

National Institute of Technology, Tiruchirappalli

Dr. Nisha Radhakrishnan

Publications

Papers published in International Journals

1. Kulkarni, M. N., **Radhakrishnan, N.**, Rai, D., 2004. Deformation Studies of Koyna Dam, Western India, Using GPS, GPS WORLD, November 15(11), pp. 14 - 19. [Scopus]
2. Kulkarni, M. N., **Radhakrishnan, N.**, Rai, D., 2006. Global Positioning System in Disaster Monitoring of Koyna Dam, Western Maharashtra, Survey Review, July 38(301), pp. 629 - 636. [SCI/Scopus]
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4. **Nisha Radhakrishnan**, D. Svega, 2011. Study in variation of ozone concentration over Indian subcontinent using Ozone Monitoring Instrument data, Journal of Remote sensing & GIS, Volume 2, Issue 2, Nov, Pages 13-20. [None]
5. **Radhakrishnan, N.**, Kulkarni, M. N., 2010. Monitoring Crustal deformation of Western Maharashtra Peninsular Shield of India using GPS, Journal of the Institution of Engineering (India), Vol. 91, February 2011, pp. 39 – 42, ISSN 0020-336X. [Scopus]
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7. Sathees Kumar, D.Thirumalaivasan, **Nisha Radhakrishnan**, Samson Mathew, 2013. Groundwater Vulnerability Assessment Using SINTACS Model, Geomatics, Natural Hazards and Risk, Volume 4, Issue 4, December 2013, Pages 339-354 (DOI:10.1080/19475705.2012.732119). [SCI]
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[None]

12. Sathees Kumar, **Nisha Radhakrishnan**, Samson Mathew, 2015. Application of geospatial techniques to land suitability analysis, International Journal of Sustainable Building Technology and Urban Development, Volume 6, Issue 1, 2 January 2015, Pages 39-47. <http://dx.doi.org/10.1080/2093761X.2015.1014446>. [Scopus]
13. **Nisha Radhakrishnan**, Aswathy R, Samson Mathew, 2017. Studying Land use - Travel Demand Interaction using 3S Technology for Tiruchirappalli city, Journal of Indian Society of Remote Sensing, Volume 45, Issue 5, 1 October 2017, Pages 815-824, DOI 10.1007/s12524-016-0616-z. [SCI]
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15. Surendar Natarajan and **Nisha Radhakrishnan** (2019) Simulation of Single Event-Based Rainfall-Runoff Process of an Urban Catchment Area Using HEC-HMS. Modeling Earth Systems and Environment, Vol 5, Issue 4, pp.1867–1881. <https://doi.org/10.1007/s40808-019-00644-5> (Scopus).
16. Surendar Natarajan and **Nisha Radhakrishnan** (2020) Flood Hazard Delineation in Ungauged Catchment by Coupling Hydrologic and Hydraulic Models with Geospatial Techniques-A Case Study of Koraiyar Basin, Tiruchirappalli City, Tamil Nadu, India. Environmental Monitoring and Assessment, 192(11), Article Number: 689, October 2020. <https://doi.org/10.1007/s10661-020-08650-2>. (SCIE).
17. Surendar Natarajan and **Nisha Radhakrishnan** (2020) An Integrated Hydrologic and Hydraulic Flood Modeling Study for a Medium-Sized Ungauged Urban Catchment Area: A Case Study of Tiruchirappalli City Using HEC-HMS and HEC-RAS. Journal of Institution of Engineers (India) Series. A, 101 (2) :381-398, June 2020. <https://doi.org/10.1007/s40030-019-00427-2> (Scopus)
18. Surendar Natarajan and **Nisha Radhakrishnan** (2020) Estimation of Flood Mitigation Parameter for Tiruchirappalli City using Mathematical Relational Model. Indian Journal of Geo Marine Sciences, Vol. 49 (7):1269-1279, July 2020. (SCIE).
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22. Surendar Natarajan and **Nisha Radhakrishnan** (2021) Simulation of Rainfall-Runoff Process for an Ungauged Catchment Using an Event-Based Hydrologic Model- A Case

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23. Surendar Natarajan and **Nisha Radhakrishnan** (2021) Assessment of Rainfall-Runoff due to the Impacts of Land Use Changes by Integrated Geospatial Empirical Approach - Study on Koraiyar Basin, Tiruchirappalli City, India. *Journal of Indian Society of Remote Sensing*, **49**, pages 793–812 (2021), November 2021 <https://doi.org/10.1007/s12524-020-01260-y>. (SCIE).
 24. S. Anjuna, S Vinoth Kumar, **Nisha Radhakrishnan**, D Ezhilarasi and N. Sivakumaran, An integrated structural health monitoring system for engineering structures : a case study using physical method, *Journal of Structural Engineering (Madras)*, Vol. 49, No. 1, April - May 2022 pp. 1-10 [Scopus]
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 28. R. Shanmathi Rekha, Shayesta Wajid, **Nisha Radhakrishnan**, Samson Mathew (2023), "Optimum site suitability analysis for urban open space facilities using geospatial techniques", *Journal of The Institution of Engineers (India): Series A*, Vol: 28, Issue 1, pp: 237 – 249, doi: 10.1007/s40030-022-00705-6. [Scopus]
 29. B. Anand , R. Shanmathi Rekha, Nisha Radhakrishnan, K. Ramaswamy, Analysis of LULC change dynamics and its impact assessment using CA-ANN model in part of Coimbatore region, India, *GeoJournal*, Volume 88, pages 5825–5845, (2023) <https://doi.org/10.1007/s10708-023-10944-0>., Published online 14 September 2023. [SCIE]
 30. Shaheem S, Nisha Radhakrishnan, Samson Mathew, Development of Structural Equation Model for Travel Mode Choice Behaviour of Working Population in Thiruvananthapuram City, *Civil Engineering and Architecture* 11(5): 2572-2582, 2023, DOI: 10.13189/cea.2023.110524[Scopus]
 31. **Vinoth Kumar Sampath and Nisha Radhakrishnan** (2024) A comparative study on different sediment yield models in an ungauged basin using CHIRPS dataset. *Modeling Earth Systems and Environment*, **10(1)**, pp. 1137-1155. <https://doi.org/10.1007/s40808-023-01840-0> (ESCI and Scopus) [IF - 3.0]
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35. S. Shaheem, S Sreelekshmi, Nisha Radhakrishnan, M. V. L. R. Anjaneyulu & Samson Mathew, Mode choice modelling of work trips using latent variables for a medium-sized city in India, *Transportation planning and Technology*, pp: 1068-1091, Published online: 05 Apr 2024, DOI: 10.1080/03081060.2024.2337078. [SCI]
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37. **Anjuna.S, Nisha Radhakrishnan, Greegar George** , (2025) IoT-based Strain Monitoring System for Large Engineering Structures, *Innovative Infrastructure Solutions*. (2025) 10:40 (ESCI/Scopus) , Volume 10, Issue 1, Article 40, doi: 10.1007/s41062-024-01838-2
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39. Nekkanti, H., **Radhakrishnan, N.** & D, Kanamma. Analysis of Rivers' Hidden Cooling Potential on a River Front City- a Case Study on Vijayawada City, Andhra Pradesh, India. *J. Inst. Eng. India Ser. A* (2025). <https://doi.org/10.1007/s40030-024-00843-z> [Scopus], Volume 106, Issue 1: pp: 59 – 69, doi: 10.1007/s40030-024-00843-z
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42. Venkatesh, T. A., & **Radhakrishnan, N.** (2026). Spatiotemporal Analysis of Land Surface Temperature and Air Pollutants Using Geospatial Techniques. *MAPAN*. <https://doi.org/10.1007/s12647-026-00934-1>
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3. Parthasarathy, C., Kumaresan, K., Sumbrui, C., Kumar, S., **Radhakrishnan, N.**, Mathew, S., 2011. Land use and Land cover Assessment along Tiruchirappalli city using Remote Sensing, The IUP Journal of Earth Sciences, Vol. 5, No. 1, pp. 60 – 68, ISSN 0973-8525.
4. **Nisha Radhakrishnan**, 2014. Application of GPS in Structural deformation Monitoring: A Case Study on Koyna Dam, Indian Journal of Geomatics (Accepted for publication, February 2014)
5. Subha Nair, **Dr. Nisha Radhakrishnan**, Dr. Samson Mathew, 2013. Trip Matrix Estimation from Traffic Counts using Cube, IC-RICE 2013 – PDACEG – Karnataka - India: International Conference on Recent Innovations in Civil Engineering, Gulbarga, Karnataka October 25 -27, 2013 (Published in journal).
6. Navyatha Metta, **Nisha Radhakrishnan**, Samson Mathew, November 2015, Land use and Transportation – Understanding Linkage between Travel Behaviour and Residential Location, A journal of the Transportation Research Group of India [TRG] Transportation in Developing Economies (Accepted for Publication).

Papers published in referred International conference proceedings

1. “Monitoring deformations of Koyna Dam using GPS”, Kulkarni, M.N., **Nisha R.**, V.S. Tomar, P. Pillai, World Conference on Disaster management, DMIC-2003, Hyderabad, November 10-12, 2003.
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6. “Remote sensing and GIS in land use planning”, Sathees kumar P, **Nisha Radhakrishnan**, 11th ESRI India User Conference 2010, Noida, April 21 – 22, 2010.
 7. GIS based Traffic Management Techniques for Vizianagaram city", Satish Kumar Eerni, VR Sankar Cheela, **Nisha Radhakrishnan**, Urban Mobility India, December 3 – 5, 2010.
 8. "A Study on NPS Modelling in River Cauvery Using GIS", Sankar Cheela, Parvathy Nair A, Jaya Krishna A, **Nisha Radhakrishnan**, Geospatial World Forum, Hyderabad, 18 - 21 January 2011.
 9. "Land Use Change Analysis in Tiruchirappalli City Using Remote sensing and GIS", Sathees kumar, **Nisha Radhakrishnan**, Samson Mathew, Geospatial World Forum, Hyderabad, 18 - 21 January 2011.
 10. “Estimation of Origin and Destination Matrix from Link Volume Counts using Bi-Level Programming”, Maneesha M, Nisha Radhakrishnan, Samson Mathew, Geospatial World Forum, Hyderabad, 18 - 21 January 2011.
 11. “Urban Speed Management - A Case Study Of Tiruchirappalli City” Basil Basheerudeen, Samson Mathew, Moses Santhakumar, **Nisha Radhakrishnan**, Urban mobility, Delhi, December 3 – 6, 2011.
 12. “Forecasting Urban Sprawl and Traffic Conditions in Tiruchirappalli City”, Satish Kumar Eerni, **Nisha Radhakrishnan**, Samson Mathew, Urban mobility, Delhi, December 3 – 6, 2011.
 13. “Analyzing the Relation between Land Use and Travel Demand Using 3S Technology”, Aswathy R, Sathees Kumar, **Nisha Radhakrishnan**, Proceedings of Geomatrix’12, INDIA, International Conference on Geospatial Technologies and Applications, February 26 – 29, 2012, IIT Bombay.
 14. “The Impact of Built Environment on Pedestrian Motor Vehicle Collision along Tiruchirappalli Urban Road Network”, K. R. Vinodhkumar, **Nisha Radhakrishnan**, Sathees Kumar, Proceedings of Geomatrix’12, INDIA, International Conference on Geospatial Technologies and Applications, February 26 – 29, 2012, IIT Bombay.
 15. “Travel Time and Delay Analysis using GIS and GPS”, Ankit Pachori, **Nisha Radhakrishnan**, India Geospatial Forum, Hyderabad Internal Convention Centre, Hyderabad, 22 -24 January 2013.
 16. “Future Travel Demand Forecasting – A case study in Tiruchirappalli District”, Sivaprakash G, **Nisha Radhakrishnan**, India Geospatial Forum, Hyderabad Internal Convention Centre, Hyderabad, 22 -24 January 2013.
 17. “Estimation of Origin Destination Matrix using Link Volume Counts”, Subha Nair, Sathees Kumar, **Nisha Radhakrishnan**, Samson Mathew, India Geospatial Forum, Hyderabad Internal Convention Centre, Hyderabad, 22 -24 January 2013.
 18. “Speed Detection And Management – ‘ITS’application”, Arif Ashraf, **Nisha Radhakrishnan**, Samson Mathew, S. Moses Santhakumar, India Geospatial Forum, Hyderabad Internal Convention Centre, Hyderabad, 22 -24 January 2013.

19. "Impact Assessment of Built Environment on Pedestrian Accidents", **Nisha Radhakrishnan**, K.R.Vinodhkumar, Sathees Kumar, Samson Mathew, Geospatial World Forum, Beurs-World Trade Centre, Rotterdam, Netherlands, 13 – 16, May 2013.
20. "Trip Matrix Estimation from Traffic Counts using Cube", Subha Nair, Dr. **Nisha Radhakrishnan**, Dr. Samson Mathew, IC-Rice 2013 – Pdaceg – Karnataka - India: International Conference On Recent Innovations In Civil Engineering, Gulbarga, Karnataka October 25 -27, 2013.
21. "Land use and Transportation – Understanding Linkage between Travel Behaviour and Residential Location", Navyatha Metta, **Nisha Radhakrishnan**, Samson Mathew, 2015, 3rd Conference of the Transportation Research Group of India held at Kolkata (India) from 17 - 20 December, 2015.
22. "Geospatial Analysis of Accessibility and Mobility For Facilities", Shanmathi Rekha R, **Nisha Radhakrishnan** and Samson Mathew, GeoSmart India, Noida, March 1-3. 2016.
23. "Evaluation Of Existing Road Transport Infrastructure In Trichy City using GIS", Thenmozhi R, **Nisha Radhakrishnan** and Moses Santhakumar, GeoSmart India/GeoSmart ASIA 2016, March 1-3, 2016, Greater Noida, India.
24. "Study of Para Transit System in Tiruchirappalli", Ankit Singh Raghuwanshi, **Nisha Radhakrishnan**, GeoSmart India/GeoSmart ASIA 2016, March 1-3, 2016, Greater Noida, India.
25. "Spatial Distribution of Urban Road Network in Trichy City Using Quick-bird Satellite Image", Thenmozhi R, **Nisha Radhakrishnan** and Moses Santhakumar, International Conference ICSETH-2016 on Sustainable Developments in Science Engineering Technologies and Humanities, PSN Engineering College, Tirunelveli, 10-11, March 2016.
26. "Study of Impact of Built Environment on Pedestrian Accidents using GIS and Statistical Model", **Nisha Radhakrishnan**, K. R. Vinod Kumar, Samson Mathew, 4th Annual International Conference on Architecture and Civil Engineering (ACE 2016), Singapore, April 25 – 26, 2016.
27. "Analysis of Trend of Precipitation Data: A Case Study of Tiruchirappalli City, Tamil Nadu", Surendar Natarajan and **Nisha Radhakrishnan**, 3rd International Conference on Material Mechanics and Management, College of Engineering, Trivandrum, 13-15 July 2017, Indexed in Scopus Journal published by the Taylor and Francis Group.
28. Accessibility Analysis of Health care facility using Geospatial Techniques", Shanmathi Rekha R, Shayesta Wajid, **Nisha Radhakrishnan** and Samson Mathew, 20th Euro Working group on Transportation Meeting, EWGT 2017, Budapest, Hungary, September 04 – 06, 2017, Indexed in Transportation Research Procedia (SCOPUS Indexed).
29. "Accessibility Analysis of Health Care using Geospatial Techniques", Shanmathi Rekha R, Shayesta Wajid, **Nisha Radhakrishnan** and Samson Mathew, 4th Conference of the Transportation Research Group of India, CTRG 2017, December 17 – 20, 2017, Mumbai.
30. **Sustainable solutions for improving Public Transport ridership in Thiruvananthapuram City**, Shaheem S, **Nisha Radhakrishnan** and Samson

Mathew, 4th Conference of the Transportation Research Group of India, CTRG 2017, December 17 – 20, 2017, Mumbai.

31. "Development of Car-following Models under Mixed Traffic Conditions in Urban Areas", Madhu Errampalli, Himanshu Verma and Nisha Radhakrishnan, 6th Conference of Transportation Research Group of India, (CTRG-2021) 14-17 December 2021, Tiruchirappalli (Trichy), Tamil Nadu, India.
32. **Vinoth Kumar Sampath**, Nisha Radhakrishnan "A comparative study of LULC classifiers for analysing the cover management factor and support practice factor in RUSLE model" International Virtual Conference on Developments and Applications of Geomatics (**DEVA – 2022**) – **NITW** in 29th – 31st August 2022.
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34. **Vinoth Kumar Sampath**, Nisha Radhakrishnan "Prioritization of sub-watersheds susceptible soil erosion in an ungauged basin using MOORA, COPRAS, MARCOS and MABAC" 28th International Conference on Hydraulics, Water Resources and River Engineering (**HYDRO – 2023**) – **NITW** in 21st – 23rd December 2023.
35. **Shaheem S, Nisha Radhakrishnan and Samson Mathew** (2023) Mode Choice Modelling of different categories of Work Trips in Thiruvananthapuram City, Fourth International Conference on Structural Engineering and Construction Management (SECON'23), 07-09 June 2023, [Federal Institute of Science and Technology \(FISAT\), Ernakulam](#), accepted for publication in, Springer conference proceedings. (Book Chapter).
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40. Tulsi Vijay Chaudhari, Dr. Nisha Radhakrishnan, AI-Powered Optimization and Spatial Analytics for Enhancing Transportation Networks and Infrastructure Planning in Tiruchirappalli, International Conference on Sustainable Urban Development (ICSUD 2026), July 7 -9, 2026, NIT Rourkela

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42. Nachiket Dattatray Gawari, Alagu Venkatesh, Nisha Radhakrishnan Title: Development of a GIS based Sustainable Accessibility Index to Evaluate the Effectiveness of Urban Transportation System, International Conference on Sustainable Urban Development (ICSUD 2026), July 7 -9, 2026, NIT Rourkela
43. Gokul Ram C, Dr. Nisha Radhakrishnan , Anirudh K, Risk-Adjusted Productivity Evaluation of Underground Utility Detection Technologies for Sustainable and Resilient Urban Infrastructure, International Conference on Sustainable Urban Development (ICSUD 2026), July 7 -9, 2026, NIT Rourkela
44. Jothi Jeya sri M, Nisha Radhakrishnan, & Aneesh Mathew, Integrating The TOPSIS With Drastic-L For Groundwater Vulnerability Assessment In A Semi -Arid Basin. 30th International Conference on Hydraulics, Water Resources, River and Coastal Engineering, Proceedings, ISBN:9789347140877.
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