

# Curriculum Vitae



**Name** Dr. HUIDROM LOKESHWOR SINGH

**Post/Designation** SENIOR TECHNICAL OFFICER

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**Nationality** Indian

**Date of Birth** 01-08-1980

**Date of Joining in CRRI** 28-01-2005

## **Educational Qualification**

Sl.No.	Degree	Subject	Division	Year	University
1.	Ph.D	Road Video Image Processing		2013	IIT-Delhi, New Delhi
2.	M.Sc.	Electronics	1 <sup>st</sup>	2002	J.M.I, New Delhi
3.	B.Sc.	Instrumentation	1 <sup>st</sup>	2000	J.M.I, New Delhi
4.	10+2	P,C,M,B,E	1 <sup>st</sup>	1997	JNVK, CBSE, All India
5.	10	E,H,M,Sc,SST	1 <sup>st</sup>	1995	JNVK, CBSE, All India

**Field of Interest** System Integration / Intelligent Transportation Systems / Traffic Survey & Management / Infrastructure Asset Survey & Management / Road Safety Systems

## **About CSIR-Central Road Research Institute**

Central Road Research Institute (CRRI), a premier national laboratory established in 1952, a constituent of Council of Scientific and Industrial Research (CSIR) is engaged in carrying out research and development projects on design, construction and maintenance of roads and runways, traffic and transportation planning of mega and medium cities, management of roads in different terrains, improvement of marginal materials, utilization of industrial waste in road construction, landslide control, ground improvements environmental pollution, road traffic safety and analysis & design, wind, fatigue, corrosion studies, performance monitoring/evaluation, service life assessment and rehabilitation of highway & railway bridges. The institute provides technical and consultancy services to various user organizations in India and abroad. For capacity building of human resources in the area of highway engineering to undertake and execute roads and runway projects, the institute has the competence to organize National & International Training Programmes continuing education courses since 1962 to disseminate the R&D finding to the masses.

Please visit website <http://www.crridom.gov.in/> for more details of CSIR-CRRI

## ***Employment***

SI.	Employer	Post held	Period of From	Employment To
1.	CSIR-CRRI	Senior Technical Officer	Jan 2015	Till Date
2.	CSIR-CRRI	Technical Officer	Jan 2012	Dec 2014
3.	CSIR-CRRI	Technical Assistant	Jan 2005	Dec 2011
4.	Agaram Industries	Service Engineer	Mar 2004	Dec 2004

## ***Contribution/Work Experiences***

1. Designed and developed automated systems for health monitoring of Indian civil infrastructure
2. Completed extensive R&D and consultancy / technical services projects for the Ministry and Industry have been completed successfully. (Total 31 Nos.)
3. Possess vast experience in design, installation and commissioning of equipments / facilities for both academic and industry applications ranging from analytical instruments to road survey vehicles
4. Learned extensive engineering course works related to Instrumentation, Electronics, Computers, Electrical, Civil Engineering and Industrial Design (More than 55 Subjects / Courses).
5. Published papers in refereed journals (6 Nos.), conferences (8 Nos.). (14 Numbers)
6. Reviewed various manuscripts for publications in International Conferences / Journals

## ***Recognition / Awards***

1. Qualified for Rashtriya Indian Military College (RIMC) Dehradun, 1993 August Term
2. Awarded CSIR-CRRI Young Technical Officer of the Year, 2011-2012

## ***Title of PhD Thesis***

The title of Ph.D thesis submitted to Instrument Design Development Centre of IIT-Delhi in November, 2012 is "An Improved Method for Automated Evaluation of Critical Road Surface Distresses using Video Image Based Techniques".

## ***Workshops / Conferences Attended***

1. International Conference on "Safe Riding Initiative", 12-13 April 2018, CRRI, New Delhi, India
2. National IPR Conference on "Expanding IP Ecosystem in Industry", 27 April 2017, New Delhi, India
3. National Workshop on "Establishing a research network on vehicular emission reduction", 17 Feb 2017, CRRI, Delhi, India
4. National Conference on Fifteen Years of PMGSY (FYPMGSY), 6-7, August 2016 IIT-Roorkee, India
5. 74<sup>th</sup> Annual Session of Indian Roads Congress, Ministry of Road Transport and Highways, 18<sup>th</sup> -22<sup>nd</sup> January 2014 at Guwahati, India
6. International Conference on "Sustainable Innovative Techniques in Civil and Environmental Engineering (SITCEE – 2014)", Krishi Sanskriti, India 4<sup>th</sup> -5<sup>th</sup> January 2014 at New Delhi, India
7. 2<sup>nd</sup> Conference of the Transportation Research Group of India (2<sup>nd</sup> CTRG), Transportation Research Group of India, 12<sup>th</sup> -15<sup>th</sup> December 2013 at Agra, India
8. Conference on Road and Transportation Technologies for North-East Region (CORTNE 2013), 22<sup>nd</sup> -24<sup>th</sup> February 2013 at Guwahati, India
9. Seminar on Recent Trends in Highway Development, Indian Roads Congress, Ministry of Road Transport and Highways, 10<sup>th</sup> -11<sup>th</sup> October 2012 at Delhi, India
10. 3<sup>rd</sup> International Conference on Pattern Recognition and Machine Intelligence (PREMI 2009), 15<sup>th</sup> -18<sup>th</sup> December 2009 at IIT Delhi, India

11. 12<sup>th</sup> International Conference on Rough Sets, Fuzzy Sets, Data Mining & Granular Computing (RSFDGrC'09), 15<sup>th</sup> -18<sup>th</sup> December 2009 at IIT Delhi, India
12. Indo-US Workshop on Designing Sustainable Products, Services and Manufacturing Systems, 18<sup>th</sup> -20<sup>th</sup> August 2009 at IISc Bangalore, India
13. International Conference on Research into Design (ICoRD'09), 7-9 January 2009 at IISc Bangalore, India
14. DST-Royal Society (UK) Workshop on National Geotechnical Centrifuge Facility, March 16-18, 2006 at IIT-Mumbai, India

### ***Consultancy / Technical Services Projects Undertaken***

- 1. Project: Calibration of ROMDAS make Bump Integrator using Dipstick**  
 Client: M/s SAI Consulting Services Ltd, Gujarat and M/s ICT Pvt. Ltd., Delhi  
 Amount: Rs.2,02,248/=  
 Role: Project Leader / Principal Investigator
- 2. Project: Calibration of VEC make Automatic Road Unevenness Recorder (ARUR) using Dipstick**  
 Client: M/s Ved Engineering Co. Ltd, New Delhi  
 Amount: Rs. 15, 16,860/= for fifteen numbers of ARURs  
 Role: Project Leader / Principal Investigator
- 3. Project: Calibration of STECO make Automatic Road Unevenness Recorder (ARUR) using Dipstick**  
 Client: M/s Scientific & Technological Equipment Corporation Ltd, New Delhi  
 Amount: Rs. 20, 22,480/= for twenty numbers of ARURs  
 Role: Project Leader / Principal Investigator
- 4. Project: Technical Feasibility Study of the Proposed U-Turn Provision on the Delhi-Noida Flyway at the Delhi Border merging with Inner Ring Road**  
 Client: DND Flyway Noida Toll Bridge Company Limited (NTBC), New Delhi  
 Role: Project Member
- 5. Project: Evaluation of Retro-reflective Sheets of White Colour of Type IX**  
 Client: PWD, CRM, New Delhi  
 Amount: Rs.4,49,440/-  
 Role: Project Member
- 6. Project: Consultancy Services for Developing Thematic GIS Database for Integrating Road Management System of Road Construction Department**  
 Client: RCD, Govt. of Bihar  
 Amount: Rs.1,25,00000/-  
 Role: Project Member
- 7. Project: Third Party Inspection Quality Assurance for Comprehensive Development of Corridor (Outer Ring Road) between Madhuban Chowk to Mukarba Chowk New Delhi (CNP-1918)**  
 Client: PWD, Govt. of Delhi NCT  
 Amount: Rs.1,48,00000/-  
 Role: Project Member

### ***R&D / Sponsored Projects Undertaken***

- 1. Title: Development of GIS based National Highways Information System (SSP-4444)**  
 Client: Ministry of Road Transport and National Highways, Govt. of India  
 Amount: Rs. 10 crores  
 Investigators: CSIR-CRRI  
 Role: Member (Implementation and maintenance of ARRB Hawkeye Roads Survey Vehicle, Field Data Collection & Analysis for many highways on the capacity of Team Leader)
- 2. Title: Design & Development and Installations of Instrumentation for Detection and Early Warning of Landslides (COR-0007)**  
 Client: CSIR Planning Commission, India

- Investigators: CSIR-CRRI  
 Role : Member (Laboratory investigations of artificial rainfall induced landslides through Instrumentation)
- 3. Title: Automated Measurement of Deflection Basin under Truck Dual Tyres Assembly (COR13D2)**  
 Client: CSIR Planning Commission, India  
 Investigators: CSIR-CRRI  
 Role: Member (Development and implementation of an automated system for measuring deflection basin)
- 4. Title: Intelligent Remote Health Monitoring for Bridge System (GAP-4539)**  
 Client: Department of Science Technology, Govt. of India  
 Amount: Rs 84 lakhs  
 Investigator: Dr. R.K. Garg (jointly with CSIR-SERC)  
 Role: Member (Development of a system for automated measurement of vehicle axle loads on bridges)
- 5. Title: Automated Detection and Analysis of Road User Information and Distresses using Digital Image Processing Techniques (OLP-526)**  
 Client: CSIR-CRRI  
 Amount: Rs. 7.5 lakhs  
 Role: Project Leader / Principal Investigator

## PUBLICATIONS

### *In Refereed Journals*

1. *Title: Automated detection and measurement of potholes from road surface video clips*  
 Author: Huidrom Lokeshwor, L.K. Das, S.K. Sud  
 Journal: Journal of Highways Research, Vol. 5(2), July-December 2012, pp.9-18.
2. *Title: Automated detection and measurement of cracks from monochrome video clips captured by a Road Network Survey Vehicle*  
 Author: Huidrom Lokeshwor, L.K.Das, S.K. Sud  
 Journal: Indian Highways Journal, Vol. 41(1), January 2013, pp.91-103.
3. *Title: An automated system for measuring pavement deflection basin parameters under dual tyres assembly of a vehicle*  
 Author: Huidrom Lokeshwor, G.K. Vij, D.C. Sharma  
 Journal: Indian Highways Journal, Vol. 41(71), July 2013, pp.11-16.
4. *Title: Robust method for automated segmentation of frames with/without distresses from road surface video clips*  
 Author: Huidrom Lokeshwor, L.K. Das, Savita Goel  
 Journal: ASCE Journal of Transportation Engineering, Vol. 140(1), January 2014, pp. 31–41
5. *Title: A portable low-cost system framework for automated road distress assessment*  
 Author: Huidrom Lokeshwor, L.K. Das, Namita Akoijam  
 Journal: Indian Highways Journal, Vol. 42(6), June 2014, pp.43-55.
6. *Title: Method for automated assessment of potholes, cracks and patches from road surface video clips*  
 Author: Huidrom Lokeshwor, L.K. Das, S.K. Sud  
 Journal: Social and Behavioral Sciences, Elsevier, Vol.104, 2 December 2013, Pages 312–321

### *In Conference / Seminar / Newspaper*

7. *Title: Automated road distress data collection and analysis using videography*  
 Author: Huidrom Lokeshwor, L.K. Das, S.K. Sud  
 Seminar: Seminar on Recent Trends in Highway Development, Indian Roads Congress, Ministry of Road

- Transport and Highways, India  
 Year: 10<sup>th</sup> -11<sup>th</sup> October 2012
8. *Title: Towards automated road distress assessment: A low-cost solution for north-east region of India*  
 Author: Huidrom Lokeshwor Singh  
 Conference: Conference on Road and Transportation Technologies for North-East Region (CORTNE 2013), India  
 Year: 22<sup>nd</sup> -24<sup>th</sup> February 2013 (presented)
9. *Title: Automated Detection of Potholes, Cracks and Patches using Imaging Systems: A sustainable approach*  
 Author: Huidrom Lokeshwor Singh  
 Conference: International Conference On "Sustainable Innovative Techniques in Civil and Environmental Engineering (SITCEE – 2014)", Krishi Sanskriti, India  
 Year: 4<sup>th</sup> -5<sup>th</sup> January 2014 (presented)
10. *Title: Automated detection and measurement of pavement distresses using imaging systems*  
 Author: Huidrom Lokeshwor Singh  
 Conference: 74<sup>th</sup> Annual Session of Indian Roads Congress, Ministry of Road Transport and Highways, India  
 Year: 18<sup>th</sup> -22<sup>nd</sup> January 2014 (presented)
11. *Title: Review and Analysis of Digital Image Processing Methods in Pavement Distress Assessment*  
 Author: Huidrom Lokeshwor, L.K.Das, D.C. Sharma, Namita Akoijam  
 Conference: International Conference on Emerging Trends in Science and Engineering research (ETSER-2015), NIT-Manipur, India  
 Year: 2-4, December 2015 (presented)
12. *Title: An approach towards automated determination of pavement condition index (PCI) using videography*  
 Author: Huidrom Lokeshwor Singh  
 Conference: A National Conference on Fifteen Years of PMGSY (FYPMGSY), IIT-Roorkee, India  
 Year: 6-7, August 2016 (presented)
13. *Title: An approach towards automated estimation of pavement condition index (PCI) for PMGSY roads*  
 Author: Huidrom Lokeshwor, L.K. Das, Namita Akoijam  
 Conference: International Road Federation (IRF) World Road Meeting 2017, Delhi NCR, India  
 Year: 14-17, November 2017
14. *Title: Improved Relation for Calibration of Fifth Wheel Bump Integrator in Indian conditions*  
 Author: Lalita Jangpangi, Huidrom Lokeshwor, Y.C. Tiwari  
 Conference: International Road Federation (IRF) World Road Meeting 2017, Delhi NCR, India  
 Year: 14-17, November 2017
15. *Title: PMGSY road asset inventory and condition data assessment using a portable low-cost video imaging based system*  
 Author: Namita Akoijam, L.K. Das, Huidrom Lokeshwor  
 Conference: International Road Federation (IRF) World Road Meeting 2017, Delhi NCR, India  
 Year: 14-17, November 2017
16. *Title: Development of computerized / centralized road database for Manipur state*  
 Author: Huidrom Lokeshwor  
 Newspaper: The Sangai Express ( <http://epaper.thesangaiexpress.com/wp-content/uploads/2018/09/TSE-EE-6-9-2018-P-4.pdf> ) & The Imphal Free Press (<https://www.ifp.co.in/page/items/52377/development-of-computerised-centralised-road-database-for-manipur-state>)  
 Year: 06<sup>th</sup> & 28<sup>th</sup> September 2018

***It is certified that the above particulars submitted are true to the best of my knowledge and belief.***

**(Dr. H. Lokeshwor Singh)**

**Date: 07-02-2019**