

Curriculum Vitae



Name Dr. HUIDROM LOKESHWOR SINGH

Post/Designation SENIOR TECHNICAL OFFICER (2)

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CSIR-CENTRAL ROAD RESEARCH INSTITUTE (CRRI),
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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 st | 2002 | J.M.I, New Delhi |
| 3. | B.Sc. | Instrumentation | 1 st | 2000 | J.M.I, New Delhi |
| 4. | 10+2 | P,C,M,B,E | 1 st | 1997 | JNVK, CBSE, All India |
| 5. | 10 | E,H,M,Sc,SST | 1 st | 1995 | JNVK, CBSE, All India |

Field of Interest Science Communication / System Integration / Intelligent Transportation Systems / Road & Traffic Surveys and Asset Management / Digital Image Processing

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 (2) | Jan 2020 | Till Date |
| 2. | CSIR-CRRI | Senior Technical Officer (1) | Jan 2015 | Dec 2020 |
| 3. | CSIR-CRRI | Technical Officer | Jan 2012 | Dec 2014 |
| 4. | CSIR-CRRI | Technical Assistant | Jan 2005 | Dec 2011 |
| 5. | 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 has been completed successfully. (Total 31 Nos.)
3. Possess vast experience in design, installation and commissioning of equipment for both academic and industry applications ranging from Analytical instruments to Network Survey Vehicles (NSV)
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 Outstanding 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. 74th Annual Session of Indian Roads Congress, Ministry of Road Transport and Highways, 18th -22nd January 2014 at Guwahati, India
6. International Conference on "Sustainable Innovative Techniques in Civil and Environmental Engineering (SITCEE – 2014)", Krishi Sanskriti, India 4th -5th January 2014 at New Delhi, India
7. 2nd Conference of the Transportation Research Group of India (2nd CTRG), Transportation Research Group of India, 12th -15th December 2013 at Agra, India
8. Conference on Road and Transportation Technologies for North-East Region (CORTNE 2013), 22nd -24th February 2013 at Guwahati, India
9. Seminar on Recent Trends in Highway Development, Indian Roads Congress, Ministry of Road Transport and Highways, 10th -11th October 2012 at Delhi, India
10. 3rd International Conference on Pattern Recognition and Machine Intelligence (PRMI 2009), 15th -18th December

- 2009 at IIT Delhi, India
11. 12th International Conference on Rough Sets, Fuzzy Sets, Data Mining & Granular Computing (RSFDGrC'09), 15th -18th December 2009 at IIT Delhi, India
 12. Indo-US Workshop on Designing Sustainable Products, Services and Manufacturing Systems, 18th -20th 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
 15. International conference on "Pavements and Computational Approaches (ICOPAC) 2018, 16th -17th November , 2018 at CSIR-CRRI, New Delhi
 16. 79th Annual IRC Session, 22th-25th November 2018 at Nagpur

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
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
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
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
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
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**
Client: PWD, Govt. of Delhi NCT
Role: Project Member
- 8. Project: Customized Training Programs conducted by CSIR-CRRI**
Client: NRIDA and various State PWDs
Role: Project / Faculty Member
- 9. Project: Regular Training Programs conducted by CSIR-CRRI**
Client: NRIDA and various State PWDs
Role: Project / Faculty 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

- 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
 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
 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: 10th -11th 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: 22nd -24th 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: 4th -5th January 2014 (presented)
10. *Title:* Automated detection and measurement of pavement distresses using imaging systems
Author: Huidrom Lokeshwor Singh
Conference: 74th Annual Session of Indian Roads Congress, Ministry of Road Transport and Highways, India
Year: 18th -22nd 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: 06th & 28th 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: 28-08-2020