

RESUME

PERSONAL DETAILS:

Name : **Binod Kumar**
Designation : Pr. Scientist
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Central Road Research Institute (CRRI)
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AREAS OF INTEREST:

1. Design, construction, evaluation and maintenance of cement concrete pavements, roller compacted concrete pavements and Interconnected Concrete Block Pavements.
2. Cement Concrete Material – High volume fly ash concrete, high performance concrete, utilization of waste and marginal materials in cement concrete.

EDUCATIONAL QUALIFICATION:

3. Master of Engineering (M.E.) in Hill Area Development Engineering from Madan Mohan Malviya Engineering College, Gorakhpur, (U.P.), India
4. Bachelor of Engineering (B.E.) in Civil Engineering from Madan Mohan Malviya Engineering College, Gorakhpur, (U.P.), India

PROFESSIONAL EXPERIENCE:

Organization	Designation	Duration
Central Road Research Institute (CRRI), New Delhi, India	Pr. Scientist	July, 2011 to till date
	Sr. Scientist	July, 2007 to July, 2011
	Scientist - C	July, 2002 to July, 2007
	Scientist - B	July, 1997 to July 2002

MEMBERSHIP OF PROFESSIONAL BODIES:

- Member of “**Concrete Materials and Placement Techniques**”, Transportation Research Board, Washington D.C., USA.
- Member of “**Rigid Pavement Committee (H-3)**”, Indian Roads Congress, New Delhi.
- Member of “**Composite Pavement Committee (H-9)**”, Indian Roads Congress, New Delhi.
- Member of “**Panel for Aggregates from other than Natural Sources – CED 2/P3**”, Bureau of Indian Standards (BIS), New Delhi.
- Member of “**Sieves, Sieving and other Sizing Methods Sectional Committee CED 55**”, Bureau of Indian Standards (BIS), New Delhi.

ACHIEVEMENTS:

RESEARCH PROJECTS:-

- Usage of High Performance Concrete for Pavements and Bridges Produced with Indigenously available Materials (SSP) – Sponsored by Ministry of Road Transport and Highways (MoRTH) – Team Member.
- Evaluation of Properties of High Volume Flyash Concrete for Pavements – A project under CSIR Sponsored Network Project COR 0013 (10th Plan) – Project Leader.
- Studies on Performance Evaluation of Rigid Pavements on High Density Traffic Corridors Using Instrumentation Supported by Laboratory Tests (SSP) - Sponsored by Ministry of Road Transport and Highways (MoRTH) – Project Leader.
- Feasibility Study of Using Imperial Smelting Furnace Slag as Fine Aggregate for Construction of Embankments, Granular Sub-Base, Cement Concrete and Bituminous Layers (SSP) – Sponsored by Hindustan Zinc Limited, Chittorgarh, Rajasthan – Project Leader.
- Feasibility Study on the Use of Copper Slag Wastes in Road and Embankment Construction (SSP) – Sponsored by Sterlite Industries (I) Limited, Tuticorin, Tamilnadu – Team Member.
- Development of Management System for Maintenance Planning and Budgeting of High Speed Road Corridors – CSIR 11th Plan Project – Sub-Module Leader.
- Investigation of Longitudinal Cracking of Slabs in Cement Concrete Highways – In-house Project (OLP 0533) – Project Leader.
- Study of Dry Lean Concrete Mixes with 7 Days Strength of 7 MPa using OPC, PPC, and PSC. – In House Project (OLP 0550) – Project Leader
- Utilization of Waste Materials (Foundary Sand, Jarosite, Jarofix, Soft Aggregates) in PQC and DLC Mixes – CSIR 12th Plan Project - Project Leader

RESEARCH PAPERS IN JOURNALS:-

- Binod Kumar, “Whitetopping – Durable and Cost Effective Concrete Overlay on Bituminous Roads,” *Traffic Infratech*, Vol. 5, Issue 5, April – May , 2015.
- Binod Kumar, “Properties of Pavement Quality Concrete and Dry Lean Concrete with Copper Slag as Fine Aggregate”, *International Journal of Pavement Engineering*, Taylor & Francis, Vol. 14, No. 8, pp. 746-751, 2013.
- Binod Kumar, Renu Mathur, & S. Gangopadhyay “Rigid Pavement Response to Environmental and Traffic Loading Investigated through Instrumentation”, *IRC Highway Research Journal*, July – December, Vol. 5 No.2, 2012.

- Binod Kumar, G. K. Tike, Dr. P. K. Nanda, “Evaluation of Properties of High-Volume Fly-Ash Concrete for Pavements”, *Journal of Materials in Civil Engineering*, American Society of Civil Engineers, Vol. 19, No.10, pp. 906-911, October, 2007.
- U.K. Guruvittal, Farhat Azad, J. Ganesh, Binod Kumar, Sudhir Mathur, “A Laboratory Study of Construction and Demolition Waste for Use in Road Works”, *Highway Research Journal (IRC)*, Vol. 5, No. 1, pp. 57-63.
- Binod Kumar, Dr. S. D. Sharma, Dr. Renu Mathur, “Distresses in Concrete Pavement: A case Study of Delhi-Mathura National Highway”, *Indian Highways*, Indian Roads Congress, Vol. 39, No.10, Oct., 2011.
- Binod Kumar, Dr. V. K. Sood, Dr. Sunil Bose, "Effect of Non-linear Temperature Gradient on Maximum Temperature Stresses in Rigid Pavements", *Indian Concrete Journal*, September, 2004.

RESEARCH PAPERS IN CONFERENCES:-

- Binod Kumar and J. B. Sengupta, “Utilization of Copper Slag as Fine Aggregate in Pavement Quality Concrete and Dry Lean Concrete” Proceedings of 14th NCB International Seminar on Cement and Building Materials, 01-04 December, 2015, New Delhi.
- Binod Kumar, “Continuously Reinforced Concrete Pavements”, Souvenir, 75th Annual Session of Indian Roads Congress, 18-22 January, 2015, Bhubneshwar.
- Binod Kumar, “Measured Curling Stresses Compared with Theoretical Stresses in Jointed Plain Concrete Pavements”, Proceedings of 91st Annual Meeting of Transportation Research Board, TRB, 22-26 January, 2012, Washington D. C.
- Binod Kumar & J. B. Sengupta, “Premature Distresses on Indian Concrete Highways”, Proceedings of conference on Recent Trends in Highway Development, Indian Roads Congress, India Habitat Centre, 10-11 October, 2012, New Delhi.
- Binod Kumar, “Causes and Repair Techniques for Distresses in Concrete Pavements”, Proceedings of National Conference on Repair and Rehabilitation of Concrete Structures, Indian Concrete Institute, 6-7 May, 2011, Noida.
- Binod Kumar and Renu Mathur, “High Volume Fly Ash Concrete Pavements”, Proceedings of National Conference on Fly Ash: Conservation of Environment and Bulk Utilization, Centre for Fly Ash Research & Management, 5-7 December, 2011, Hyderabad.
- Dr. P. K. Nanda, Devesh Tiwari, Binod Kumar, “Non Destructive tests on Pavements”, Proceedings of International Seminar on NDT, 27-28 January, 2006, Mumbai.
- Binod Kumar, Dr. Saroj Gupta, Dr. V. K. Sood, "Restoration Techniques for Distressed Concrete Pavement", Proceeding of IRC Seminar on Design Construction And Maintenance of Cement Concrete Pavements, 8-10 October, 2003, Vigyan Bhawan, New Delhi.

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- Binod Kumar, Dr. Renu Mathur, "Premature Distresses in Concrete Pavements: Causes and Repair", Proceedings of All India Seminar on Highways Development: Design, Construction, Operation and Repairs, 16-17 November, 2008, Lucknow.
 - Dr. P. K. Jain, Surender Mohan, Binod Kumar, "Maintenance of Polished Concrete Pavements by Microsurfacing", Proceeding of IRC Seminar on Design Construction And Maintenance of Cement Concrete Pavements, 8-10 October, 2003, Vigyan Bhawan, New Delhi.
 - Binod Kumar, J. B. Sengupta, "Causes and Repair of Distresses in Concrete Pavements", Proceedings of Seminar on "Cement Concrete Roads and White Topping", 24th August, 2012, CRRI, New Delhi.