



BIO-DATA

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3. Institution: National Institute of Technology
Karnataka (NITK) Surathkal, Mangalore
– 575 025, India
4. Date of Birth: 02/05/1979
5. Gender: Male

Academic Qualifications

S.No.	Degree	University/ Board	Year of passing	Percentage of marks or CGPA
1	B.E. (Civil Engineering)	Karnataka University, Dharwad	November 2000	81.84%, first with distinction
2	M.E (Transportation Engineering)	SHRI G.S.Institute Of Technology And Science, INDORE. (Rajiv Gandhi Proudयोगiki Vishwavidyalaya, BHOPAL(M.P))	April 2003	85.05% first class with distinction
3	Ph. D (Public Transportation)	Indian Institute of Science, Bangalore, India	June 2015	-

6. Ph. D thesis

Title: *Performance evaluation of public bus transport operations in Karnataka by using non-parametric and multivariate analysis*

Guide Name: **Prof.T.G. Sitharam**

Institute: **Indian Institute of Science, Bangalore, India**

Year of award: **June 2015**

7. Road Safety Auditors certification is obtained in the month of June 2022. I am a certified road safety auditor.

8. Work experience:

Sl No.	Designation	Institute	From	To	Status of Employment
1	Lecturer	S.D.M. College of Engineering and Technology, Dharwad, Karnataka	17/12/2003	12/12/2007	Regular
2	Assistant Professor (AGP of Rs.6,000)	NITK Surathkal, Mangaluru	14/12/2007	13/12/2012	Regular
3	Assistant Professor (AGP of Rs.7,000)	NITK Surathkal, Mangaluru	14/12/2012	15/09/2019	Regular
4	Assistant Professor Grade -I, (Pay Level 12/AGP of Rs.8,000)	NITK Surathkal, Mangaluru	16/09/2019	06/10/2023	Regular
5	Associate Professor, (Pay Level 13A2/AGP of Rs.9,500)	NITK Surathkal, Mangaluru	09/10/2023	Till date	Regular

9. Subject (courses) Taught:

- I. Highway and Airport Geometric Design
- II. Public Transportation
- III. Surveying
- IV. Selected topics in Transportation Engineering
- V. Transportation Design Studio
- VI. Civil Engineering Materials Laboratory
- VII. Traffic Engineering and Management

10. Research Guidance at NITK

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|------------------------|-------------------------|---------------|
| I. Ph. D completed | : 12 (Till August 2026) | |
| II. Ph. D Submitted | : | On-going : 03 |
| III. M.Tech Completed: | 98 | On-going : 05 |
| IV. B. Tech Completed: | 11 | On-going : 00 |

11. Administrative and other Activities

A. Institute Level:

- I. Faculty in-charge for guest houses from August 2015 to February 2018.
- II. Everest Hostel Block Warden from January 2018 to January 2020.
- III. The Resident Engineer In-charge at Works Establishment Section from October 2021 till 18th February 2022.
- IV. Member of Sign Board installation committee.
- V. State Technical Agencies (STA) member for Pradhan Mantri Gram Sadak Yojana (PMGSY) Projects.
- VI. Faculty Advisor for Kannada Vedike activities from May 2023 to till date.

B. Department Level:

- I. DUGC Secretary – [2017 - 2018]
- II. DPGC Secretary – [2020 - 2021]
- III. Chairman for Ph. D (Transportation Engineering) Selection committee June 2019
- IV. Faculty Advisor – M. Tech (Transportation Engineering) [Since 2015 to 2019]

C. Developed Transportation Design Studio Laboratory [April 2019]. Transportation Engineering Lab in-charge [Since 2017 to till September 2021].

D. Awarded for best article in Indian Journal for Transport Management (IJTM) in March 2016 and IEEE conference in September 2017.

E. Organising Secretary for two days international conference on, “Green Highway Construction - A Sustainable Approach”, held on 14th and 15th of September 2020.

F. Coordinator for five days faculty development program (FDP) under TEQIP, held from 22nd to 26th February 2021.

G. Organising Secretary for two days international conference on, “Sustainable Infrastructure: Innovations, opportunities and Challenges (SIIOC-2023)”, held on 20th and 21st of September 2023.

H. Organising Secretary for two days international conference on, “Sustainable Infrastructure: Innovations, opportunities and Challenges (SIIOC-2024)”, held on 30th April and 1st of May 2024.

12. List of Projects undertaken

Sl.No	Funding Agency	Title of the Project	Project Cost	Duration	Role	Current Status
1	TEQIP Phase -01 of SDMCET Dharwad	GIS based Traffic Management Studies on Dharwad, under service to community & Economy- TEQIP	Rs.2.18 lakhs	July 2008 to July 2009	Co-PI	Completed
2	TEQIP Phase -01 of SDMCET Dharwad	GIS based Traffic Management Studies on Hubli, under service to community & Economy- TEQIP	Rs.1.73 lakhs	September 2008 to July 2009	Co-PI	Completed
3	TEQIP Phase -01 of SDMCET Dharwad	Origin and Destination studies for Hubli – Dharwad twin city urban environment. Under service to community & Economy –TEQIP	Rs.1.03 lakhs	July 2010 to July 2011	Co-PI	Completed
4	KSRTC, Mangalore Division	Commuter Perception on Service quality and their Expected level of service of KSRTC, Mangalore Division services	Rs.8000	November 2017 to July 2018	PI	Completed

5.	National Jute Board Government of India	Technology development and engineering performance Evaluation of jute geocells for slope stabilization and Pavement applications	Rs.47,98,052	January 2023 to January 2026	Co-PI	On Going
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13.Publications list

List of Journal publications:

[1] Halyal, Shivaraj, and Mulangi, Raviraj H. “Investigating Travel Time Variability and Reliability of a Bus Rapid Transit System: A Case Study Using ITS-Based AVL and APC Data.” *Innovative Infrastructure Solutions* VOL. 11 No. 5 (2026): Article 240. DOI 10.1007/s41062-026-02648-4.

[2] Sanganaikar, Raghavendra S., Mulangi, Raviraj H., and Yatish, R. G. “Time-Specific Operating Speed Prediction for Selected Vehicle Classes on Rural Highway Curves.” *Innovative Infrastructure Solutions* VOL. 11 No. 8 (2026): Article 454. DOI 10.1007/s41062-026-02816-6.

[3] Sanganaikar, Raghavendra S., Mulangi, Raviraj H., and Yatish, R. G. “Vehicle and Time Specific Crash Modelling on Selected Rural Highway Curves Using Geometric and Speed Parameters: A Transformed Linear Regression Approach.” *Journal of Science and Transport Technology* VOL. 6 No. 1 (2026): pp. 15-28. DOI 10.58845/jstt.utt.2026.en.6.1.15-28.

[4] Charly, Theres, Joshi, Lalita, Manu, Basavaraju, and Mulangi, Raviraj H. “Rapid Air Quality Assessment and Modelling of an Educational Institute Located in a Coastal Region near National Highway.” *Aerosol Science and Engineering* VOL. 9 No. 4 (2025): pp. 475-484. DOI 10.1007/s41810-024-00273-1.

[5] Chiranjeevi, Kondeti, Girish, Yatish Ramagiri, Kumar, Doma Hemanth, Mulangi, Raviraj H., and Shankar, A. U. Ravi. “Optimizing Ball Milling for High-Quality Recycled Aggregates: Examining the Mechanical Processing and Performance of Cement-Treated Bases.” *Journal of Transportation Engineering, Part B: Pavements* VOL. 151 No. 2 (2025): Article 04025016. DOI 10.1061/JPEODX.PVENG-1625.

[6] Chiranjeevi, Kondeti, Kumar, Doma Hemanth, Yatish, R. G., Mulangi, Raviraj H., and Shankar, A. U. Ravi. “Optimization and Characterization of Ferrochrome and Recycled Concrete Aggregate Mixes for Pavement Base Layers.” *Journal of Materials in Civil Engineering* VOL. 37 No. 1 (2025): Article 04024437. DOI 10.1061/JMCEE7.MTENG-18497.

[7] Kumar, Pradeep, Kumar, Doma Hemanth, Bandyopadhyay, Tirtha Sathi, Raveendran, Dhanya, Kolathayar, Sreevalsa, and Mulangi, Raviraj H. “Performance Evaluation of Jute Geocell-Reinforced Sand Subgrade with an Integrated Wooden Anchor Grid.” *International Journal of Geosynthetics and Ground Engineering* VOL. 11 No. 6 (2025): Article 66. DOI 10.1007/s40891-025-00672-5.

[8] Sanganaikar, Raghavendra S., Mulangi, Raviraj H., and Yatish, R. G. “Comparative Analysis of 85th Percentile Operating Speeds for Different Vehicle Categories Under Daytime and Nighttime Conditions: A Preliminary Investigation.” *NIPES - Journal of Science and Technology Research* VOL. 7 No. 4 (2025): pp. 108-129. DOI 10.37933/nipes/7.4.2025.1746.

[9] Shanthappa, Nithin K., Mulangi, Raviraj H., and Manjunath, Harsha M. “Deep Learning-Based Public Transit Passenger Flow Prediction Model: Integration of Weather and Temporal Attributes.” *Public Transport* VOL. 17 No. 2 (2025): pp. 367-390. DOI 10.1007/s12469-024-00365-8.

- [10] Angadi, Vijay S., Halyal, Shivaraj, and Mulangi, Raviraj H. "Spatiotemporal Capacity Estimation of Bus Rapid Transit System Based on Dwell Time Analysis." *Journal of King Saud University - Engineering Sciences* VOL. 36 No. 7 (2024): pp. 485-497. DOI 10.1016/j.jksues.2023.10.001.
- [11] Charly, Theres, Manu, Basavaraju, and Mulangi, Raviraj H. "Assessment of Traffic-Related PAH in Various Environmental Components and Its Associated Health Risk at a Highway Toll Plaza." *Journal of Air Pollution and Health* VOL. 9 No. 2 (2024): pp. 205-224. DOI 10.18502/japh.v9i2.15925.
- [12] Chiranjeevi, Kondeti, Yatish, R. G., Kumar, Doma Hemanth, Mulangi, Raviraj H., and Shankar, A. U. Ravi. "Utilization of Recycled Concrete Aggregates for Pavement Base Courses – A Detailed Laboratory Study." *Construction and Building Materials* VOL. 411 (2024): Article 134122. DOI 10.1016/j.conbuildmat.2023.134122.
- [13] Kumar, Praveen P., George, Varghese, Mulangi, Raviraj H., and Khandri, Akash S. "Evaluating Public Transport Efficiency: A Cross-Regional SFA Approach." *Civil Engineering and Architecture* VOL. 12 No. 5 (2024): pp. 3512-3529. DOI 10.13189/cea.2024.120528.
- [14] Manjunath, Harsha M., and Mulangi, Raviraj H. "Spatio-Temporal Analysis of Public Transit GPS Data: Application to Traffic Congestion Evaluation." *Advances in Transportation Studies* VOL. 62 (2024): pp. 111-124. DOI 10.53136/97912218111177.
- [15] Shanthappa, Nithin K., Mulangi, Raviraj H., and Manjunath, Harsha M. "Origin-Destination Demand Prediction of Public Transit Using Graph Convolutional Neural Network." *Case Studies on Transport Policy* VOL. 17 (2024): Article 101230. DOI 10.1016/j.cstp.2024.101230.
- [16] Halyal, Shivaraj, Mulangi, Raviraj H., and Manjunath, Harsha M. "Short-Term Passenger Demand Modelling Using Automatic Fare Collection Data: A Case Study of Hubli-Dharwad BRTS." *Advances in Transportation Studies* VOL. 59 (2023): pp. 103-122. DOI 10.53136/97912218058267.
- [17] Harsha, Manjunath M., Mulangi, Raviraj H., and Panditharadhya, Bharath J. "Application of Public Transit AVL Data for Evaluation of Delay Variability." *European Transport - Trasporti Europei* No. 94 (2023): Paper No. 2. DOI 10.48295/ET.2023.94.2.
- [18] Kumar, Praveen P., George, Varghese, and Mulangi, Raviraj H. "Assessment of Efficiency and Effectiveness of Bus Transport Organizations Using DEA Incorporating Emissions and Accidents." *European Transport - Trasporti Europei* No. 92 (2023): Paper No. 5. DOI 10.48295/ET.2023.92.5.
- [19] Shanthappa, Nithin K., Mulangi, Raviraj H., and Manjunath, Harsha M. "The Spatiotemporal Patterns of Bus Passengers: Visualisation and Evaluation Using Non-Negative Tensor Decomposition." *Journal of Geovisualization and Spatial Analysis* VOL. 7 No. 1 (2023): Article 9. DOI 10.1007/s41651-023-00139-z.
- [20] Halyal, Shivaraj, Mulangi, Raviraj H., and Manjunath, Harsha M. "Forecasting Public Transit Passenger Demand: With Neural Networks Using APC Data." *Case Studies on Transport Policy* VOL. 10 No. 2 (2022): pp. 965-975. DOI 10.1016/j.cstp.2022.03.011.
- [21] Harsha, Manjunath M., and Mulangi, Raviraj H. "Probability Distributions Analysis of Travel Time Variability for the Public Transit System." *International Journal of Transportation Science and Technology* VOL. 11 No. 4 (2022): pp. 790-803. DOI 10.1016/j.ijst.2021.10.006.
- [22] Mulangi, Raviraj H., Manjunath, Harsha M., and Kulkarni, Vrunda. "Visualization and Assessment of the Effect of Roadworks on Traffic Congestion Using AVL Data of Public Transit." *Journal of Geovisualization and Spatial Analysis* VOL. 6 No. 2 (2022): Article 28. DOI 10.1007/s41651-022-00123-z.

- [23] Chitragar, Srinivas F., Shivayogimath, Chandrashekhar B., and Mulangi, Raviraj H. "Study on Strength and Volume Change Behavior of Stabilized Black Cotton Soil with Different pH of Soil-Lime Mixes for Pavement Subgrade." *International Journal of Pavement Research and Technology* VOL. 14 No. 5 (2021): pp. 543-548. DOI 10.1007/s42947-020-0117-x.
- [24] Harsha, Manjunath M., and Mulangi, Raviraj H. "Impact of Side Friction on Travel Time Reliability of Urban Public Transit." *International Journal of Civil Engineering* VOL. 19 No. 10 (2021): pp. 1221-1237. DOI 10.1007/s40999-021-00622-y.
- [25] Cyril, Anila, Mulangi, Raviraj H., and George, Varghese. "Bus Passenger Demand Modelling Using Time-Series Techniques-Big Data Analytics." *Open Transportation Journal* VOL. 13 No. 1 (2019): pp. 41-47. DOI 10.2174/1874447801913010041.
- [26] Cyril, Anila, Mulangi, Raviraj H., and George, Varghese. "Development of a GIS-Based Composite Public Transport Accessibility Index." *Journal of Urban and Environmental Engineering* VOL. 13 No. 2 (2019): pp. 235-245. DOI 10.4090/juee.2019.v13n2.235245.
- [27] Cyril, Anila, Mulangi, Raviraj H., and George, Varghese. "Level of Service Research of Public Transport Facilities: A Access of Trivandrum City." *International Journal of Recent Technology and Engineering* VOL. 8 No. 2 Special Issue 8 (2019): pp. 1215-1218. DOI 10.35940/ijrte.B1041.0882S819.
- [28] Cyril, Anila, Mulangi, Raviraj H., and George, Varghese. "Level of Service Test on Public Transport Facilities in Trivandrum City." *International Journal of Recent Technology and Engineering* VOL. 8 No. 2 Special Issue 3 (2019): pp. 1019-1022. DOI 10.35940/ijrte.B1191.0782S319.
- [29] Cyril, Anila, Mulangi, Raviraj H., and George, Varghese. "Performance Optimization of Public Transport Using Integrated AHP–GP Methodology." *Urban Rail Transit* VOL. 5 No. 2 (2019): pp. 133-144. DOI 10.1007/s40864-019-0103-2.
- [30] Hanumappa, Devaraj, Mulangi, Raviraj H., and Kudachimath, Nityanand S. "Traffic Characteristics Evaluation and Traffic Management Measures: A Case Study of Dharwad City." *Open Transportation Journal* VOL. 12 No. 1 (2018): pp. 258-272. DOI 10.2174/1874447801812010258.
- [31] Cyril, Anila, Mulangi, Raviraj H., and George, Varghese. "Data Processing Methodology for Big Data in Public Transportation." *International Journal of Pure and Applied Mathematics*, Vol. 120 No. 6 (2018): pp. 649–660.
- [32] Mahadikar, Jagadish, Mulangi, Raviraj H., and Sitharam, Thallak G. "Optimization of Bus Allocation to Depots by Minimizing Dead Kilometers." *Journal of Advanced Transportation* VOL. 49 No. 8 (2015): pp. 901-912. DOI 10.1002/atr.1312.
- [33] Mahadikar, Jagadish, Mulangi, Raviraj H., and Sitharam, Thallak G. "Estimation of Dead Kilometers in Public Transport Routes Operation: A Case Study of Bangalore Metropolitan Transport Corporation." *Indian Journal for Transport Management* VOL. 38 No. 3 (2014): pp. 167-183.
- [34] Mulangi, Raviraj H., Sitharam, Thallak G., Hanumappa, Devaraj, and Hebbal, Siddeshwar N. "Performance Evaluation of State Public Transport Undertakings Using Non-Parametric Techniques." *Indian Journal for Transport Management* VOL. 40 No. 2 (2014): pp. 196-211.
- [35] Mulangi, Raviraj H., Shankar, A. U. Ravi, and George, Varghese. "Traffic Management Proposal for Udupi City." *International Journal of Earth Sciences & Engineering* VOL. 4 No. 5 (2011): pp. 246-252.

[36] Shivapur, Anand V., Mulangi, Raviraj H., and Swamy, H. S. Govardhan. "Use of Inclined Compound Triangular Notch-Weir to Improve Discharge Range." *ISH Journal of Hydraulic Engineering* VOL. 15 No. 3 (2009): pp. 87-96. DOI 10.1080/09715010.2009.10514962

[37] Mulangi, Raviraj H., Shankar, A. U. Ravi, and George, Varghese. "Traffic Management Proposals for Udupi City." *International Journal of Earth Sciences and Engineering*, Vol. 04 No. 05 (2011): pp. 246–252.

List of book chapters.

1. A book chapter on, "Study on Travel Time Characteristics of Hubli-Dharwad Bus Rapid Transit System in Comparison with Heterogeneous Traffic Lane", is published in *Recent Advancements in Civil Engineering* (pp. 701-712). Springer Nature, Singapore. (DOI: 10.1007/978-981-16-4396-5_61)
2. A book chapter on, "Exploring the Application of Data Envelopment Analysis in the Evaluation of Public Transport Organizations", is published in *Lecture Notes in Civil Engineering*, 162, pp. 431-457. (DOI: 10.1007/978-981-16-2826-9_28)
3. A book chapter on, "Study on Physical and Chemical Change Behavior of Stabilized Black Cotton Soil for Pavement Subgrade", is published in *Lecture Notes in Civil Engineering*, 137 LNCE, pp. 115-128. (DOI: 10.1007/978-981-33-6466-0_11)
4. A book chapter on, "Laboratory Investigation of Black Cotton Soil Modified with Bioenzyme and Aggregates for Pavement Subgrade", is published in *Lecture Notes in Civil Engineering*, 105, pp. 341-351. (DOI: 10.1007/978-981-15-8293-6_29)
5. Halyal, S., Mulangi, R. H., Harsha, M. M., & Laddha, H. (2022). "Study on Travel Time Characteristics of Hubli-Dharwad Bus Rapid Transit System in Comparison with Heterogeneous Traffic Lane." In *Recent Advancements in Civil Engineering* (pp. 701-712). Springer Nature, Singapore. https://doi.org/10.1007/978-981-16-4396-5_61 Study on strength and volume change behavior of expansive soil using non-traditional (bio-enzyme) and traditional (lime and bagasse ash) stabilizers", is published in *Lecture Notes in Civil Engineering*, 29, pp. 587-594. (DOI: 10.1007/978-981-13-6713-7_46)
6. A book chapter on, "Mechanical properties of pavement quality concrete produced with reclaimed asphalt pavement aggregates", is published in *Lecture Notes in Civil Engineering*, 25, pp. 543-553. (DOI: 10.1007/978-981-13-3317-0_47)

List of Peer Reviewed Conference Proceedings/presentations

[1] Thanuja, R., Manjunath, Harsha M., Mulangi, Raviraj H., and Shanthappa, Nithin K., 2026, "Prediction Models for Bus Travel Time Using GPS Data," *Recent Advancements in Sustainable and Safe Transportation Infrastructure, Volume 3: Select Proceedings of CTSEM 2024, Transportation Systems and Planning*, U. Jain, V. Srinivasan, M. V. L. R. Anjaneyulu, and M. Parida, eds., Springer Nature, Singapore, pp. 107–118. DOI: 10.1007/978-981-96-8444-1_10.

[2] Charly, Theres, Basavaraju, Manu, and Mulangi, Raviraj H., 2026, "Health Risk Assessment of Heavy Metals in Particulate Matter at a Typical Toll Plaza," *Engineering Soil, Water and Environment for Sustainable Infrastructure: Select Proceedings of SIIOC 2024*, S. Kolathayar and A. Hegde, eds., Springer Nature, Singapore, pp. 37–46. DOI: 10.1007/978-981-96-7552-4_3.

[3] Shanthappa, Nithin K., Mulangi, Raviraj H., and Shukla, Yatharth, 2025, "Effect of Weather on Passengers Access and Egress Mode Choice," *Lecture Notes in Civil Engineering*, Vol. 673, Springer, Singapore, pp. 259–273. DOI: 10.1007/978-981-96-8448-9_18.

- [4] Shanthappa, Nithin K., Mulangi, Raviraj H., and Venkateswari, Narayanam Puja, 2025, "Analyzing the Heterogeneity in Public Transit Demand: Impact of Spatial and Temporal Attributes," *Lecture Notes in Civil Engineering*, Vol. 673, Springer, Singapore, pp. 327–340. DOI: 10.1007/978-981-96-8448-9_23.
- [5] Shanthappa, Nithin K., Mulangi, Raviraj H., and Sanjay, G. P., 2025, "Impact of Diverse Land Use and Population Densities on Access and Egress Mode Choice of Bus Transit System," *Lecture Notes in Civil Engineering*, Vol. 673, Springer, Singapore, pp. 275–286. DOI: 10.1007/978-981-96-8448-9_19.
- [6] Mulangi, Raviraj H., Sanganaikar, Raghavendra S., Babu, K. R. N. Niranjana, and Pandey, Sourabh Kumar, 2025, "Operating Speed Prediction Model for Horizontal Curves of Two-Lane Rural Highways," *Lecture Notes in Civil Engineering*, Vol. 673, Springer, Singapore, pp. 359–369. DOI: 10.1007/978-981-96-8448-9_25.
- [7] Pandey, Sourabh Kumar, Mulangi, Raviraj H., Sanganaikar, Raghavendra S., and Babu, K. R. N. Niranjana, 2025, "Accident Prediction Model for Horizontal Curves on State Highways Using Spatial Variation," *Lecture Notes in Civil Engineering*, Vol. 673, Springer, Singapore, pp. 371–387. DOI: 10.1007/978-981-96-8448-9_26.
- [8] Sanganaikar, Raghavendra S., Mulangi, Raviraj H., Ananya, M. C., Saniya, S., and Gani, Abdul, 2025, "Dependency of Vehicular Operating Speed on Road Geometric Characteristics: A Review," *Lecture Notes in Civil Engineering*, Vol. 673, Springer, Singapore, pp. 191–201. DOI: 10.1007/978-981-96-8448-9_12.
- [9] Chiranjeevi, Kondeti, Kumar, Doma Hemanth, Yatish, R. G., Talkeri, Avinash, Mulangi, Raviraj H., and Shankar, A. U. Ravi, 2025, "Utilization of Ferrochrome and Recycled Concrete Aggregates for Sustainable Pavement Base Layers: A Laboratory Study," *Lecture Notes in Civil Engineering*, Vol. 673, Springer, Singapore, pp. 221–231. DOI: 10.1007/978-981-96-8448-9_15.
- [10] Sanganaikar, Raghavendra S., Mulangi, Raviraj H., Sangeetha, Dhanraj, Mohith Gowda, M. V., and Chandan, M., 2025, "Developing Mathematical Model for Operating Speed on Horizontal Curves of Arterial Roads," *Lecture Notes in Civil Engineering*, Vol. 673, Springer, Singapore, pp. 203–212. DOI: 10.1007/978-981-96-8448-9_13.
- [11] Shanthappa, Nithin K., and Mulangi, Raviraj H., 2024, "Spatio-Temporal Factors Affecting Short-Term Public Transit Passenger Demand Prediction: A Review," *Lecture Notes in Civil Engineering*, Vol. 434, Springer, Singapore, pp. 421–430. DOI: 10.1007/978-981-99-6090-3_34.
- [12] Shanthappa, Nithin K., and Mulangi, Raviraj H., 2024, "Development and Comparison of Deep Learning and Statistical Models to Predict Bus Passenger Flow," *Lecture Notes in Civil Engineering*, Vol. 529, Springer, Singapore, pp. 317–326. DOI: 10.1007/978-981-97-4852-5_25.
- [13] Sanganaikar, Raghavendra S., and Mulangi, Raviraj H., 2024, "Pedestrian Safety Studies on Urban Infrastructure: A Review," *Lecture Notes in Civil Engineering*, Vol. 529, Springer, Singapore, pp. 183–188. DOI: 10.1007/978-981-97-4852-5_14.
- [14] Charly, Theres, Basavaraju, Manu, and Mulangi, Raviraj H., 2024, "Vehicular Pollution and Its Relationship With Meteorological Variables at Toll Plaza During Paryaya Festival in Udupi, Karnataka," *Lecture Notes in Civil Engineering*, Vol. 529, Springer, Singapore, pp. 789–797. DOI: 10.1007/978-981-97-4852-5_64.
- [15] Panditharadhya, B. J., Mulangi, Raviraj H., Shankar, A. U. Ravi, and Amulya, S., 2024, "Experimental Investigation on Fiber-Reinforced Concrete With Bagasse Ash as Binder," *Lecture Notes in Civil Engineering*, Vol. 528, Springer, Singapore, pp. 811–828. DOI: 10.1007/978-981-97-4844-0_63.

[16] Halyal, Shivaraj, Angadi, Vijay S., and Mulangi, Raviraj H., 2024, "Spatiotemporal Speed Characterization of Bus Rapid Transit System," *Lecture Notes in Civil Engineering*, Vol. 529, Springer, Singapore, pp. 267–279. DOI: 10.1007/978-981-97-4852-5_21.

[17] Shanthappa, Nithin K., Mulangi, Raviraj H., and Kumar, Abhishek, 2024, "Travel Decisions and Experiences of Bus Passengers During Extreme Rainfall Conditions," *Lecture Notes in Civil Engineering*, Vol. 529, Springer, Singapore, pp. 297–306. DOI: 10.1007/978-981-97-4852-5_23.

[18] Otageri, Soumya, Kumar, Doma Hemanth, Mulangi, Raviraj H., and Shankar, A. U. Ravi, 2024, "Comparison of Volumetric Properties and Stability of Bituminous Mixes With Shredded Waste Plastic," *Lecture Notes in Civil Engineering*, Vol. 529, Springer, Singapore, pp. 155–165. DOI: 10.1007/978-981-97-4852-5_12.

[19] Shanthappa, Nithin K., Mulangi, Raviraj H., Sharma, Rishabh, Baishya, Himangshu, Panth, Prateek, and Mohtashim, M. D., 2024, "Visualisation and Assessment of Seasonal Variations in Bus Passenger Mobility Pattern," *Lecture Notes in Civil Engineering*, Vol. 529, Springer, Singapore, pp. 307–315. DOI: 10.1007/978-981-97-4852-5_24.

[20] Kudachimath, Nityanand S., Mulangi, Raviraj H., and Das, Bibhuti Bhusan, 2023, "Utilization of Aluminium Refinery Residue (ARR), GGBS and Alkali Solution Mixes in Road Construction," *Lecture Notes in Civil Engineering*, Vol. 260, Springer, Singapore, pp. 1329–1336. DOI: 10.1007/978-981-19-2145-2_97.

[21] Halyal, Shivaraj, Mulangi, Raviraj H., and Manjunath, Harsha M., 2023, "Visualisation of Transit Passenger's Mobility From Automatic Fare Collection Data (AFC): Case Study of Hubli-Dharwad BRTS," *Lecture Notes in Civil Engineering*, Vol. 261, Springer, Singapore, pp. 431–447. DOI: 10.1007/978-981-19-2273-2_28.

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