

Dr. Madhu Errampalli, PhD

Chief Scientist¹ and Professor²

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Personal Details

Date of Birth: 17.07.1974

Gender: Male

Nationality: Indian

Marital Status: Married and have Two Daughters

Address:

Type V/11, CSIR-CRRI Staff Quarters, Maharani Bagh, New Delhi 110065 India

Passport No.: M5425182, valid up to 05-02-2025

Languages Known: English, Hindi & Telugu (Native)

Major Affiliations

CSIR-Central Road Research Institute (C.R.R.I.) New Delhi, India.

Academy of Scientific and Innovation Research (AcSIR) India.

Indian Roads Congress (IRC) New Delhi, India.

Bureau of Indian Standards (BIS), India.

Areas of Expertise

Transportation Planning (Mobility Plans), Traffic Engineering (Traffic Management Measures), Intelligent Transport Systems (ITS), Road Safety Audit, Microscopic Traffic Simulation, Fuzzy Logic Modelling, Transport Sustainability, Public Transportation, Economic Analysis of Road Projects etc.

Profile Summary

- Acquired **PhD** in Transportation Engineering from **Gifu University, Gifu, Japan**, M.Tech from Indian Institute of Technology (IIT) Madras India and B.Tech from JNTU Hyderabad, India
- More than **29 years** of experience of R&D and Consultancy works in the areas of Transportation Planning, Traffic Engineering and Road Safety
- **39 out of total 56** R&D and Consultancy projects as Project Leader (**2 International Projects** from the World Bank and FEHRL as Project Leader) – handled a total budget of about **688 Million INR** (7.51 million US\$) as Project Leader
- Published a total of **176** Research Papers, Guided **33** M.Tech and **2** PhD Students
- Received number of recognitions and awards namely Pt. Jawaharlal Nehru Birth Centenary Award 2017 from Indian Roads Congress (IRC), Vishwakarma Award 2016 of Construction Industry Development Council (CIDC) for category of Scientist, SKOCH Order of Merit Award 2015 for SUSTRANS Project, Young Scientist Award 2011-12 from CSIR-CRRI, Two times Bronze Medal Award from Indian Roads Congress (IRC) in 2005 and 2011, Best Article Award in Indian Journal of Traffic Management by ASRTU in 2009, Session Best Presentation Award in SCIS & ISIS 2006, Tokyo, Japan etc.
- Delivered more than **35 Invited Talks** in various international and national forums (other than conferences)
- Received **Certificate of Competence** (Road Safety Auditor) from International Road Federation (IRF) and **Road Safety Auditor Certification** from IRF and Australian Road Research Board (ARRB), Australia
- Certified **Road Safety Audit Trainer and Mentor** in India recognized by IRC and MoRTH, Government of India
- Road Safety Audit for about **4000 Km** of Highways at different stages and **1 National Patent** granted on Driver Evaluation with Car Driving Simulator

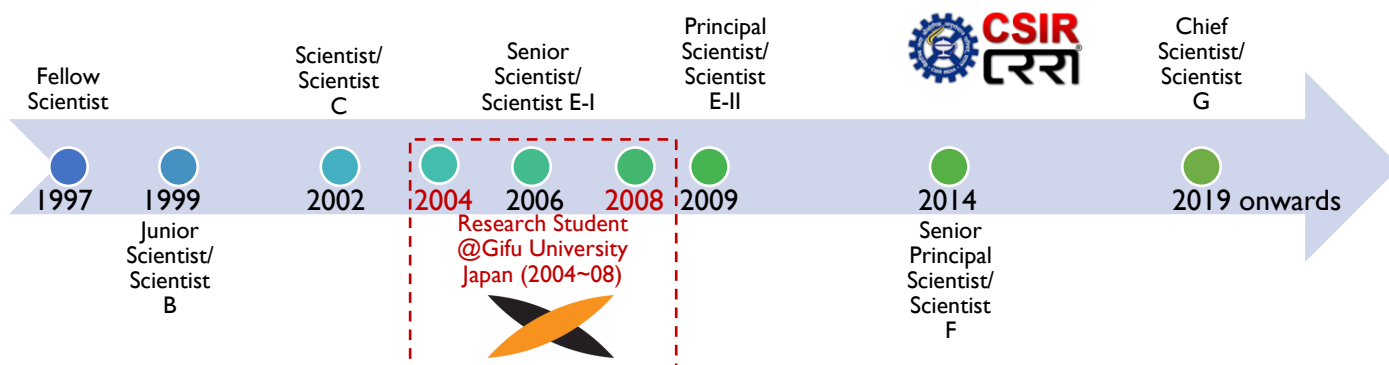
Educational Qualification

Degree	Subject	University/ Institution	Division	Year of Passing
PhD (Doctor of Philosophy)	Transportation Engineering	Graduate School of Engineering, Gifu University, Gifu, JAPAN*	-NA-	2008
M.Tech (Master of Technology)	Transportation Engineering	Indian Institute of Technology (IIT) Madras, Chennai, India*	-NA-	1997
B.Tech (Bachelor of Technology)	Civil Engineering	Jawaharlal Nehru Technological University, Hyderabad, India	First Class with Distinction	1995

* Institute will not award any grade/ rank/ division

1. Professional Experience:

Total of **29 Years** at CSIR-CRRI including 4 years at Gifu Univ., Japan



2. Software Skills



3. Membership to Professional Bodies/ Organizational / National / International Committees.

- Life Member of (a) Institute of Urban Transport (India), (b) Geotechnical Society of India and (c) Indian Roads Congress (IRC)
- Member of World Conference on Transport Research Society (WCTRS)
- Member Secretary for Transport Planning & Traffic Engineering Committee (H-1) of IRC (from 2017 to 2024)
- Member Secretary for Urban Roads and Streets Committee (H-8) of IRC
- Convener, Transport & Logistics Services SSD-II: P1 Panel of BIS (Bureau of Indian Standards)
- Member, Technical Specification Committee for ITMS Project of Delhi Police

4. Fellowships / Scholarships

- Received **Japanese Government Scholarship (Mombukagakusho) 2004-2008** through Ministry of Human Resource and Development (MoHRD), Govt. of India for research studies from April 2004 - March, 2008 leading to complete PhD
- Received **Young Scientist Fellowship of CSIR and CRRI in 2009 to visit Hong Kong** to make presentation in 14th HKSTS (Hong Kong Society for Transportation Studies) International Conference held on December 10th ~ 12th, 2009 on Speed-Flow Equations of Multi-Lane Highways of India
- Received **Gifu University Fellowship 2007 to visit USA** for presenting the research findings on Fuzzy Logic based Microscopic Traffic Simulation in 11th World Conference of Transport Research (WCTR) held at University of California, Berkeley, USA from July 24th ~ 28th, 2007
- Received **Gifu University Fellowship 2005 to visit Bangkok, Thailand** for presenting the research findings on Microscopic Traffic Simulation considering Public Transport Policy in 6th EASTS International Conference held at Bangkok, Thailand from September 21st ~ 24th, 2005
- Recipient of **GATE (Graduate Aptitude Test in Engineering) Scholarship** during 1995 to 1997 for pursuing M. Tech Course at IIT Madras

5. Research Publications - 176 Nos.

Google Scholar *Total Citations= 940; h-index=18; i10-index=27

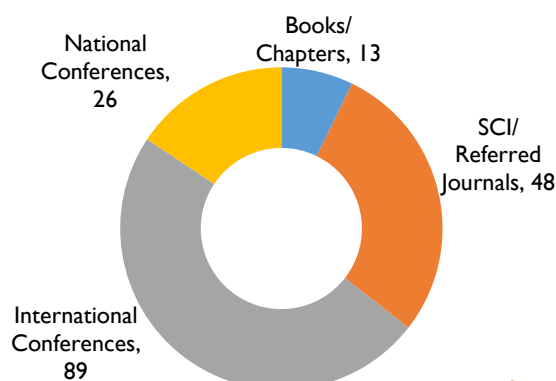
R⁶ ResearchGate *Research Interest Score = 596.3;

Citations = 608; h-index = 13

ELSEVIER Scopus

*Citations = 252; h-index = 9

* as on 22.1.2026



6. Significant Publications in Journals

1. Gupta, A. and **Errampalli, M.** 2024. Optimization of transport sustainability index to conserve resources: A case study of Delhi, India, *Case Studies on Transport Policy*, Elsevier, **18**, 101316. <https://doi.org/10.1016/j.cstp.2024.101316>
2. Gupta, A. and **Errampalli, M.** 2024. A Method for Assessment of Optimum Transport Sustainability Index of an Indian City, *Journal of Scientific and Industrial Research*, **83**, pp. 242-254. <http://doi.org/10.56042/jsir.v83i3.1964>
3. Minal, S., Ravi Sekhar, Ch., and **Errampalli, M.** 2023. Multimodal travel choice determinants in context of travel time reliability. *Journal of Transport*, Institution of Civil Engineers (ICE), **176 (7)**, pp. 430-439 <https://doi.org/10.1680/jtran.20.00091>
4. Advani, A., Sharma, N., **Errampalli, M.**, Rane, Y., Dhyani, R. and Kumar, P. V. P. 2022. Gradual sustainability approach for urban transport through subtle measures. *Journal of Current Science*, **122 (9)**, pp.1036-1043. <http://doi.org/10.18520/cs/v122/i9/1036-1043>
5. Minal, S., Ravi Sekhar, Ch., and **Errampalli, M.** 2022. Estimation of value of travel time based on mixed land use of trip origin and destination. *Journal of Case Studies of Transport Policy*, **10 (2)**, pp. 1207-1222. <https://doi.org/10.1016/j.cstp.2022.04.009>
6. Advani, M., Gupta, N., Velmurugan, S., **Errampalli, M.** and Chandra, S. 2020. Defining and Analyzing Forceful Gap Behavior at Unsignalized Intersection: A Case Study, *Transportation Research Record*, **2674 (8)**, pp. 420-428. <https://doi.org/10.1177/0361198120925258>
7. **Errampalli, M.**, Patil, K. S. and Prasad, C. S. R. K. 2020. Evaluation of integration between public transportation modes by developing sustainability index in India, *Journal of Case Studies of Transport Policy*, **8 (1)**, pp. 180-187. <https://doi.org/10.1016/j.cstp.2018.09.005>
8. **Errampalli, M.**, Kayitha, R., Chalumuri, R. S., Tavasszy, L. A., Borst, J. and Chandra, S. 2020. Assessment of urban freight travel characteristics - A case study of Delhi, *Transportation Research Procedia*, **48**, pp. 467-485. <https://doi.org/10.1016/j.trpro.2020.08.053>
9. **Errampalli, M.**, Mallela, S. S. and Chandra, S. 2020. Calibration of car-following model for Indian traffic conditions, *Transportation Research Procedia*, **48**, pp. 829-839. <https://doi.org/10.1016/j.trpro.2020.08.091>
10. Seetharaman, P., Velmurugan, S., Kalsi, N., Kayitha, R., **Errampalli, M.** and Kannan, S. 2020. Traffic impact assessment for sustainable development in urban areas, *Transportation Research Procedia*, **48**, pp. 3173-3187. <https://doi.org/10.1016/j.trpro.2020.08.165>
11. Minal, S., Ravi Sekhar, Ch., and **Errampalli, M.** 2019. Development of neuro-fuzzy-based multimodal mode choice model for commuter in Delhi. *Journal of IET Intelligent Transport Systems*, **13 (2)**, pp. 243-251. <http://dx.doi.org/10.1049/iet-its.2018.5112>
12. Chalumuri, R. S., Nath R. R. and **Errampalli, M.** 2018. Development and evaluation of an integrated transportation system: A case study of Delhi, *Journal of Transport*, ICE, **171 (2)**, pp. 75-84. <https://doi.org/10.1680/jtran.16.00003>
13. Rao, A. M., **Errampalli, M.** and Gupta, K. 2017. Impact of Odd Even Scheme on Transportation Systems in Delhi, *Journal of Transportation in Developing Economies*, **3 (4)**, pp. 1-12. <https://doi.org/10.1007/s40890-017-0035-z>
14. Kumar, R., Parida, P., **Errampalli, M.** and Bharat Kumar A. V. A. 2017. Does Connectivity Index Of Transport Network Have Impact On Delay For Driver, *Transportation Research Procedia*, **25**, pp. 4988-5002. <https://doi.org/10.1016/j.trpro.2017.05.377>
15. Ravi Sekhar, Ch., Minal. and **Errampalli, M.** 2016. Mode Choice Analysis Using Random Forrest Decision Trees. *Transportation Research Procedia*, **17**, pp. 644-652. <https://doi.org/10.1016/j.trpro.2016.11.119>
16. Arun, A., **Errampalli, M.** and Velmurugan, S. 2016. Selection of a suitable service measure and determination of LOS criteria for Indian multilane interurban highways: A methodological review. *Journal of Transportation in Developing Economies*, **2 (2)**, pp 1-12. <https://doi.org/10.1007/s40890-016-0021-x>
17. Ravi Sekhar, Ch., Minal. and **Errampalli, M.** 2016. Multimodal choice modeling using random forest decision trees. *International Journal of Traffic and Transportation Engineering*, **6 (3)**, pp. 356-367. [http://dx.doi.org/10.7708/ijtte.2016.6\(3\).10](http://dx.doi.org/10.7708/ijtte.2016.6(3).10)
18. **Errampalli, M.** and Kayitha, R. 2016. Traffic Management Plan for Port Blair City, India, *Transportation Research Procedia*, **17**, pp 548-557. <https://doi.org/10.1016/j.trpro.2016.11.109>
19. Pulugurta, S., **Errampalli, M.**, and Kayitha, R. 2015. Fuzzy Logic-Based Travel Demand Model to Simulate Public Transport Policies. *Journal of Urban Planning and Development*, ASCE, **141 (4)**, pp 1-11. [https://doi.org/10.1061/\(ASCE\)UP.1943-5444.0000261](https://doi.org/10.1061/(ASCE)UP.1943-5444.0000261)

20. **Errampalli, M.**, Velmurugan, S. and Deepa, C. 2015. Effect of congestion on fuel cost and time cost on multi-lane highways in India. *International Journal of Traffic and Transportation Engineering*, **5** (4), pp. 458-472. [http://dx.doi.org/10.7708/ijtte.2015.5\(4\).10](http://dx.doi.org/10.7708/ijtte.2015.5(4).10)
21. Ravi Sekhar, Ch., **Errampalli, M.**, Sarada, P., Srivastav, S. and Irshad, M. 2015. Performance Evaluation of Urban Road Network in Delhi Considering Travel Speed. *Journal of Urban Transport*, **14**(1), pp. 27-38.
22. Kumar, R., **Errampalli, M.**, Maan, A., Sinha S. and Akhtar, N. 2015. Estimation of combined exposure factor due to impact of different transport related environmental pollutants air quality and noise level in Delhi city, *World Journal of Science, Technology and Sustainable Development*, **12** (4), pp. 269-280. <https://doi.org/10.1108/WJSTSD-05-2015-0028>
23. Kumar, R., **Errampalli, M.**, Dahiya, A. and Sinha, S. 2015. Analytical Hierarchy Process for Assessing Sustainability Indicators of Public Transportation Systems, Pedestrians and Feeder Services in Developing, *World Journal of Science, Technology and Sustainable Development*, Emerald Publishing, **12** (4), pp. 281-293. <https://doi.org/10.1108/WJSTSD-05-2015-0027>
24. Sarkar, P. K., **Errampalli, M.** and Kumar, M., 2014. Evaluation of Public Transport Policies by Developing Mode Choice Model using Fuzzy Logic Technique. *Highway Research Journal*, Indian Roads Congress (IRC), **7** (2), 2014, pp. 29-37.
25. Gupta, N. J., Chand, S. and **Errampalli, M.** 2014. Review of Feeder system for public transport towards Sustainability. *Indian Journal of Transport Management*, **38** (2), pp. 113-123.
26. Ravi Sekhar, Ch., **Errampalli, M.**, Kanagadurai, B. and Gangopadhyay, S. 2013. Analysis of travel time reliability of an urban corridor using micro simulation techniques, *Journal of Current Science*, **105** (3), pp. 319-329. <https://www.currentscience.ac.in/Volumes/105/03/0319.pdf>
27. **Errampalli, M.**, Okushima, M. and Akiyama, T. 2013. Development of microscopic traffic simulation model with fuzzy logic technique. *Journal of Simulation*, **89** (1), pp. 87-101. <https://doi.org/10.1177/0037549712443716>
28. Velmurugan, S., Padma, S., **Errampalli, M.**, Shukla, A. and Gangopadhyay, S. 2013. A study of factors influencing the severity of road crashes involving drunk drivers and non drunk drivers, *Journal of Research in Transportation Economics*, **38** (1), pp. 78-83. <https://doi.org/10.1016/j.retrec.2012.05.015>
29. Arun, A., Velmurugan, S. and **Errampalli, M.** 2013. Methodological Framework towards Roadway Capacity Estimation for Indian Multi-Lane Highways. *Procedia - Social and Behavioral Sciences*, **104**, pp. 477-486. <https://doi.org/10.1016/j.sbspro.2013.11.141>
30. Sarada, P., Arun, A. and **Errampalli, M.** 2013. Use of Artificial Intelligence for Mode Choice Analysis and Comparison with Traditional Multinomial Logit Model. *Procedia - Social and Behavioral Sciences*, **104**, pp. 583-592. <https://doi.org/10.1016/j.sbspro.2013.11.152>
31. Kumar, M., Sarkar, P. K. and **Errampalli, M.** 2013. Development of Fuzzy Logic based Mode Choice Model Considering Various Public Transport Policy Options. *International Journal of Traffic and Transportation Engineering*, **3** (4), pp. 408-425. [http://dx.doi.org/10.7708/ijtte.2013.3\(4\).05](http://dx.doi.org/10.7708/ijtte.2013.3(4).05)
32. **Errampalli, M.** and Ravinder K. 2013. Evaluation of Traffic System Management Measures using Microscopic Multi Modal Simulation. *Journal of Urban Transport*, **12** (1), pp. 17-27.
33. Velmurugan, S., **Errampalli, M.**, Jakkula, N. and Kayitha, R. 2012. Development of Congestion Cost Equations for Multilane Highways in India, *Transportation Research Record*, **2317** (1), pp. 121-130. <https://doi.org/10.3141/2317-15>
34. Okushima, M., **Errampalli, M.** and Akiyama, T. 2012. Microscopic Fuzzy Urban Traffic Simulation with Variable Demand. *Journal of Civil Engineering and Architecture*, **6** (5), pp. 541-556. <https://doi.org/10.17265/1934-7359/2012.05.003>
35. Padma, S., Velmurugan, S., **Errampalli, M.**, Sitaramanjaneyulu, K., Gangopadhyay, S. and Revathi, A. 2012. Modeling occurrence and severity of road crashes on selected multi-lane carriageways in India, *Highway Research Journal*, Indian Roads Congress, **5** (2), pp. 27-32.
36. **Errampalli, M.**, Velmurugan, S., Ravinder, K. and Nataraju, J. 2011. Development of free speed equations for assessment of road user cost on high speed multi-lane carriageways of India on plain terrain. *Journal of Current Science*, **100** (9), pp. 1362-1372. <https://currentscience.ac.in/Volumes/100/09/1362.pdf>
37. Padma, S., **Errampalli, M.**, Velmurugan, S., Shukla, A. and Gangopadhyay, S. 2011. Modeling time mean speed and space mean speed for heterogeneous traffic conditions, *Journal of Transportation Planning and Technology*, **34** (8), pp. 823-838. <https://doi.org/10.1080/03081060.2011.613593>
38. **Errampalli, M.**, Ravinder, K. and Velmurugan, S. 2011. Evaluation of traffic and transportation characteristics of Delhi. *Journal of Urban Transport*, **10** (1), 29-45.
39. Ravi Sekhar, CH., Kanakadurai, B., **Errampalli, M.** and Gangopadhyay, S., 2011. Genetic algorithm based neural network model for mode choice analysis. *Journal of Urban Transport*, **10** (1), 64-74.

40. Padma, S., **Errampalli, M.**, Shah, P. M., Shukla, A. and Gangopadhyay, S., 2011. A study of road crashes along the high speed corridors of India. *Journal of Road Transport*, Institute of Road Transport (IRT), **3**, pp. 1-14.
41. Velmurugan, S., **Errampalli, M.**, Ravinder, K., Sitaramanjaneyulu, K. and Gangopadhyay, S. 2010. Critical evaluation of roadway capacity of multi-lane high speed corridors under heterogeneous traffic conditions through traditional and microscopic simulation models. *Journal of Indian Roads Congress*, **71** (3), pp. 235-264.¹
42. Okushima, M., Akiyama, T. and **Errampalli, M.** 2009. Fuzzy Logic Based Microscopic Traffic Simulation for Urban Transport Policy Evaluation. *Journal of Infrastructure Planning Review*, **26** (5), Japan Society of Civil Engineers (JSCE), pp. 923-932. <https://doi.org/10.2208/journalip.26.923>
43. Velmurugan, S., **Errampalli, M.**, Ravinder, K. and Gangopadhyay, S. 2009. Updation of road user cost for economic evaluation of road projects. *Indian Journal of Traffic Management*, **33** (3), pp. 205-225. ²
44. **Errampalli, M.**, Okushima, M. and Akiyama, T. 2008. Fuzzy logic based lane change model for microscopic traffic flow simulation. *Journal of Advanced Computational Intelligence and Intelligent Informatics*, **12** (2), 172-181. <https://doi.org/10.20965/jaciii.2008.p0172>
45. **Errampalli, M.**, Okushima, M. and Akiyama, T. 2006. Evaluation of bus priority system with microscopic simulation model. *Journal of Infrastructure Planning Review*, **23** (4), Japan Society of Civil Engineers (JSCE), 945-953. <https://doi.org/10.2208/journalip.23.945>
46. **Errampalli, M.**, Okushima, M. and Akiyama, T. 2005. Microscopic simulation model considering public transport policy. *Journal of Eastern Asia Society for Transportation Studies*, **6**, pp. 2718-2733. <https://doi.org/10.11175/easts.6.2718>
47. **Errampalli, M.**, Reddy, T. S. and Velmurugan, S. 2004. Updation of free speed models through mechanistic principles for Indian conditions. *Journal of Advanced Transportation*, **38** (2), pp. 133-146. <https://doi.org/10.1002/atr.5670380203>
48. Reddy, T. S., Velmurugan, S., **Errampalli, M.** and Ramalingaiah, A. N. 2003. Updation of road user cost and revised software for evaluation of highway projects. *Journal of Indian Roads Congress*, **64** (2), pp. 207-267.³

7. Research Projects

Total **56** Projects (Led **39** Projects as a Leader in one form or other) - handled budget of about **688** million INR (approx. **7.51** million US\$)

S. No	Name of the Project	Year	Client	Role	Cost (INR in Lakhs)
1	Comprehensive Traffic and Transportation Plan for Cities of Nainital and Haldwani	2026	Uttarakhand Public Works Department (UKPWD) Nainital	Project Leader	9.79
2	Review and Vetting of Road Drawings & Design for Haldwani Road Improvement under ADB	2026	Uttarakhand Urban Sector Development Agency (UUSDA) Haldwani	Coordinator	1.7
3	Road Safety Audit of 6668.104 Kms of selected SH and MDR, Development of Detailed Geometric Design Plan (GDP) for 49 Black Spots and Review of present level of road safety in the 2500 Km road length of SH and MDR in the state of Odisha	2026	Odisha Works Department (OWD) Bhubaneswar	Road Safety Auditor	134.1
4	Comprehensive Mobility Plan for Ajmer	2026	Ajmer Development Authority (ADA) Ajmer	Project Leader	11.6
5	Assessment and Evaluation of Implementation Methodology of Intelligent	2025	C-DAC Trivandrum	Project Leader	18

¹ Received Medal for Best Paper in the field of Transportation Engineering for the year 2011 by Indian Roads Congress (IRC)

² Received Best Research Article Award for the year 2009 by Association of State Road Transport Undertakings (ASRTU)

³ Received Medal for Best Paper in the field of Transportation Engineering for the year 2003 by Indian Roads Congress (IRC)

	Traffic Management Systems (ITMS) for Delhi				
6	Methodology to Optimize Composite Transport Sustainability Index for a Typical Indian City	2024	CSIR-CRRI New Delhi	Project Leader	2
7	MiNTraNS Software-Microscopic Traffic Network Simulation Model for Mixed Traffic Conditions	2025	CSIR-CRRI New Delhi	Project Leader	2
8	Performance Evaluation Bus Rapid Transit System in Jaipur	2024	Jaipur Development Authority (JDA) Jaipur	Road Safety Auditor	8
9	Pre-Opening Stage Road Safety Audit of Dwarka Expressway Package 1 and 3	2025	National Highway Authority of India (NHAI)	Road Safety Auditor	19
10	Road Safety Audit and Design for the PWD North and North East Zone Roads in the State of Karnataka: Package 1 [Karnataka State Highways Improvement 3 (KSHIP 3) Project] Bellary and Vijayanagar Districts	2024	Karnataka Public Works Department Bangalore	Road Safety Auditor	25
11	Development of Microscopic Traffic Network Simulation Model for Mixed Traffic Conditions (MiTraNS)	2021	CSIR India	Project Leader	12.5
12	DRIV Theme 5a: Sustainable Mobility (Public Transport and Pedestrian Safety) WP5: Sustainable Integration Index (SII) for PT Modes	2021	IIT Delhi	Project Leader	1.25
13	Road Safety Audit for MDR ODR and VR in the state of Uttar Pradesh	2021	Uttar Pradesh Public Works Department (UPPWD) Lucknow	Road Safety Auditor	16
14	Performance Evaluation Bus Rapid Transit System in Bhopal	2020	Bhopal Municipal Corporation (BMC) and Bhopal City Link Limited (BCLL) Bhopal	Road Safety Auditor	7
15	Road Safety Remedial Measures for Gurugram City Road Network (Safer Roads for Gurugram)	2020	AB InBev India Bangalore	Project Leader	2.6
16	Road Safety Audit for Selected State Highways under Darbhanga Circle in Bihar	2020	Road Construction Department (RCD) Patna Bihar	Road Safety Auditor	9
17	Development of Traffic Circulation Plan around Metro Stations using Microscopic Traffic Simulation Model	2020	Petroleum Conservation Research Association (PCRA) New Delhi	Co Principle Investigator	2.6
18	Megacity Logistics - Metrics Tools and Measurements for Sustainability (MEGALOG)	2018	The World Bank Group Washington D.C. USA	Project Leader	19
19	Development and Application of Technologies for Sustainable Transportation (SUSTRANS)	2017	CSIR India	Champion (Principle Investigator)	222.2
20	Microscopic Traffic Simulation Model for Inter-City Roads for Indian Conditions	2019	CSIR-CRRI New Delhi	Project Leader	1.6
21	Road Safety Assessment and Improvement Plan for Dwarka Flyover	2017	Delhi Development Authority (DDA)	Project Leader	2
22	Road Safety Assessment on 2500 km of SHs & MDRs of Odisha State	2017	Odisha Works Department (OWD) Bhubaneswar	Road Safety Auditor	9

23	Traffic Circulation and Corridor Improvement Study of Savitri Cinema Road from Savitri Cinema to Guru Ravidas Marg	2015	Public Works Department (PWD) NCT of Delhi	Project Leader	2.5
24	Road Safety Audit of Sarita Vihar Flyover with Underpass (RUB) Cloverleaves Approach Roads Slip Roads and Cycle Tracks	2015	Delhi Development Authority (DDA)	Project Leader	2
25	Road Safety Audit during Development and Construction Phase of 4/6 Lanning of National Highways under PPP on DBFO Basis	2015	National Highway Authority of India (NHAI)	Package Leader	9
26	Fuel Efficiency Standards of Heavy Duty Vehicles in India	2015	Shakti Sustainable Energy Foundation New Delhi	Co Project Leader	5
27	Development of Road User Cost Models for High Speed Corridors	2014	CSIR India	Task Leader	70
28	Geometric Design of Intersections Traffic Circulation Plan and Rigid Pavement Design at DSK Township Pune	2013	DSK Pvt Ltd Pune	Project Leader	2.5
29	Traffic and Transportation Plan for Port Blair City	2013	Andaman & Nicobar Administration Port Blair	Project Leader	3.3
30	EUTRAIN European Transport Research Area International Cooperation Activities	2012	Forum of European Highway Research Laboratories (FEHRL) Brussels Belgium	Project Leader	0.3
31	Evaluating Bus Rapid Transit (BRT) Corridor Performance from Ambedkar Nagar to Mool Chand	2012	Transport Department NCT of Delhi	one of Principal Investigators	12
32	Road Safety Audit of Dasve Road Network in Lavasa	2012	LAVASA Pvt Lrd Pune	Co Project Leader	5
33	Feasibility Study on requirement of Pedestrian Underpass/Vehicular Underpasses between Palanpur-Deesa-Radhanpur Section of NH-14 & NH-15	2012	National Highway Authority of India (NHAI)	Road Safety Auditor	2
34	Urban Road Traffic and Air Pollution in Delhi	2009	Society for Indian Automobile Manufactures (SIAM) New Delhi	One of the Principle Investigators	9
35	Fuzzy Logic based Microscopic Traffic Simulation Model to Evaluate Transport Policies	2008	Japanese Government Scholarship	Research Student	
36	Neuro-Computing in Mode Choice	2004	CSIR-CRRI New Delhi	Project Leader	0.2
37	Road Safety audit of NH-5 near Bhubaneswar and Visakhapatnam	2004	National Highway Authority of India (NHAI)	Package Leader	4
38	Updation of Road User Cost Study (URUCS)	2001	Ministry of Road Transport and Highways (MoRTH) New Delhi	One of the Principle Investigators	5
39	Urban Road Traffic and Air Pollution (URTRAP)	2002	Ministry of Petroleum and Natural Gas (MoPNG) New Delhi	One of the Principle Investigators	20

8. Number of Patents/ Copyrights/ Trademarks/ IPR granted/ applied for & applied for & highlights of translational research contributions:

a. Patents

- ❖ National Patent No. 528642 of “Car Driving Simulator with Driver Diagnostics and Training Method” on 17.3.2024

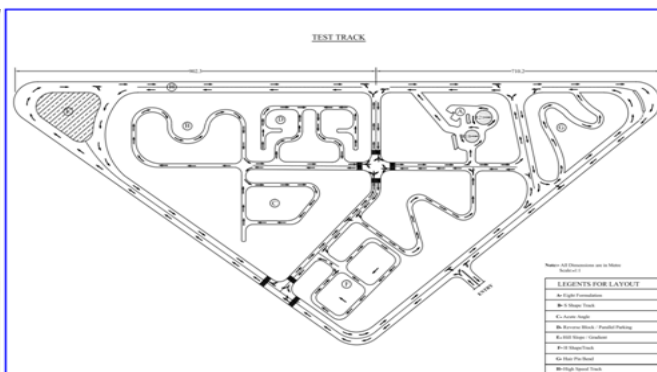
b. Translational research contributions

- ❖ Development of Car Driving Simulator

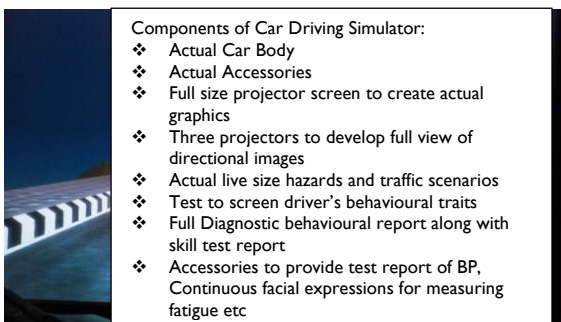
To tackle the griming road safety situation in India, one of the approaches is to train and enhance driving skills of driver. In this direction, a car driving simulator is developed to evaluate driver skills considering psycho-motor traits.



Outer View of Developed Car Simulator



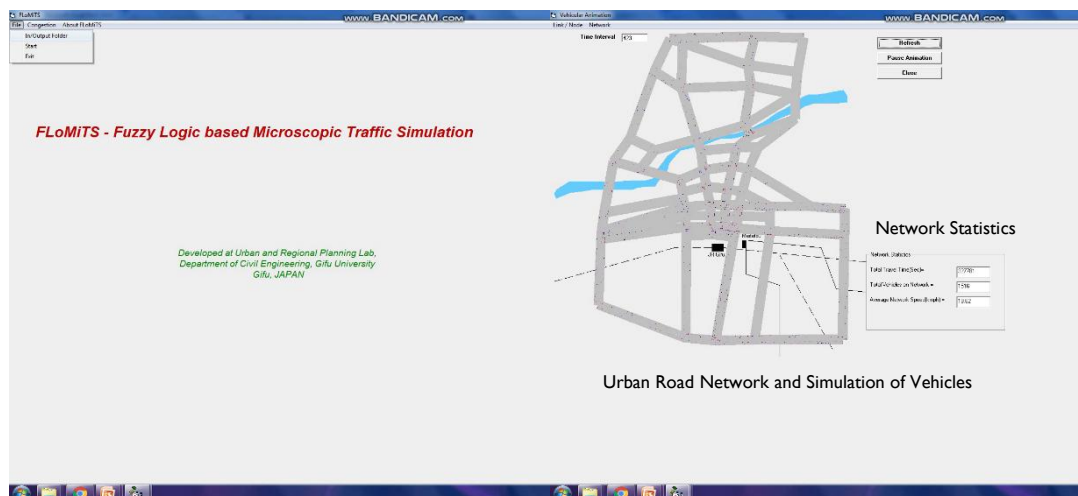
Developed Driving Track in Simulator Software



Some Views of Developed Car Driving Simulator Software

c. **Technologies Developed:**

❖ Fuzzy Logic Based Microscopic Traffic Simulation (FLoMiTS) Software



❖ Fuzzy Logic Based Mode Choice Model (FLoMCM) Software

9. Contribution to IRC/ BIS Codes, Standards and Guidelines

- IRC:SP:30-2019 - Manual on Economic Evaluation of Highway Projects as **Subgroup Convener**
- IS 17736:2021 - Transportation of Over Dimensional Consignment by Road - Guidelines as **Convener**
- IRC:SP:131-2022 - Guidelines for Design and Evaluation of Public and Non-Motorised Transport Systems for Sustainability as **Subgroup Convener**
- IRC:67-2022 - Code of Practice for Road Signs (Fourth Revision) as **Subgroup Convener**
- IS 19225 : 2025 - Public Bus Transport Services - Guidelines as **Convener**

10. Other Significant Achievements

- As **Project Leader**, Successfully Completed **Two International Projects** (EUTRAIN in 2012 sponsored by FEHRL, Belgium and MEGALOG in 2018 sponsored by The World Bank Group, Washington D.C.)
- As **Champion** (Project Leader), successfully completed 12th Five Year Plan Network Project (SUSTRANS) in time by handling a budget of 22.22 Cr along with a total manpower of 55 scientific and technical personnel from three different CSIR labs (CSIR-CSIO, CSIR-NAL, CSIR-CLRI and CSIR-CRRI) and received '**Excellent**' Grade awarded by Sectoral Monitoring Committee (SMC). This project produced **4** Patents, **101** Publications, **11** technology leads having different TRLs, technology commercialization to **4** companies, **5** PhD and **50** M.Tech/ B.Tech thesis and total external cash flow (ECF) generated through sponsored projects acquired by CSIR-CRRI due to the knowledge and expertise gained from this project of about **821.43** Lakhs, secured **one Order-of-Merit Award** from SKOTCH Group and produced **sustainable transport guidelines** from IRC.
- Developed **Microscopic Traffic Simulation Software** to estimate vehicular movements for Single Lane, Two Lane, Four Lane Divided, Six Lane Divided and Eight Lane Divided Carriageway for **Inter-city Roads**
- Developed Road Investment Decision Software (**RIDS**) version 3.0 to estimate EIRR for the feasibility of highway projects
- Organised **Four** National Dissemination Workshops on MEGALOG on Dec 13th 2017, SUSTRANS on 17th March 2017, Driving Simulator 10th Feb 2016 and STIC on March 23rd 2013.
- Organised **Nine** Task Force Committee Meetings (TFC) and **Two** Expert Advisory Meetings (EAG) for the project SUSTRANS which was led by the Candidate as Champion (Project Leader)
- Organised **Industry Meet** on “Safe, Smart and Sustainable Mobility” on July 8th, 2022.
- Organised **International Webinar** on “Social Distancing Norms for Transportation in Covid-19-Need and Challenges” on May 15-16, 2020.

- **Sub-vertical Leader**, Mobility Infrastructure and Planning (MIP) under Civil, Infrastructure and Engineering (CIE) Theme of CSIR
- As **Head of the Division (HOD)**, managed the Transportation Planning Division of CSIR-CRRI for three years from 2015-2018, instrumental in increasing research output in terms of the publications especially in SCI Journals and achieved ECF about 10 crores from externally funded projects
- Member of **Doctoral Research Committee (DRC)** at SPA Delhi and Member of **Doctoral Advisory Committee (DAC)** at CSIR-CRRI for AcSIR for monitoring and guiding PhD Students
- **Faculty** for two subjects on 'Transportation Planning' and 'Soft Computing Techniques' for AcSIR
- **Member in Various Committees** such as Recruitment Interview Committees/ Boards of PGRPE Trainee Scientists at RAB, Screening Committee for Selection of PGRPE Students, PhD Students for AcSIR and Project Assistants
- **Faculty** for different training programmes of CSIR-CRRI
- **Reviewer** for various International Conference CTRG, TPMDC, EASTS etc. and also **International Journals** Transportation Problems, CSTP, Nuero-Computing, Transportation Research etc.

11. Certification

I, the undersigned, certify that to the best of my knowledge and belief, this CV correctly describes myself, my qualifications, and my experience. I understand that any wilful misstatement described herein may lead to my disqualification or dismissal, if engaged.



(Dr. ERRAMPALLI MADHU)