RESUME

1. **Name** : **Dr. Anil Kumar Sinha**
2. **Qualifications** : B.E. (Civil Engg.), M.Tech (Geotech.)
   Ph.D (Geotech.)
3. **Post/Address** : HoD and Senior Principal Scientist,
   GE Division, CSIR-CRRI, New Delhi
4. **Mobile No.** : 9968099428
5. **E-mail** : sinha.crri@nic.in
6. **Employment details** :

Sl. No.	Post	From	To	Institute
1	Research Fellow	1994	1995	IIT, Roorkee
2	JRF/SRF	1997	1999	CSIR-CBRI, Roorkee
3	Scientist B	1999	2006	CSIR-CRRI, New Delhi
4	Scientist C	2006	2010	CSIR-CRRI, New Delhi
5	Senior Scientist	2010	2014	CSIR-CRRI, New Delhi
6	Principal Scientist	2014	2019	CSIR-CRRI, New Delhi
7	Senior Principal Scientist	2019	Till date	CSIR-CRRI, New Delhi

7. **Areas of Specialization** :
   - Waste materials (Fly ash, cinder, Ground granulated blast furnace slag, copper slag, steel slag, zinc slag, tailing, jarofix, jarosite, red mud, phosphogypsum, biomass, kimberlite, C & D waste, MSW etc.) for embankment and pavement layers.
   - Ground improvement and soil stabilization with new stabilizers (Cement, Lime, RBI, Renolith, Fs emulsion, Geocrete, Novo Crete, Nano technology etc.)
   - Landslide investigation and mitigation measures.
   - Soil investigation, embankment, RE wall failure, and instrumentation.
   - Pavement performance.

8. **Faculty of AcSIR:** Advance Geotechnical Engineering and Training programs of CSIR-CRRI

9. **Patents:** Development of Electro-mechanical field density gauge. (Granted 21/10/2021)

10. Awards/Certificates received

I. **International Green Apple Environment Award (2024), London, UK**

Project - Recycle of Jarofix Waste Material for Sustainable Road Construction

II. **CII National Award for Environmental Best Practices (2024)**

Most Innovative Environmental Project – Bulk Recycling of Jarofix Waste Material for Road Construction.

III. **IGS-Forensic Geotechnical Engineering award (2023)**

Best project- Failure Analysis and Design of Remedial Measures for Beach Road, Kerala

IV. **CIDC Vishwakarma Award (2023)** Chairman commendation Trophy

Title of Project- Design, Construction and Performance Study of Phosphogypsum Experimental Road at Paradeep, Odisha.

V. **IGS Delhi Chapter Leadership Award (2020)**

Excellence in Geotechnical Engineering.

VI. **IRC Medal Award (2018)** The Best Paper Award

For Publication of Research Paper entitled- Municipal solid waste in road embankment construction - a case study. Journal of Indian Road Congress, Vol. 78(2), pp 79-90.

VII. **SKOCH Order of Merit Award (2018)** Achievement award for the best project

Title of Project- Copper Slag Solid Waste material for Road Construction

VIII. **CIDC Vishwakarma Award (2018)** Achievement award for Scientist

IX. **CIDC Vishwakarma Award (2018)** Achievement award for the best project

Title of Project- Jarofix Waste Material for Road Construction from Zinc Industry.

X. **SKOCH Order of Merit Award (2017)** Technologies for Growth

Title of Project- Jarofix Solid Waste Material from Zinc Industry for Road Construction - A Case Study.

XI. **SKOCH Order of Merit Award (2016)** Achievement award for the best project

Title of Project- Development and Application of Technologies for Sustainable Transportation (SUSTRANS).

XII. **IRC Commendation Certificate (2015)** Research Paper

For Publication of Research Paper entitled- Characterization of Jarofix waste material for the construction of road. Journal of Highway Research Board, Indian Road Congress, Vol. 6 (2), pp 35-43.

XIII. **IRC Commendation Certificate (2015)** Research Paper

For Publication of Research Paper entitled- Probable Causes and Corrective Measures of Landslides on Aizwal-Lunglei Road (NH - 54), Mizoram. Journal of Highway Research Board, Indian Road Congress, Vol. 6 (2), pp 44-51.

11. Book/Code published

I. Design and construction methods of high embankment on soft soil by **A.K.Sinha**, V.G. Havanagi and S. Mathur. Published by CRRI, New Delhi.

II. IRC-SP-132 (2022). Guidelines on use of Industrial wastes for Road embankment and subgrade construction. Published by Indian Roads Congress, New Delhi.

III. QCHRB (2024). Quality Control Handbook for Roads and Bridges Vol. 1 and 2 Roads and Bridges. Published by PWD, Bhopal, Madhya Pradesh.

12. Research Papers (Published)

Journal Papers

1. V G Havanagi, **A.K. Sinha**, A. Kumar and M. Dayana (2024). Segregated Municipal Solid Waste for Embankment and Subgrade Construction. Accepted. Indian Road Congress.
2. **A K Sinha,** V.G Havanagi and G S Parvathi (2024). Recycling of Stabilized Copper Slag Waste for Sustainable Road Embankment Construction: A Pilot Study. Iranian Journal of Science and Technology, Transactions of Civil Engineering. DOI : 10.1007/s40996-024-01622-3.
3. **A K Sinha** and V. G. Havanagi (2024). Recycle of Phosphogypsum Waste Material for Embankment and Subgrade Road Construction. Indian Highways, Indian Road Congress, Vol. 52 (08), 54-62.
4. P Bhatt, **A K Sinha**, Mariya D P J, M Hasan and G S Parvathi (2024). Performance evaluation of zinc tailing waste material for embankment construction: Experimental and numerical investigation. Journal of Mining and Environment (JME), Vol. 15 (4), 1177-1191. https://doi.org/10.22044/jme.2024.13368.2459
5. **A. K. Sinha** and G. D. Vasantrao (2024). Utilisation of red mud as a partial replacement of Cement for rigid pavement. Indian Highway, Indian Road Congress, Vol. 52(6), pp. 49-56.
6. Vasant G. Havanagi, **A. K. Sinha**, A, Kumar and V K Kanaujia (2024). Ground granulated blast

furnace slag as a soil stabilizer for road construction. Indian Highways, Indian Road Congress, Vol. 52 (4), pp 16-27.

7. **A. K. Sinha** and G. D. Vasantrao (2023). Recycle of zinc tailing waste material for rigid pavement concrete mixes. Indian Highway, Indian Road Congress, Vol. 51(8), pp. 34-42.
8. Brajraj Kumar, **A K Singh**, Somesh Kumar Nigam and Sushil Kumar Madan (2023). Cement Stabilized Zinc Tailing Waste Material for Subbase and Base Layers of Pavement. Highway research board, Indian Roads Congress, Vol. 12 (1), pp 26-39.
9. **A.K. Sinha,** V. G. Havanagi and A P Sinha (2023). Characterization of zinc tailing for bituminous road construction. Indian Highways, Indian Road Congress, Vol. 51 (7), pp 28 - 36.
10. Mariya Dayana, Parvathi G. S., and **A K Sinha** (2023). Investigation of Hillslope Failure and Mitigation- A Case Study of Sillewani Ghat, Chhindwara, India. Journal of the Geological Society of India. Vol. 99, pp 621-634. https://doi.org/10.1007/s12594-023-2363-4.
11. **A.K. Sinha,** V. G. Havanagi and J.T. Shahu (2022). Model tests on jarofix embankment subject to strip loading. Journal of Arabian Journal of Geosciences, 15, 1454. https://doi.org/10.1007/s12517-022-10745-8.
12. G.S.Parvathi, **A.K.Sinha,** Vasant G. Havanagi, and Mariya Dayana (2022). Failure analysis and mitigation of Shankumugham beach road, Kerala, India—a case study. Arabian journal of Geosciences, 15:1263. https://doi.org/10.1007/s12517-022-10536-1.
13. Vasant G. Havanagi**, A.K.Sinha** and G.S.Parvathi, (2022). Failure investigation and design of remedial measures for reinforced earth wall - A case study. Indian Highways, Indian Road Congress, Vol. 50 (7), pp 38 - 48.
14. M. Vinoth, **A.K.Sinha,** U.K. Guruvittal and Vasant G.Havanagi (2022). Strength of stabilised waste foundry sand material. Indian geotechnical journal. Vol. 52 (3), 707-719.
15. **A.K.Sinha,** Vasant G. Havanagi, G.S.Parvathi and S Chandra (2022). Geotechnical Characterization of Zinc Tailing Waste Material for Road Construction. Gemechanics and Geoengineering, Vol. 17 (6), 1984-2004.
16. Alok Ranjan and **A K Sinha** (2021). Vibration Isolation with Infilled Trench. Indian Highways, Indian Road Congress, Vol. 49 (12), pp 43-49.

17. **A.K.Sinha,** M. Vinoth, Vasant G.Havanagi and S Chandra (2021). Potential Investigation of Stabilised Fuming Furnace Slag for Road Construction. International Journal of Solid Waste Technology and Management, Vol. 47 (3), 499-512.

18. **A.K. Sinha,** V. G. Havanagi and J.T. Shahu (2021). Stabilised jarofix waste material for road construction. International Journal of Pavement Engineering, Vol.22 (7), 882-893.

19. Suresh Badavath, **A.K. Sinha** and Shrabony Adhikary (2020). Geotechnical characterization of zinc slag waste material for embankment construction. Journal of Indian Roads Congress, Vol.81 (1), pp 12-23.

20. **A K Sinha**, R. Shankar, B. Kumar, and V G Havanagi (2020). Recycling of foundry sand waste material for construction of concrete road. Indian Highways, Indian Road Congress, Vol. 48 (8), pp 24-34.

21. **A.K. Sinha**, G D Vasantrao and V.G. Havanagi (2020). Strength and Performance of Fuming Furnace Slag Concrete for Road Construction. Indian Highways, Indian Road Congress, Vol. 48 (7), pp 9-15.

22. **A K Sinha**, M Vinoth, S Ravi Shanker and V G Havanagi (2020). Characterisation of Foundry Sand Waste Material for Road Construction. Journal of New Building Materials & Construction World (NBM&CW), New Delhi, Vol. 25(9), pp 74 – 85.

23. **A.K.Sinha,** V.G. Havanagi and G.S.Parvathi (2019). Utilisation of waste materials in road construction. Journal of New Building Materials & Construction World (NBM&CW), New Delhi, Vol. 25(3) pp 78-88.

24. **A.K. Sinha,** V. G. Havanagi and J.T. Shahu (2019). Construction and performance of jarofix waste material embankment. Proceedings of the Institution of Civil Engineers – Construction materials. https://doi.org/10.1680/jcoma.18.00003.

25. G.S.Parvathi, **A.K.Sinha** and V.G. Havanagi (2019). Red Mud - Fly Ash Mix as an Embankment Fill Material. Journal of Indian Road Congress, Vol. 47 (3), pp 20-25.

26. G.S.Parvathi, V. G. Havanagi, V K Kanaujia and **A. K. Sinha** (2018). Ground improvement for the construction of road over Soft organic soil: a case study. Journal of the Indian national group of the international association for Bridge and Structural engineering, Vol. 48 (2), pp 70-80.

27. V. G. Havanagi, **A. K. Sinha,** G.S.Parvathi and S. Chandra (2018). Municipal solid waste in road embankment construction - a case study. Journal of Indian Road Congress, Vol. 79(1), paper No.

69, page 64.

28. **A.K. Sinha,** V. G. Havanagi and J.T. Shahu (2018). Characterization of jarofix for usage in geotechnical projects. Proceedings of the Institution of Civil Engineers – Geotechnical Engineering, 171(5), pp 439–450.
29. **A. K. Sinha**, V. G. Havanagi and V.K.Kanaujia (2018). Insitu investigation of cinder mound for building construction - a case study. Journal of New Building Materials & Construction World (NBM&CW), New Delhi, Vol. 23(9) pp 144 – 158.
30. **A.K.Sinha** and V.G. Havanagi (2018). Soil stabilization by liquid based stabilizer. Journal of Highway Research Board, Indian Road Congress, Vol.46 (3), pp 11-22.
31. **A.K.Sinha,** V.G. Havanagi and V.K.Kanaujia (2017). Chrome slag in embankment and pavement construction. Journal of Highway Research Board, Indian Road Congress, Vol.8 (1), pp 45-54.
32. V. G. Havanagi, **A. K. Sinha,** G.S.Parvathi and S. Chandra (2017). Municipal solid waste in road embankment construction - a case study. Journal of Indian Road Congress, Vol. 78(2), pp 79-90.
33. **A. K. Sinha** and V.G.Havanagi (2017). Pavement construction over municipal solid waste dump. Indian Highways, Indian Road Congress, Vol. 45(10), pp 11-20.
34. **A.K. Sinha**, V G. Havanagi, A. Ranjan and S. Das (2017). Cinder Waste Material for the Construction of Bituminous Pavement Layers. International journal of current environmental engineering, Korea, Vol.4(3), pp 221-227.
35. **A. K. Sinha** and V.G.Havanagi (2016). Construction and performance study of cement stabilised road - A case study. Indian Highways, Indian Road Congress, Vol. 44(5), pp 27 - 38.
36. A. Ranjan, R K Swami, **A K Sinha** and K. Singh (2016). Use of liquefiable materials for vibration isolation. STM journal of Geotechnical Engineering, Vol. 3(3), pp 33-36.
37. V.G. Havanagi, **A.K.Sinha** and A. Ranjan. (2015). Fine copper slag as an alternative marginal material for road construction. Indian Highways, Indian Road Congress, Vol. 44(1), pp 25-33.
38. **A.K.Sinha**, V.G. Havanagi, A. Ranjan, S. Mathur and V K Kanaujia (2015). Stabilised cinder waste material for construction of pavement layers. Indian Highways, Indian Road Congress, Vol. 31(3), pp 43 - 49.

39. **A.K.Sinha**, V.G. Havanagi, V. K. Arora, A. Ranjan and S. Mathur. (2013). Characterization of Jarofix waste material for the construction of road. Journal of Highway Research Board, Indian Road Congress, Vol. 6 (2), pp 35-43.

40. Pankaj Gupta**, A.K.Sinha**, V.G. Havanagi and S. Mathur. (2013). Probable Causes and Corrective Measures of Landslides on Aizwal-Lunglei Road (NH - 54), Mizoram. Journal of Highway Research Board, Indian Road Congress, Vol. 6 (2), pp 44-51.

41. **A.K.Sinha,** V.G. Havanagi, A. Ranjan and S. Mathur. (2013). Steel slag waste material for the construction of road. Indian Highways, Indian Road Congress, Vol. 41(10), pp 15-22.

42. V.G. Havanagi, **A.K.Sinha**, V K Kanaujia, A. Ranjan and S. Mathur. (2013) Cinder waste material for the construction of road. Indian Highways, Indian Road Congress, Indian Road Congress, Vol. 41(4), pp 69-72.

43. **A.K. Sinha,** V G. Havanagi, V K Arora and S. Mathur (2012). Design, Construction & Evaluation of Jarofix Embankment and Sub Grade Layers. International Journal of Environment Engineering Research, vol. 1(3) pp 97-103.

44. **A.K.Sinha**, V.G. Havanagi, V.K.Arora, A. Ranjan and S. Mathur. (2012) Recycling Jarofix waste as a construction material for embankment and sub grade. International Journal of Solid Waste Technology and Management, vol. 38(3), pp 169-181.

45. **A.K.Sinha**, V.G. Havanagi, V.K.Arora and S. Mathur (2012). Construction of embankment and sub grade using Jarofix (Zinc ore waste) – A case study. Journal of Civil Engineering and Construction Review (CE&CR), Vol. 25(3), pp 98-103.

46. V. G. Havanagi, **A. K. Sinha,** V. K. Arora and S. Mathur (2012). Design and Stability analysis of copper slag embankment. Indian Highways, Indian Road Congress, Vol. 40(10), pp 17-23.

47. V G. Havanagi, **A.K. Sinha**, V K Arora and S. Mathur (2012). Waste materials for construction of road embankment and pavement layers. International Journal of Environment Engineering Research, vol. 1(2) pp 51-59.

48. V. G. Havanagi, **A. K. Sinha** and S. Mathur (2012). Design and structural evaluation of pond ash embankment. Indian Highways, Indian Road Congress, Vol. 40(7), pp 39-48.

49. V G.Havanagi, **A K Sinha**, P Gupta and S Mathur(2011). Investigation and remedial measures of Hnathial landslide, Mizoram. Journal of National Institute of Disaster Management Vol. 5(2) pp 201-212.

50. V. G. Havanagi, **A. K. Sinha** and Sudhir Mathur (2011). Use of geosynthetic material for reinforced earth wall construction. Journal of New Building Materials & Construction World (NBM&CW), New Delhi, Vol. 17(3) pp 232 – 243.

51. **A.K.Sinha**, V. G. Havanagi and Sudhir Mathur (2010). Powder based inorganic stabiliser for construction of sub-base and base layers of road pavement. Indian Highways, Indian Road Congress, Vol. 39(1) Feb. pp 33-44.

52. **A.K.Sinha**, V. G. Havanagi and Sudhir Mathur (2009). An approach to shorten the construction periods of high embankment on soft ground improved with PVD. Journal of Geotextiles and Geomembrane, Vol. 27(6) Dec. pp 488-492.

53. **A.K.Sinha**, V. G. Havanagi and Sudhir Mathur (2007). Inflection point method for predicting settlement of PVD improved soft clay under embankments. Journal of Geotextiles and Geomembrane, Vol. 25, Dec. pp 336-345.

International / National Conference Proceedings

54. A K Sinha, V G Havanagi, Mariya P J D, Dr Arakshita Majhi, Vaishali Surawar, S K Tripathy and S Acharya (2024). Utilization of Bauxite Residue for Road Construction. 12th International Bauxite, Alumina & Aluminum Conference & Exhibition, Goa, India.

55. Pankaj Bhatt, A. K. Sinha, Mariya Dayana P J and Murtaza Hasan (2024). Strength and Deformation Behaviour of Zinc Tailing Waste Material for Embankment Construction. International Conference on Creative and Innovative Solutions in Civil Engineering, 11 August, MNIT, Jaipur, Rajasthan. IOP Conf. Series: Earth and Environmental Science, IOP Conference Series Earth and Environmental Science 1326(1):012057 DOI: 10.1088/1755-1315/1326/1/012057

56. S. S. Yashmin and **A. K. Sinha** (2024). Utilisation of bauxite residue in road construction: A review and assessment. Innovative Technology in Sustainable Infrastructure Development, Jharkhand Engineering Services Association, Technical Seminar, Ranchi, Jharkhand pp. 9-18.

57. **अनिल कुमार सिन्हा**, वी जी हवानगी एस एस कर, एस पांडे, ये बहल और एम परिडा (2024). संधारणिए सड़क निर्माण के लिए औद्योगिक और नगरपालिका ठोस अपशिष्ट सामग्री का पुनर्चक्रण – सी आर आर आई अनुभव। राष्ट्रिये हिन्दी समेलन, अमृतकाल में राष्ट्रिये वैगयानिक चेतना का उनन्यन, भोपाल मध्य प्रदेश, पेज 24।

58. Syeda Sabina Yashmin and **A K Sinha** (2023). Resilient Modulus of red mud as a subgrade material. Indian Geotechnical Conference, at Roorkee, India.

59. Syeda Sabina Yashmin and **A K Sinha** (2023). Characterization of Red Mud as an Embankment Material for High-Volume Utilizations. International Conference on Creative and Innovative Solutions in Civil Engineering, 11 August, MNIT, Jaipur, Rajasthan.

60. Somesh Kumar Nigam, **A. K. Sinha** and S.K Madan (2023) Characterisation of Stabilized Red Mud Waste Material for Road Infrastructure. Materials Today: Proceedings Elsevier, https://doi.org/10.1016/j.matpr.2023.06.229.

61. आलोक रंजन, **अनिल कुमार सिन्हा** और विजय कुमार कनौजिया (2023). भूमि की तरंगों की प्रकृति. सड़क शोध पत्र संकलन, सीएसआईआर-केंद्रीए सड़क अनुसंधान संस्थान, नई दिल्ली, पेज 28-34.

62. Parvathi G. S., Mariya Dayana, **A.K.Sinha**, and Vasant G. Havanagi (2024), 3-Dimensional Finite Element Analysis of Shankumugham Beach Road Due to Rainfall- Induced Storm Surge. In: Jose, B.T., Sahoo, D.K., Shukla, S.K., Krishna, A.M., Thomas, J., Veena, V. (eds) Proceedings of the Indian Geotechnical Conference 2022 Volume 7. IGC 2022. Lecture Notes in Civil Engineering, vol 491. Springer, Singapore. https://doi.org/10.1007/978-981-97-2700-1_6. Proceedings of the Indian Geotechnical Conference, Kochi, 13-15th December 2022

63. Somesh Kumar Nigam, **A. K. Sinha** and S.K Madan (2022). Stress - Strain Behaviour of Red Mud Waste Material for Road Construction. National conference on structural and geotechnical engineering (NCSGE-2022) 16-16 October, NIT Jamshedpur, Jharkhand.

64. Brajraj kumar, **A K Sinha** and Saraswati Setia (2022). Cement stabilised zinc tailing waste material as subbase and base course in road construction. Proceeding of Indian geotechnical conference, Kochi, 13-15th December.

65. **A K Sinha**, M Vinoth, S. Ravi Shanker, V G Havanagi (2020). Coimbatore Foundry Sand Waste Material for Road Construction. Proceedings of Geoenvironmen, conference on geoenvironment & sustainability, pp 198-206, 17-19th February, Delhi.

66. विजय कुमार कनौवजया, डॉ अनिल कुमार निन्हा और डॉ पी एस प्रसाद (2019). ब्लंकेट समविय ं के वमक्स वडजाइन की जांच और समीछा करना. सड़क दपपण, सीएसआईआर-केंद्रीए सड़क अनुसंधान संस्थान, नई वदल्ली, अंक (18), पेज 11-14.

67. V. G. Havanagi, **A. K. Sinha** and G.S.Parvathi (2018). Characterization of phosphogypsum waste for road construction. Proceeding of Indian geotechnical conference, Bangalore.

68. **A.K.Sinha** and V.G. Havanagi (2018). Jarofix Waste Material in Embankment Construction. International symposium on geotechnics of transportation infrastructure, New Delhi.

69. V. G. Havanagi, **A. K. Sinha,** G.S.Parvathi and S. Chandra (2017). Characterization of municipal solid wastes for road embankment construction. National conference on New Technology for Road Construction, Lucknow, India, pp 64-78.

70. **A.K.Sinha** and V.G.Havanagi (2015). Carrier oriented pedagogy of geotechnical education. Proceeding of Indian geotechnical conference, Pune.

71. **A.K.Sinha**, V.G.Havanagi and V. K. Arora (2015). Stress – strain behaviour of stabilised jarofix waste material. Proceeding of Indian geotechnical conference, Pune.

72. **A.K.Sinha** and V.G.Havanagi and K. Kumar (2015). Causes and remedial measures of malin landslide, Maharastra. Proceeding of Indian geotechnical conference, Pune.

73. V.K.Kanaujia, **A.K.Sinha**, V.G. Havanagi and U.K.Guruvittal (2015). Investigation and stability analysis of embankment bund. Proceeding of Indian geotechnical conference, Pune.

74. **A.K.Sinha**, Vasant G Havanagi and U K Guruvittal (2015). Instrumentation and monitoring of embankment on soft soil. Proceeding of national symposium on advances in instrumentation, geo monitoring and validation, July, organised by Central board of irrigation and power, New Delhi.

75. आलोक रंजन, **अनिल कुमार सिन्हा** और पाणिग्रही (2015). सापेझवाद का सिद्धांत. सड़क दर्पण, सीएसआईआर-केंद्रीए सड़क अनुसंधान संस्थान, नई दिल्ली, अंक (12), पेज 33-35.

76. **A.K.Sinha**, V.G.Havanagi, P. S. Prasad and K. Kumar (2014). Stabilisation of tunnel muck yard at Jammu & Kashmir rail link. Proceeding of Indian geotechnical conference, Kakinada, pp 2033 - 2037.

77. **A.K.Sinha**, V.G.Havanagi and V. K. Arora (2014). Experimental study of jarofix embankment model. Proceeding of Indian geotechnical conference, Kakinada, pp 1469-1474.

78. V. K. Kanaujia, **A.K.Sinha**, P. S. Prasad and V.G.Havanagi (2014). Design of capillary cutoff for rural road. Proceeding of Indian geotechnical conference, Kakinada, pp 1155 - 1158.

79. V.K.Arora, V.G. Havanagi and **A. K. Sinha** (2013). Characterisation of copper slag and jarofix waste materials for road construction. Proceeding of international conference on world academy

of science and technology. International science index issue 84, Melbourne, Australia, pp 1353-1358.

80. **A.K.Sinha**, V.G.Havanagi, and S. Mathur (2013). Construction of Cement Stabilized Road at Amritsar. Proceeding of Indian geotechnical conference, Roorkee, pp 1-5.

81. **A.K.Sinha**, V.G.Havanagi, A Ranjan, S. Mathur and B K Singh (2013). Characterization of Jarosite Waste Material for Road Construction. Proceeding of Indian geotechnical conference, Roorkee, pp 1-4.

82. V G Havanagi, **A K Sinha**, U K Guruvittal, S Mathur (2013). Utilization of Fly Ash for Road Construction-CRRI Experiences. Proceeding of national seminar on Utilisation of Fly Ash in Geotechnical Structures, Bhubaneswar, Odisha, pp 85-103.

83. **A.K.Sinha**, V.G.Havanagi, A Ranjan and S. Mathur (2012). Steel slag waste material used in the construction of embankment and sub grade. Proceeding of Indian geotechnical conference, New Delhi, Vol.2, pp 874-877

84. V.G.Havanagi, **A.K.Sinha**, A Ranjan and S. Mathur (2012). Characterisation of super fine copper slag for construction of embankment. Proceeding of Indian geotechnical conference, New Delhi, Vol.2, pp 878-881.

85. V.K.Kanaujia, V.G.Havanagi, **A.K.Sinha** and S. Mathur (2012). Design of capillary cutoff using locally available granular materials. Proceeding of Indian geotechnical conference, New Delhi, Vol.1, pp 416-419.

86. V.G. Havanagi, **A.K.Sinha**, V.K.Arora and S. Mathur (2012). Waste materials for construction of road embankment and sub grade. Seminar on cement concrete roads and white-topping (need of the hour for a scintillating tomorrow), CSIR-CRRI, August, Sovenier, pp 35-40.

87. V.G.Havanagi, **A.K.Sinha**, A Ranjan, V.K.Kanaujia and S. Mathur (2012). Super fine copper slag waste material for embankment construction. Published in CSIR-CRRI diamond jubilee conference, Vol. 1, pp 50-52.

88. V.K.Kanaujia, V.G.Havanagi, **A.K.Sinha** and S. Mathur (2012). Suitability of granular materials for capillary cutoff. Published in CSIR-CRRI diamond jubilee conference, Vol. 1, pp 106-109.

89. **A.K.Sinha**, V.G.Havanagi, A Ranjan and S. Mathur (2012). Recycle of steel slag waste material in the construction of road. Published in CSIR-CRRI diamond jubilee conference, vol. 1, pp 90-93.

90. **A.K.Sinha**,V G Havanagi, P S Prasad, Kishore Kumar and Sudhir Mathur (2012). Design of tunnel muck yard at Jammu & Kashmir rail link. Published in national conference and field study on landslide management, Nainital, Uttrakhand.

91. **A.K.Sinha**, V.G. Havanagi, V.K.Arora, Alok Ranjan and S. Mathur (2011). Feasibility study of Jarofix waste material for road construction. Indian geotechnical conference, Kochi, Vol.1, Pp 685-688.

92. V. G. Havanagi, **A.K.Sinha** and Sudhir Mathur (2011). Construction of embankment using copper slag waste material. International conference on reducing the carbon footprint in road construction, Delhi, India. Published by Indian Road congress, New Delhi, 5/ 99-106pp.

93. V. G. Havanagi, **A.K.Sinha** and Sudhir Mathur (2011). Design and stability analysis of pond ash railway embankment. Indian geotechnical conference, Kochi, Vol.1 Pp721-724.

94. V G Havanagi, **A.K.Sinha**, P Gupta and S Mathur (2011). Investigation of Hnathial Bazar Veng landslide at 173.5 km Aizwal-Lunglei road, Mizoram. Proceedings of National conference on 'Landslide hazards-consequences & challenges', Roorkee, India, Vol. 1. pp 204-207.

95. **A.K.Sinha**, Vasant G Havanagi and Sudhir Mathur and U K Guruvittal (2010) Investigation and design of pond ash road embankment. 2nd International conference on CPT 10, May California, USA.

96. **A.K.Sinha**, Vasant G Havanagi and Sudhir Mathur (2009). Settlement of soft clays with prefabricated vertical drain. International symposium on ground improvement technologies and case histories, Singapore, pp 345-351.

97. Vasant G Havanagi, **A.K.Sinha**, P.S.Prasad, Sitaramanjaniyulu and Sudhir Mathur (2009). Copper slag as an alternative material for road construction. Proceeding of 24th International Conference on Solid Waste Technology and Management, Philadelphia, USA, pp 133- 144.

98. Jai Bhagwan, **A.K.Sinha**, Sudhir Mathur (2009). Ground improvement techniques development of road infrastructure. Proceeding of the national seminar on emerging trends in ground improvement, Kolkata, pp 67-73.

99. **A.K.Sinha**,Vasant G Havanagi and Sudhir Mathur (2008). Feasibility study on the use of cementation material in road construction – A laboratory investigation. Proceeding of National Geosymposium on Geoenvironment, Geohazards, Geosynthetic and Ground Improvement-Experience and Practices (4G) CSMRS, New Delhi, pp 107-115.

100. **A.K.Sinha**, V. G. Havanagi and Sudhir Mathur (2008). Continuous stage construction of high embankment on soft ground improved with PVD. Proceeding of National symposium on Engineering of ground and environmental geotechniques, Hyderabad, pp 192-197.

101. V. G. Havanagi, **A.K.Sinha** and Sudhir Mathur (2008). Quality control of compacted fill by sand replacement method using unstandard pouring materials. Proceeding of Indian geotechnical conference Bangalore.

102. Vasant G Havanagi, **A.K.Sinha** and Sudhir Mathur (2008). Feasibility study on the use of zinc slag wastes in embankment and pavement construction Proceeding of National Geosymposium on Geoenvironment, Geohazards, Geosynthetic and Ground Improvement-Experience and Practices (4G), CSMRS, New Delhi, pp 213-217.

103. V. G. Havanagi, **A.K.Sinha**, Sudhir Mathur and Prema Prasad (2008). Experimental study on the use of copper slag wastes in embankment and pavement construction. Proceeding of National symposium on Engineering of ground and environmental geotechniques, Hyderabad, pp 259-264.

104. U.K.Guruvittal, P.S.Prasad, N.K.Sharma, **A.K.Sinha**, Vasant G Havanagi and Sudhir Mathur (2008). Designing ground improvement techniques in soft clay areas. Proceeding of National Geosymposium on Geoenvironment, Geohazards, Geosynthetic and Ground Improvement-Experience and Practices (4G), CSMRS, New Delhi, pp 350-356.

105. U.K.Guru Vittal, Sudhir Mathur and **A.K.Sinha** (2007) Sub-Soil Investigation & Recommendations for Construction of Kalindi Bye pass Embankment. Proceeding of silver jubllee conference Geotechnica on Geotechnical Engineering experiences and Practices, CSMRS, New Delhi, page 75-81.

106. V.G. Havanagi, **A.K.Sinha** and V.K.Kanaujia (2006). Relative density criteria for quality control of coal ash embankment fills. Proceeding of Indian Geotechnical Conference Chennai, Vol. 1, pp 871-874.

107. **A.K.Sinha** and Sudhir Mathur (2005). Strength and deformation behaviour of remoulded cured fly ash. Proceeding of International Conference on Fly ash Utilisation Programme New Delhi, Vol. VIII, pp 19.1–19.8

108. Vasant G.Havanagi, Sudhir Mathur and **A.K.Sinha** (2005). Construction of fly ash embankment in flood zone of river Yamuna – A case study. Proceeding of International Conference on Fly ash Utilisation Programme New Delhi, Vol. VIII, pp 7.1-7.11.

109. **A.K.Sinha** (2005). A new method for computation of coefficient of consolidation. Proceeding of Indian Geotechnical Conference Ahmadabad, Vol. 1, pp 169-172.

110. **A.K.Sinha**, V.G.Havanagi, V.K.Kanaujia and Sudhir Mathur (2005). Establishment of correlation between SPT 'N' values, relative density and shear characteristics for pond ash embankment fills – A case study. Proceeding of Indian Geotechnical Conference Ahmadabad, Vol. 2, pp 327-330.

111. **A.K.Sinha** (2003). Characteristic properties of cured fly ash. Proceeding of 3rd International Conference – Fly ash Utilisation & Disposal, New Delhi, Vol. 1, pp II 16 – II 20.

112. Sudhir Mathur, U.K.Guruvittal, V. G. Havanagi and **A.K.Sinha** (2003). Design and construction of reinforced approach embankment using pond ash. Proceeding of 3rd International Conference – Fly ash Utilisation & Disposal, New Delhi, Vol. 1, pp VI 39- VI 45.

113. R.Kumar and **A.K.Sinha** (2002). Soil and road material information system for Geo engineer – A GIS Vision. Proceeding of Indian Geotechnical Conference, Allahabad, Vol. 1, pp 645-647.

114. U.N.Sinha, S.Karthigeyan and **A.K.Sinha** (2000). Shear strength characteristics of compacted fly ash used as geomaterial for the construction of embankment. Proceeding of 2nd International Conference on Fly ash Disposal and Utilisation, New Delhi, Vol. 2, pp VII-9, 70-76.

115. **A.K.Sinha** and V.K.Arora (1999). Experimental study on reinforced earth retaining wall. Proceeding of Indian Geotechnical Conference, Calcutta, Vol. 1, pp 257-259.

116. U.N.Sinha, S. Karthigeyan, P.Kumar, S.N.Bhargwa, A.K.Sharma and **A.K.Sinha** (1999). Influence of thickness and asperities of infilled material in discontinuous rock mass using direct shear box. Proceeding of Indian Geotechnical Conference, Calcutta Vol. 1, pp 9-12.

13. Project completed/Report prepared

1. Report (2024). Utilization of Biomass incinerator ashes in road work. Submitted to Punjab State Council for Science & Technology, Chandigarh.
2. Report (2024). Evaluation of LCR/MIF Value (PP3030 Extruded geogrid and PET6060 Knitted geogrid). Submitted to TechFab India Industries Ltd., New Delhi.
3. Report (2024). Evaluation of LCR/MIF Value of MacGrid EG 30S (i.e. biaxial extruded polypropylene geogrid) for pavement design of Dantiwara-Piper-Merta city section of SH-21. Submitted to Maccaferi environmental solutions Pvt. Ltd., New Delhi.
4. Report (2024). Failure analysis and design of remedial works for rehabilitation of retaining wall , CRPF campus, Srinagar. Submitted to CPWD Srinagar J&K.

5. Report (2024). Construction of Eight Lane Access Controlled Expressway starting near Junction with NH-12 near village Ummedpura to Major Bridge over Taakli River Nayagaon Jageer Village (Ch 419.000-427.300) section of Delhi-Vadodara Green Field Alignment (NH-148N) under Bharatmala Pariyojana in the State of Rajasthan on EPC Mode (Package-15): Investigation of face log data due to change of rock classification. Submitted to NHAI, Kota, Rajasthan.
6. Report (2024). External Technical/Quality Audit of 16- lane carriageway of UER-II (NH-344M& NH-344N) and Dwarka Expressway(NH-248BB) for 8 nos. construction packages under NHAI, PIU, Dwarka, New Delhi. Submitted to NHAI, New Delhi.
7. Report (2024). Design, Construction, Supervision and Pavement performance evaluation of road constructed by using red mud. Submitted to Hindalco industries, Mumbai
8. Report (2024). Sustainable Geocomposite Drainage-Root Barrier. Submitted to CSIR (FTT project)
9. Report (2024). Hill Road Widening using Light Weight Geofoam Blocks-An alternative to earth cutting and filling. Submitted to NHIDCL, New Delhi
10. Report (2024). Behaviour of red mud waste material under cyclic loading. Submitted to CSIR-CRRI (In-house project)
11. Report (2023). Recycling of Ghazipur Municipal Solid wastes for Road embankment and subgrade construction. Sponsored-Principal scientific Advisor, Govt. of India, New Delhi.
12. Report (2023). Utilization of Municipal Solid wastes for Road and structural fill applications. Sponsored - South Delhi Municipal Corporation.
13. Report (2023). Design, construction, supervision and pavement performance evaluation of road constructed by using red mud. Sponsored by Hindalco Industries Limited, Mumbai.
14. Report (2023). Structural Safety Audit of Bridges at Km12, Km14 and Km16, Jauligrant-Thano-Raipur Motor Road, Dehradun, Uttarakhand (Geotechnical Engg. -- Part A) Sponsored by PWD, Dehradun, Uttrakhand
15. Report (2023). Investigation of Causes of Foundation Settlement and Remedial Measures for P3 Pier at Galgalia-Bahadurganj, Bihar Sponsored by G R Infra projects Limited, New Delhi.
16. Report (2023). Quality audit of structures of six-laning of NH-8 from shamlaji to motachiloda, Ahmedabad, Gujarat Sponsored by National Highways Authority of India, Ahmedabad, Gujarat
17. Report (2023). Delhi Research Implementation and Innovation (DRIIV); WP-6 Use of construction and demolition waste, Incinerated residues in Road construction. Sponsored by Principal Scientific Advisor (PSA), Government of India, Lead Co-ordinator IIT Delhi.
18. Report (2023). Investigation and Design of Remedial Measures of RE Wall at km 137+300 on Delhi-Vadodara, Bharatmala Pariyojana, Rajasthan (Pkg.-5). Sponsored by Project Director, Project Implementation Unit (PIU), NHAI, Sohna, Gurugram.

19. Report (2023). Recycling of Ghazipur Municipal solid wastes for Road embankment and sub-grade construction. Sponsored by Office of Principal Scientific advisor (PSA), Government of India & Invest India, New Delhi.
20. Report (2022). Utilization of red mud for road and structural fill application. Sponsored by Hindalco Industries Limited, Mumbai.
21. Report (2022). Feasibility study of red mud waste material in the construction of road and as a structural fill. Sponsored by Vedanta Limited, Lanjigarh, Kalahandi, Odisha.
22. Report (2022). Ground granulated blast furnace slag as a soil stabilizer for road construction. Sponsored by JSW Cement Limited, Mumbai.
23. Report (2022). Utilization of municipal solid wastes for road and structural fill applications. Sponsored by South Delhi Municipal Corporation.
24. Report (2021). Feasibility study for the construction of Flyover/Underpass/Grade separator at three locations, Surat city, Gujarat. Sponsored by Municipal Corporation of Surat, Gujarat
25. Report (2021). Design, construction and performance monitoring of phosphogypsum experimental road at Paradeep, Odisha. Sponsored by Paradeep phosphate limited (PPL), Paradeep, Odisha.
26. Report (2021). Failure analysis and design of Remediation works for Silewani Ghati Hill road-Chhindwara, (MP). Sponsored by NHAI, New Delhi
27. Report (2021). Feasibility Study of Dredged Sand from the Catchment of Banganga River and Its Tributaries. Sponsored by Water Resources Department, Jaipur, Rajasthan
28. Report (2021). Design and stability analysis of red mud disposal pond sponsored by Hindalco Industries, Mumbai.
29. Report (2020). Construction and performance study of a mixes of jarofix-slag and jarofix-soil as a retained fill in reinforced retaining wall. Sponsored by M/s Hindustan Zinc Limited, Chittorgarh, Rajasthan.
30. Report (2020). Design of road remediation and erosion protection works of Shangumugam beach road, Thiruvananthapuram, Kerala. Sponsored by PWD, Kerala.
31. Report (2020). Investigation and design of landslide remediation measures in Nilambur - Gudalloor road, Kerala. Sponsored by PWD, Kerala.
32. Report (2020). Evaluation of AggreBind (Styrene polymer compound) stabilizer in soil stabilization for road construction. Sponsored by M/s Telemachus Infra Private Limited, New Delhi.
33. Report (2020). Technical Evaluation of Enzyme based solution for stabilization in Road construction. Sponsored by Virentiatech Pvt. Ltd., New Delhi
34. Report (2020). Feasibility study of zinc tailing for road construction. Sponsored by M/s Hindustan Zinc Limited, Udaipur, Rajasthan.

35. Report (2020). Pavement performance study of experimental phosphogypsum waste material road. Sponsored by Paradeep Phosphate limited, Paradeep, Odisha.
36. Report (2020). Investigation, Design and Remedial Measures for protection of slopes at Bailey bridge, Pambai Valley. Sponsored by CPWD New Delhi.
37. Report (2019). Quality assurance of construction of structures of inner ring road (phase-II) from Fatehabad to Devari road in Agra, (UP). Sponsored by Agra development authority, Agra, UP.
38. Report (2019). Technical Audit of NH Ludhiyana to Talwandi, Ludhiyana, Punjab. Sponsored by NHAI. New Delhi.
39. Report (2019). Feasibility of reducing the existing road level of Rajpath starting from Vijay Chowk to North and South Block, upto President House. Sponsored by PWD Delhi.
40. Report (2019). Sub soil investigation for the construction of box culvert, vup and flyovers at Agra inner ring road phase II (UP).
41. Report (2019). Feasibility study of fuming furnace slag in road construction. Sponsored by Hindustan Zinc Limited, Udaipur, Rajasthan.
42. Report (2019). "Feasibility study of zinc slag waste materials for road construction". Sponsored by Hindustan zinc limited, Udaipur, Rjasthan.
43. Report (2012-2017, 12th FYP). "*Landslide investigation and remedial measures of Maithana landslide".* Submitted to BRO, New Delhi.
44. Report (2012-2017, 12th FYP). "*Development and Application of Technologies for Sustainable Transportation ". Network Project, sponsored by CSIR, New* Delhi
45. Report (2017). "*Soil investigation and remedial measures of approaches of four flyovers*" Sponsored by Housing & Urban Development Corporation, Kolkata.
46. Report (2017). *"Feasibility study of foundry sand in the construction of road*." Submitted to The Institute of Indian Foundrymen, New Delhi.
47. Report (2017). *"Design and construction of embankment using municipal solid waste (Varanasi)"*. Submitted to NHAI, New Delhi.
48. Report (2016). *"Sub soil investigation for the construction of box culvert, PUP, VUP and fly over".* Submitted to Agra development authority, Agra.
49. Report (2016). *"Design and construction of embankment using municipal solid waste (Ghazipur)"*. Submitted to NHAI, New Delhi.
50. Report (2016). *"Feasibility of chrome slag in Embankment, Subgrade and sub base layers of Road construction"*. Submitted to Balasore Ispat Ltd. Orissa.
51. Report (2016). Vetting of pavement design proposed with geocrete stabilized layer. Sponsored by Public Works Department, Kanpur Dehat, Uttar Pradesh.
52. Report (2015). "*Construction of road over municipal solid waste dump*", Submitted to यूपी हाउसिंग एवं विकास परिषद, वसुंधरा कॉम्प्लेक्स, सैक्टर - 16ए, वसुंधरा, गाजियाबाद.

53. Report (2015). "P*avement design proposed with geocrete stabilized layer*". Submitted to PWD, UP.
54. Report (2015). *"Design and construction of phosphogypsum road at Paradeep*". Submitted to Paradeep phosphate Ltd. Orissa.
55. Report (2015). *"Ground Improvement measures over soft organic soil".* Submitted to NIT Manipur, Langol, Imphal.
56. Report (2013-2015). "*Quality assurance of construction of structures of inner ring road (phase-1) from Kuberpur to Fatehabad road in Agra*, (UP). Submitted to Agra development authority, Agra, UP.
57. Report (2014). "*Distress evaluation of Calicut Runway".* Submitted to International Airport Calicut, Kerala.
58. Report (2013). "*Feasibility study of phosphogypsum waste material in road construction*". Submitted to Paradeep Phosphate Pvt. Limited, Orissa.
59. Report (2013). "*Pavement performance study of experimental test track using Jarofix waste material"* Submitted to the M/s Hindustan zinc limited Chittorgarh, Rajasthan.
60. Report (2013). "*Electro-mechanical density gauge equipment".* Submitted to CSIR-CRRI, New Delhi.
61. Report (2013). "*Design of capillary cutoff and improvement of sub grade layers for the construction of Thanesar dhand to Khanouri road*". Submitted to PWD Kaithal, Haryana.
62. Report (2012). "Quality/*Technical audit of Lucknow-Muzaffarpur National Highway project (8 contracts)".* Sponsored by NHAI, New Delhi.
63. Report (2012). *"Suitability of sand material for Capillary cutoff"*. Submitted to Provincial Division, PWD, B&R, Jhajjar (Haryana).
64. Report (2012). "*Geotechnical study of Jugasalai cinder Dump area for building construction*" Submitted to the M/s Tata steel Jamshedpur, Jharkhand.
65. Report (2012). "*Feasibility study of cinder waste material in the construction of road*" Submitted to the M/s Tata steel Jamshedpur, Jharkhand.
66. Report (2012). "*Pavement performance evaluation of experimental test track using copper slag*". Submitted to M/s Sterlite Industries Tuticorin Tamil Nadu.
67. Report (2012). *"State of the art report for mitigation of land slide*". Submitted to CSIR-CRRI under Supra institutional project.
68. Report (2012). *"Pavement performance study of experimental test track section of cement stabilized road" Wagha border*, Amritsar, Punjab.
69. Report (2012). "*Feasibility study of super fine copper slag in land filling and road construction*" submitted to the M/s Birla copper, Hindalco Industries Dahej, Gujrat.

70. Report (2011). "*Feasibility study of Jarosite in the road construction*" Submitted to the M/s Hindustan Zinc Limited Chittorgarh and Udaipur, Rajasthan.
71. Report (2011). "*Design, construction & evaluation of experimental test track using Jarofix"*. Submitted to the M/s Hindustan Zinc Limited Chittorgarh, Rajasthan.
72. Report (2011). "*Feasibility study of Nanostad polymer stabilizer*" submitted to the M/s U B Engineering Ltd. Pune.
73. Report (2011) *Pavement performance of Experimental test track construction of PMGSY roads using Jute Geotextiles*. Submitted to NRRDA, New Delhi.
74. Report (2011). "*Design of filter material for capillary cut-off and assessment of suitability of soil for embankment and subgrade",* Submitted to PWD, B&R, Fatihabad, Haryana
75. *Field experimental test track construction using construction and demolition waste at New Delhi*.
76. Report (2010). "*Feasibility study of steel slag in the construction of Road*" submitted to the M/s Goa Pollution control Board, Goa.
77. Report (2010) "*Quality and audit of DMRC roads approaching to Stations*" submitted to the M/s DMRC, New Delhi.
78. Report (2009)."*Design specifications for construction of experimental test tracks using copper slag*". Submitted to M/s Sterlite Industries Tuticorin.Tamil Nadu
79. Report (2009). "*Protection of unstable cut slopes along approach roads and railway lines and stabilization of the proposed dumping muck yard sites at Jammu and Kashmir*" submitted to the M/s IRCON, Mumbai.
80. Report (2009). "*Design details and technical specifications for construction of 6m high retaining wall at CRRI staff quarter",* Maharani Bagh.
81. Report (2009). *"Feasibility study of Jarofix in the road construction*". Submitted to the M/s Hindustan zinc limited Chittorgarh, Rajasthan
82. Report (2008). "*Design of coal ash Railway embankment*". Submitted to M/s NTPC, NOIDA.
83. Report (2008) "*Ground improvement measures for widening of industrial bye pass road Visakhapatnam*". Submitted to Visakapatnam Port trust, Visakapatnam.
84. Report (2008) Technical Audit of Golden Quadrilateral roads. Submitted to CAG, Indian Government, New Delhi.
85. Report (2008)."*Supervision of pile construction and pile load tests for the construction of bridge superstructure*", NTPC, Faridabad. Submitted to PWD, Haryana.
86. Report (2007). "*Feasibility study of RBI 81 cementations material for road construction*". Submitted to M/s Legend innovative Pvt. Ltd., New Delhi.
87. Report (2007). "*Instrumentation and monitoring on PVBD improved soft clay under embankment*". Submitted to Port Trust, Visakapatanam.

88. Report (2007). "*Feasibility study on the use of imperial smelting furnace zinc slag as fine aggregate for construction of embankments, granular sub base, cement concrete and bituminous layers*". Submitted to M/s Hindustan zinc limited Chittorgarh, Rajasthan.

89. Report on (2007). "*Feasibility study on the use of waelzkiln zinc slag as fine aggregate for construction of embankments, granular sub base, cement concrete and bituminous layers*". Submitted to M/s Hindustan zinc limited Chittorgarh, Rajasthan.

90. Report (2007). "*Feasibility study of F.S Technology emulsion cementations material for road construction*". Submitted to M/s. FS Roads Consulting Private Limited, New Delhi.

91. Report (2007). "*Technical audit of NHAI GQ highway project, Kishangarh to Jaipur*". Submitted. to CAG, New Delhi.

92. Report (2006). "*Soil investigation and design of high embankment on soft ground* " (Kalindi Kunj bye pass road). Submitted to M/s DDA, New Delhi.

93. Report (2006). "*Feasibility study on the use of copper slag wastes in road and embankment construction*". Submitted to M/s Sterlite Industries Tuticorin, Tamil Nadu

94. Report (2006). *"Investigation and recommendation for landslide/subsidence at km 173.5 km on Aizwal-Lunglei road (NH-54)*" near Aizwal, Mizoram. Submitted to BRO, Mizoram.

95. Report (2005) "Design of embankment using hydraulic fill for widening of M.B.bridge road" (ITO chungi to Yamuna bridge). Submitted to M/s DDA New Delhi.

96. Report(2005). *"Design and super vision of pond ash embankment for widening of marginal bund road", (GT road to Khajuri chawk).* Submitted to M/s PWD, New Delhi.

97. Report (2005) *Remedial measures for improvement to high embankment slopes of pond ash, NOIDA-Greater NOIDA expressway.*

98. *Technical Audit of PMGSY roads (2003) at CRRI for different Indian states.*

14. Other Information

Countries of Work Experience: Deputed to Singapore for presentation of Research paper on 'Settlement of soft clays with prefabricated vertical drain. International symposium on ground improvement technologies and case histories, Singapore, December 2009.

I. **PEER REVIEWER** - International journal of Geotextile and Geomembrane.

II. **PEER REVIEWER** - International Journal of Physical Modelling in Geotechnics.

III. **PEER REVIEWER** - International KSCE Journal of Civil Engineering.

IV. **PEER REVIEWER** - International Journal of Engineering and Technology Research.

V. **PEER REVIEWER** - Journal of National Institute of Disaster Management, New Delhi.

VI. **PEER REVIEWER** - Journal of Indian Road Congress, New Delhi.

VII. **GUEST FACULTY** - Indian Academy for Highway Engineers (IAHE), MORTH, India.

VIII. **SECRETARY/EXECUTIVE MEMBER –** Involved in organizing different workshops/conferences/symposium under Indian Geotechnical Society, Delhi chapter.

15. Invited lecture

1) Topic- Recycle of red mud waste material in road construction. 15th September 2024, Engineers day, Sponsored by Jharkhand Engineer services association, Ranchi, Jharkhand.
2) Topic – Mobility Infrastructure and planning (MIP). One week one theme (OWOT), Sponsored by CSIR-CRRI at CSIR-AMPRI , Bhopal, Madhaya Pradesh.
3) Topic- Industrial waste materials for road construction. Sponsored by IIT (ISM), Dhanbad.
4) Topic- Industrial waste materials for road construction with CSIR-CRRI Experiences. Dec. 2021, Sponsored by NIRMA, Ahmadabad.
5) Topic- Industrial waste materials for road construction. Dec. 2019, Sponsored by Jharkhand Engineer services association, Ranchi, Jharkhand.

16. Membership in organizational / national / international committees.

Member of Professional Bodies	Class of Membership
H-4 committee of IRC on –Ground improvement, Embankment, Drainage	Subcommittee member
Indian Geotechnical Society, All India	Life Fellow
Indian Geotechnical Society Delhi chapter	Life member
Indian Road Congress	Life Member

डॉ अनिल कुमार सिन्हा
वरिस्ठ प्रिन्सिपल वैज्ञानिक