies on a Group of Natural Draught Cooling Towers, Proceedings, Tenth International Conference on Wind Engineering, Denmark, pp. 517-524.
65. Agarwal S.K., Lakshmy P., and Trikha D. N. (1997), Some Suggestions for Revision of Wind Load Provisions of IRC: 6, Proceedings of the Second National Seminar on Wind Effects on Structures, India, pp. 318-340.
66. Lakshmy P., Agarwal S. K., and Trikha, D. N. (1997), Aerodynamic Force Coefficients for Box Girder Bridges, Proceedings of the Second National Seminar on Wind Effects on Structures, India, pp. 297-317.

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73. Lakshmy P., and Agarwal, S.K. (1996), Interactive Software for Wind Load Assessment of Structures, Proceedings, First National Conference on Computer Aided Structural Analysis and Design, Hyderabad, India, 1996.
74. Agarwal S.K and Lakshmy, P. (1996), Aerodynamic Interference Studies on Two Dissimilar Chimneys, Third International Colloquium on Bluff Body Aerodynamics and Applications, USA.
75. Lakshmy P. (1995), Prediction of Wind Induced Stability of Cable Stayed Bridges, Proceedings, International Conference on Stability of Structures”, Vol. 2, pp. 1039-1050, Coimbatore, India.
76. Agarwal S.K., and Lakshmy P. (1995), An Interactive Software for the Analysis and Design of Tubular Triangular Towers, Proceedings, National Seminar on High Rise Structures, Allahabad, India.
77. Lakshmy P. (1995), Influence of Wind Characteristics in Lattice Tower Design” Proceedings, National Seminar on High Rise Structures, Allahabad, India.

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80. Lakshmy P., S.K. Agarwal. (1994), RCCHIM- An User friendly Software for Assessment of Design Loads on RC Chimneys, Proceedings, National Seminar on Wind Loads-Codal Provisions, 6-7April, 1994, pp.9-1-11.
81. Lakshmy P, Agarwal S.K, Trikha, D.N. (1994), Criteria for Wind Loads on Bridges-A Review, Proceedings, National Seminar on Wind Loads-Codal Provisions, 6-7April, 1994, pp.12-1-21.
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83. Agarwal S.K. and Lakshmy P. (1994), Wind Loads on Lattice Towers, Proceedings, National Seminar on Wind Loads-Codal Provisions, 6-7, April, 1994, pp.16-1-21.
84. Lakshmy, P., and Agarwal S.K. (1992), Wind Tunnel Techniques to Minimize Effect of Pollution on Concrete Structures, Proceedings, All India Seminar on Effect of Air Pollution on Structures, Nagpur, India.
85. Lakshmy P., Tamhankar M.G. (1989), Computer Aided Design and Detailing of R.C. T-beam and Slab System, Proceedings, National Seminar on Detailing of Reinforced Concrete and Steel Structures, India.

d. Any Other information

Patent Filed/Granted

Serial No.	Title	Country/ Countries	Filed on (Patent No. & Date)	Granted on (Date)	Names of the other inventors
1	Vehicle mounted automatic controlled	India	IN-2984DEL2012 25-9-2012		RK Garg Rajesh Chak Ashwini Kumar VR Dahake

	Mobile bridge Inspection Device				Lakshmy P S.Gangopadhyay Ram Kumar Gautam Biswas Jagroop Singh Prabhu Dutt
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Contributions: Code of Practice & SOAR

1. IRC: 6(2017), Standard Specifications and Code of Practice for Road Bridges” Section II, Loads and Load Combinations,(Seventh Revision) IRC, New Delhi.”
2. IRC: SP: 64-2016. Guidelines for Analysis and Design of Steel Cast –in-place voided slab superstructure”(First Revision), IRC, New Delhi
3. IRC: SP: 66-2016. Guidelines for Design of Continuous Bridges”, (First Revision), IRC, New Delhi.
4. IRC:SP:70-2016, “ Guidelines for Use of High Performance Concrete(including Self Compacting Concrete in Bridges)(First Revision, IRC, New Delhi
5. HRB: SR No. 24 (2015) State of the Art Report on Application and Techniques of Instrumentation for Highways and Related Structures. First Edition, HRB, IRC, New Delhi.
6. IRC: SP-104: 2015, Guidelines for Fabrication and Erection of Steel Bridges First print, IRC, New Delhi.
7. IRC:22:2015, Standard Specifications and Code of Practice for Road Bridges, Section VI- Composite Construction (Limit State Design), Third Revision, IRC, New Delhi.
8. IRC: SP -105-2015, Explanatory Handbook to IRC: 112-2011 Code of Practice for Concrete Bridges, First Print, IRC, New Delhi.
9. IRC: SP-72, Guidelines for the Design of Flexible Pavements for Low volume Roads (First Revision), IRC, New Delhi.
10. IRC: SP-103 -2014, Guidelines on Tree Plantation along Rural Roads, IRC, New Delhi.
11. IRC:6-2014, Standard Specifications and Code of Practice for Road Bridges, Section : II, Loads and Stresses, (Sixth Revision), Indian Roads Congress, New Delhi
12. IRC SP-56-2011, Guidelines for Steel Pedestrian Bridges, First Revision, IRC, New Delhi.

13. HRB: SR No. 22 (2012) State of the Art Report on Areas of Application and Techniques for Instrumentation in Traffic Engineering, First Edition, HRB, IRC, New Delhi.
14. IRC:6-2010, Standard Specifications and Code of Practice for Road Bridges, Section : II, Loads and Stresses, (Fifth Revision), Indian Roads Congress, New Delhi.
15. IRC:24-2010, Standards Specifications and Code of Practice for Road Bridges, Section V, Steel Bridges (Limit State Method), Third Revision, Indian Roads Congress, New Delhi.

Edited Volumes/Chapters in Books

1. Ram Kumar, Lakshmy, P. (Eds), Deep Foundations (Well/Piles) for Bridges-Optimal Solutions”, Proceedings of Workshop held during November 29-30, 2006, CRRI, New Delhi. Proceedings in CD)
2. Agarwal S.K., Lakshmy, P (Eds.), Wind Effects on Structures – Proceedings Second National Seminar on Wind Engineering, 1997, Allied Publishers Limited, New Delhi.
3. Agarwal, S.K., Lakshmy, P (Eds.), Wind Loads-Codal Provisions, Proceedings of National Seminar held during 6-7, April, 1994, SERC, Ghaziabad. (Prescribed as Reference Book by University of Rajasthan and Pondicherry University for M.Tech Structures Students)
4. Chapter on “Mitigation Measures for Culverts and Bridges” in Guidelines for Planning, Design and Construction of Roads in Cyclone Prone Areas, First Edition, NDMA, New Delhi, 2013 .
5. Chapter on” Use of Recycled Aggregate in Road Sector in “Guidelines on Recycling Use and Management of C&D Waste”, published by Indian Concrete institute, Chennai, October, 2015.

Software Developed

1. Analysis of Bridges using 9- Noded Mindlin Plate Element
2. Design and Detailing of RC Slab and T- Beam Bridge
3. Computing Design loads on Chimneys and Natural Draught Cooling Towers
4. Analysis of Tower Type Structures

5. Simulation of wind and estimation of Buffeting Loads for Analysis of Cables Bridges
6. Estimation of Modal Structural Damping in Cable Stayed Bridges
7. Flutter Analysis of Flexible Bridges
8. Estimation of Buffeting and Vortex Induced Response of Cable Stayed Bridges
9. Estimation of Thermal Distribution in Concrete Slab and Box Girder
10. Design of Composite Box Girder Bridges
11. RLAB-RC- Software for Distress Diagnostics, Performance Evaluation and Residual Life Assessment of RC Bridge Superstructure
12. INDO-BMS-Software for Maintenance Management of Bridges

M.Tech Thesis Guided

1. Anchala Arivatsava, “ Detection of Simulated Damage on Bridge Using Vibration Analysis, Gautam Budha University, Greater Noida , May 2017 (Along with Dr. Shilpa Pal)
2. Siddharth, Durability Studies on Concrete Specimen bonded with waterproofing Membrane, Gautam Budha University, Greater Noida , May 2016 (Along with Dr. Shoba Ram)
3. Lincy Varghese, Experimental Investigation on Structural Properties of Nanosilica Added High Performance Concrete, Academy of Scientific and Innovative Research (AcSIR), CSIR-Central Road Research Institute (CRRI), New Delhi (jointly with Dr. VVLK Rao), 2015
4. N. Sahay, Performance based Seismic Design for Indian Highway Bridges, BIT Mesra, Ranchi. (M.Phil), 2014
5. Vasvi Aggarwal, Development of Fatigue Load Model for Road Bridges, AcSIR, CSIR-CRRI, New Delhi, 2014
6. Ravi Kumar Mahalka, Study on Properties of Water Proofing Membrane for use in bridge decks, Vellore Institute of Technology, Vellore (Jointly with Dr. Mohan Ganesh), 2014
7. Surya M, Experimental studies on structural properties of recycled aggregate concrete, Academy of Scientific and Innovative Research (AcSIR), CSIR-Central Road Research Institute (CRRI), New Delhi (jointly with Dr. VVLK Rao), 2013

8. Reshmi Retnakaran, Seismic Response of Pier-pile foundation of a Multispan elevated Roadway, Manipal Institute of Technology, Manipal(Jointly with Dr.Kiran Kumar Shetty), 2013
9. Dipin Das, Analysis of Anchorage zone stresses in Post-tensioned Girder Bridges, NIT, Suratkal (jointly with Prashant), 2011
- 10.R.Prateek, Effect of over-weight vehicles on RC-T girder Bridges, MIT,Manipal (Jointly with Dr. Kiran Kumar Shetty), 2011
- 11.Vineed M. Varughese, Seismic Effect on Well Foundation of a Bridge MIT, Manipal. (jointly with R.Krishnamoorthy), 2011

PhD. Guidance (in Progress)

1. Lincy Varghese, AcSIR, High Volume Flyash Concrete (Broad Area)
2. Dinesh Kumar, AcSIR, Recycled Aggregate Concrete(Broad Area)
3. 3. N. Sahay, BITS Ranchi, Seismic Design of Bridges (Broad Area)

Organisational Activities

1.	Course coordinator, One Week Training program on Bridge Design and Construction, CSIR-CRRI, New Delhi
2.	Course coordinator, One week Training Program on Distress Diagnostics, Performance Evaluation and Maintenance of Bridges at CSIR-CRRI, New Delhi
3.	Member, Technical Committee, 2 nd International Conference on Durability of Structures New Delhi, December, 2014.
4.	Member, Local Organising Committee, VIIIth Asia Pacific Conference in Wind Engineering, Dec.,2013
5.	Member, Technical Committee, ICI-CPWD symposium on Technology & Equipment for C&D Waste Recycling, New Delhi, Nov 8-9, 2013
6.	Organised a Seminar on Road Construction, By CSIR-CRRI for Engineers of Pune Municipal Corporation at Pune during October, 2013
7.	Member, Organising Committee, <i>fib</i> days, New Delhi
8.	Organised a Workshop on Guidelines for Planning, Design and Construction of Roads in Cyclone Prone Areas for Engineers of Andhra Pradesh, Vishakapatnam, 19, October, 2011

9.	Member, Technical and Publication Committee, 6 th Structural Engineering Convention (SEC-2008), Organised by CSIR-SERC Chennai
10.	Member, Technical Committee, 7 th Structural Engineering Convention (SEC-2010) organized by Annamalai University
11.	Member, Organising Committee, National Conference on "Repair and Rehabilitation of Concrete Structures" held at Noida during May6-7, 2011. (Chaired a Technical Session)
12.	Organised a Workshop on Identification of Thrust & Core R&D Areas in Civil Engineering- Infrastructure Development at CSIR-CRRI, New Delhi for Department of Science & Technology, 2007
13.	Organising Secretary, Workshop on Deep Foundations (Well/Piles) for Bridges-Optimal Solutions", November 29-30, 2006, New Delhi
14.	Course Co-ordinator, One Week Specialist Training Course on "Wind Loads and Wind Resistant Design of Structures" at SERC, Ghaziabad in 1998.
15.	Organising Secretary, Second Seminar on Wind Engineering-Wind Effects on Structures, SERC, Ghaziabad, April 3-4, 1997.
16.	Organising Secretary, National Seminar on Wind Loads-Codal Provisions, Ghaziabad, 6-7, April, 1994.

Invited Lectures Delivered

1.	<ul style="list-style-type: none"> a. Prestressing Techniques b. Bridge Bearings and Expansion Joints, L&T, Leadership Academy, July 19, 2017
2.	Condition Monitoring and Bridge Management System, ING-IABSE Workshop on Inspection, Investigation, Repair & Rehabilitation of Bridges & Flyover Bangalore, Jan20-21, 2017
3.	<ul style="list-style-type: none"> a. Effect of Nanosilica on Microstructure and Structural Properties of concrete b. Strength and Durability Properties of Recycled Aggregate Concrete With FlyAsh, TE QIP Sponsored National Workshop on Sustainable Construction Materials and Technologies (SINCI2016), Aug, 22, 2016, Government College of Technology, Coimbatore.
4.	Distress Diagnostics of Concrete Bridges, National Workshop on Advances in Repair and Rehabilitation of Concrete Structures, 23 rd September 2016, CSIR-CBRI, Roorkee.

5.	Use of C&D Waste Recycled Products in Road Construction, ICI Workshop on Recycling Usage & Management of C&D waste at IIT Chennai, June 21, 2016
6.	Structural Health Monitoring of Concrete Bridges, World of Concrete 2016, Pragati Maidan, New Delhi, May 19, 2016
7.	Evaluation, Testing and Acceptance Criteria for Bridge Expansion Joints and Bearings, ING-IABSE Workshop on "Bridge Bearings, Expansion Joints and Seismic Devices", Bhopal, 15-16, January 2016.
8.	Structural Health Monitoring of Bridge, Highway Research Station on October 5, 2015.
9.	Bridge Condition Survey and Detailed Investigations, ING-IABSE Workshop on "Project Preparation, Repair and Rehabilitation of Bridges at Raipur, Aug 7-8, 2015
10.	Condition Survey of Bridges and Detailed Investigations, ING-IABSE workshop on "Project Preparation, Repair and Rehabilitation of Bridges & Flyover at Lucknow 10-11, June 2015
11.	Non-Destructive Testing of Concrete Bridges, Training for a Team of Highway Engineers from Govt. of Iraq at CSIR-CRRI, New Delhi, 2014
12.	Design and Construction of Cross-Drainage Structures and Small Bridges as per New Specifications for Rural Roads, Workshop on Use of Locally Available Materials for Rural Roads, September 11, 2014 at Gwalior for officials of MPRRDA & STA's.
13.	Bridge Inspection, Condition Survey & Inventory & BMS, Training Program at IAHE, Noida.
14.	Overview of Codes of Practice on New IRC codes of Bridges, Planning and Design of Precast Structures, Short training Program at IAHE Noida.
15.	Use of Flyash in Bridge Construction- Codal Provisions and Experiences, Workshop for Preparation of Road Map for R&D Practices for Use of Flyash in Roads, Embankments, Bridges & Allied Structures.
16.	Planning, Design and Erection of Precast Structures, India- Africa Forum Summit at IAHE, Noida.
17.	Load testing of concrete Bridges, at National Council for Cement and Building

	Materials, Ballabgarh.
18.	Planning, Design and Erection of Precast Bridges, in a Short Course on Modern Trends in Design & Construction of Bridges and Flyovers for Engineers from Bhutan at IAHE, Noida.
19.	Planning, Design and Execution of Cross-Drainage Structures, Customized Training Programmes on “Design and Construction and maintenance of Flexible and Rigid pavement for rural roads” for Engineers of HSMB, Haryana, at CSIR-CRRI, New Delhi.
20.	Planning, Design and Execution of Cross-Drainage Structures, Customized Training programmes on “Project Preparation, SBD, Quality Assurance and Maintenance of Rural Roads” for field engineers of PMGSY at CSIR-CRRI, New Delhi
21.	(I)Design of Superstructure for Bridges & Flyovers, (ii)Seismic Design Provisions (iii) (c)Design Consideration of Bridge Accessories, Training Program organised by NITHE, Noida
22.	Design of Bridges and Culverts, in a Training program for Engineers at National Power Training Institute, New Delhi.
23.	Load Combination and load factors for Limit State Design of Bridges and Specifications for Bearings and Expansion Joints, in a short course on Guidelines and Codes of Practice for Design and Construction of Bridges and Elevated Structures at NITHE, Noida.
24.	Bridge Information System, in a short training program on GIS Application in Planning & Management of Rural Road Network at CSIR-CRRI, New Delhi.
25.	Analysis and Design of Bridges, Foundation Course for Highway Engineers, IRCON International, Gurgaon.
26.	Rating of Railway Bridges, Bridge Diagnostics, Performance Evaluation and Rehabilitation, CRRI.
27.	Retrofitting and Rehabilitation of Bridges, Short Course on Vulnerability Reduction of Buildings and Bridge Structures, CIDC, New Delhi.
28.	Loads and Stresses for Highway Bridge Design in India, Training Programme of Highway Engineers of IRCON at IRCON Training Centre, Gurgaon.
29.	Bridge Bearings-Inspection and Rehabilitation, Training Course on Bridge Inspection, Rehabilitation and Maintenance Management System, CRRI, New

	Delhi
30.	Experimental Techniques and Retrofitting of Long Span Bridges to Wind, Training Program on Bridge Inspection, Rehabilitation and Maintenance Management System, CRRI, New Delhi.
31.	Bridge Bearing- Inspection and Rehabilitation in the Training Programme on Bridge Inspection, Rehabilitation and Maintenance Management organized by NITHE, Noida

Courses Taught in M.Tech and Ph.D Program

1. Bridge & Tunnel Engineering
2. Bridge Management
3. Disaster Resistant Road System