



### BIO-DATA

1. Name and full correspondence address: Raviraj H. Mulangi, Assistant Professor,  
Department of Civil Engineering,  
NITK Surathkal, Mangalore
2. Email(s) and contact number(s): ravirajmh@nitk.edu.in  
Mobile: +91-9448861733
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 Proudhyogiki 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.

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	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.

10. Research Guidance at NITK

- I. Ph.D completed : 04 ( Till December 2022)
- II. Ph.D Submitted : 01 ( Till December 2022)      On-going : 06
- III. M.Tech Completed : 53      On-going : 08
- IV. B.Tech Completed : 06      On-going : 02

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 18<sup>th</sup> February 2022.
- IV. Member of Sign Board installation committee.

**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.

#### 12. List of Projects undertaken (completed)

Sl.No	Funding Agency	Title of the Project	Project Cost	Duration	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	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	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	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	Completed

#### 13. Publications list

##### List of Journal publications:

1. M.M.Harsha and Raviraj H.Mulangi, “ Probability distributions analysis of travel time variability for the public transit system”, International Journal of Transportation Science and Technology. December 2022, Vol. 11(4), pp. 790-803, DOI: 10.1016/j.ijtst.2021.10.006
2. Raviraj H Mulangi, Harsha, M.M., Vrunda Kulkarni, “ Visualization and Assessment of the Effect of Roadworks on Traffic Congestion Using AVL Data of Public Transit “, Journal of Geovisualization and Spatial Analysis. September 2022, Vol. 6(28), pp. 1-14, DOI: 10.1007/s41651-022-00123-z

3. Shivaraj Halyal, Mulangi, R.H., “Harsha, M.M., “Forecasting public transit passenger demand: With neural networks using APC data.” Case Studies on Transport Police. June 2022, Vol.10(2), pp. 965-975, DOI: 10.1016/j.cstp.2022.03.011
4. Harsha, M.M., Mulangi, R.H., “ Exploring the Application of Data Envelopment Analysis in the Evaluation of Public Transport Organizations“, International Journal of Civil Engineering. April 2021, Vol. 19(10), pp. 1221-1237, DOI: 10.1007/s40999-021-00622-y
5. Chitragar, S.F., Shivayogimath, C.B., Mulangi, R.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. December 2020, Vol. 14(5), pp. 543-548, DOI: 10.1007/s42947-020-0117-x
6. Cyril, A., Mulangi, R.H., George, V., “ Level of service research of public transport facilities: A access of Trivandrum city“, International Journal of Recent Technology and Engineering. August 2019, Vol. 8(2 Special Issue 8), pp. 1215-1218, DOI: 10.35940/ijrte. B1041.0882S819
7. Cyril, A., Mulangi, R.H., George, V., “ Level of service test on public transport facilities in Trivandrum city “, International Journal of Recent Technology and Engineering. July 2019, Vol. 8(2 Special issue 3), pp. 1019-1022, DOI: 10.35940/ijrte. B1191.0782S319
8. Cyril, A., Mulangi, R.H., George, V., “ Performance Optimization of Public Transport Using Integrated AHP–GP Methodology “, Urban Rail Transit. June 2019, Vol. 5(2), pp. 133-144, DOI: 10.1007/s40864-019-0103-2
9. Cyril, A., Mulangi, R.H., George, V., “ Development of a GIS-based composite public transport accessibility index “, Journal of Urban and Environmental Engineering. September 2019, Vol. 13(2), pp. 235-245, DOI: 10.4090/juee.2019.v13n2.235245
10. Cyril, A., Mulangi, R.H., George, V., “Bus passenger demand modelling using time-series techniques-big data analytics“, Open Transportation Journal. May 2019, Vol. 13(1), pp. 41-47, DOI: 10.2174/1874447801913010041
11. Devaraj Hanumappa, Raviraj H. Mulangi, Nityananad S. Kudachimath, “Traffic characteristics evaluation and traffic management measures: a case study of Dharwad city”, The open Transportation Journal. August 2018, Vol. 12, pp. 258-272, DOI: 10.2174/1874447801812010258
12. Jagdish Mahadikar, Raviraj H. Mulangi and T.G. Sitharam (2015), “Optimization of bus allocation to depots by minimizing dead kilometers”, Journal of Advanced Transportation, publisher, Wiley-Blackwell. May 2015, Vol. 49, pp. 901-912 DOI: 10.1002/atr.1312. (Impact Factor 1.813)
13. Raviraj H. Mulangi, T.G. Sitharam, Devaraj Hanumappa and Siddeshwar N.Hebbal, “Performance Evaluation of State Public Transport Undertakings Using Non-Parametric Techniques”, Indian Journal for Transport Management, publisher CIRT, Pune. Vol. October-December 2014, pp.239-255.
14. Raviraj H Mulangi, A U Ravi Shankar and Varghese George,” Traffic Management Proposal for Udupi City”, International Journal of Earth Sciences & Engineering, Vol. 04, No.05 (September 2011), pp. 246-252.

15. Jagadish Mahadikar, Raviraj H. Mulangi and T.G. Sitharam, “Estimation of dead kilometers in public transport routes operation: A case study of Bangalore Metropolitan Transport Corporation”, Indian Journal for Transport Management, publisher CIRT, Pune. Vol. July-September 2014, pp.167-183.
16. Anand V. Shivapur, Raviraj H. Mulangi & H.S. Govardhan Swamy,” Use of inclined compound triangular notch-weir to improve discharge range”, The Indian Society for Hydraulics Journal of Hydraulic Engineering, VOL.15, (No.3) (June 2012) Page Nos 87-96.

### 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 Bio enzyme 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. A book chapter on, “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](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)
7. A book chapter on, “Visualisation of Transit Passenger's Mobility from Automatic Fare Collection Data (AFC): Case Study of Hubli–Dharwad BRTS”, Lecture Notes in Civil Engineering book series (LNCE, volume 261), Springer, Singapore. Pp.431–447, (DOI: 10.1007/978-981-19-2273-2\_28)
8. A book chapter on, “Study on Travel Time Characteristics of Hubli-Dharwad Bus Rapid Transit System in Comparison with Heterogeneous Traffic Lane”, Lecture Notes in Civil Engineering book series (LNCE, volume 172), Springer, Singapore. Pp.701–712, (DOI: 10.1007/978-981-16-4396-5\_61)
9. A book chapter on, “Delay Variability Analysis at Intersections Using Public Transit GPS Data”, Lecture Notes in Civil Engineering book series (LNCE, volume 261), Springer, Singapore. Pp.613–627, (DOI: 10.1007/978-981-19-2273-2\_40)
10. A book chapter on, “Analysis of Bus Stop Delay Variability Using Public Transit GPS Data”, Lecture Notes in Civil Engineering book series (LNCE, volume 261), Springer, Singapore. Pp.301–315, (DOI: 10.1007/978-981-19-2273-2\_21)

## List of Peer Reviewed Conference Proceedings/presentations

1. Cyril, A., Mulangi, R.H., George, V., “Demand-Based Model for Line Planning in Public Transport”, Transportation Research Procedia, Elsevier publication. Vol. 48(2020), pp. 2589-2596, held at I.I.T.B., Mumbai, Maharashtra, INDIA, on 26-31 May 2019 (WCTR 2019).DOI.: 10.1016/j.trpro.2020.08.252.
2. Harsha, M.M., Mulangi, R.H., Kumar, H.D.D., “Analysis of Bus Travel Time Variability using Automatic Vehicle Location Data”, Transportation Research Procedia, Elsevier publication. Vol. 48(2020), pp. 3283-3298, held at I.I.T.B., Mumbai, Maharashtra, INDIA, on 26-31 May 2019 (WCTR 2019).DOI.: 10.1016/j.trpro.2020.08.123.
3. Panditharadhya, B.J., Sampath, V., Mulangi, R.H., Ravi Shankar, A.U., “Mechanical properties of pavement quality concrete with secondary aluminium dross as partial replacement for ordinary portland cement”, IOP Conference Series: Materials Science and Engineering. Vol. 431(3),032011, held at University of Malaya, Kaula Lumpur, Malaysia on August 8-9, 2018.DOI.: 10.1088/1757-899X/431/3/032011.
4. Harsha, M.M., Mulangi, R.H., “Public Transit Travel Time Analysis Using GPS Data: A Case Study of Mysore ITS”, Proceedings of the 3rd International Conference on Communication and Electronics Systems, ICCES 2018(IEEE conference). Vol. 8723923, pp. 407-411, held at Coimbatore, INDIA, on 15-16 October 2018.DOI.: 10.1109/CESYS.2018.8724102.
5. Raviraj H Mulangi, “Performance evaluation of Mysore intelligent transport system”, at 7th International Engineering Symposium - IES 2018, March 7-9, 2018, Kumamoto University, Japan paper I.D: C1-6, Page No.C1-6-1 to C1-6-6, IES2018 proceedings.
6. Raviraj H Mulangi, “Performance Evaluation of ITS project on Mysore city bus transport operations”, IEEE conference (International Conference on Inventive Computing and Informatics (ICICI 2017)), at Coimbatore, INDIA, held on 23-24 November 2017. Paper I.D: ICICI - 268, page No. 503-508
7. Raviraj H Mulangi, “Impact study of ITS project on Mysore city bus transport operations using Non-Parametric Techniques”, IEEE conference (ICCTCEEC), at Vidyavardhaka College of Engineering, Mysuru, Karnataka, INDIA, held on 8-9 September 2017. Paper I.D: CTCEEC - 187, Issue No. 3, page No. 306-310
8. Raviraj H. Mulangi, “Intercity bus passenger transport demand modelling”, 10th TPMDC, at I.I.T.B., Mumbai, Maharashtra, held on 12-14 December 2012. Paper I.D: 195, page No. 91, 10th TPMDC abstract booklet.
9. Harsha M.M, Raviraj H Mulangi, “Public Transit Travel Time Analysis Using GPS Data: A Case Study of Mysore ITS”, IEEE conference, 3rd International Conference on Communication and Electronics Systems (ICCES 2018), at Coimbatore, INDIA, held on 15-16 October 2018. Paper I.D: ICCES-209.
10. Anila Cyril, Raviraj H. Mulangi & Varghese George (2018). “Modelling and Forecasting Bus Passenger Demand Using Time Series Method”. IEEE conference, 7th International Conference on Reliability, Infocom Technologies and Optimization (ICRITO 2018), at Amity University, Noida, held on 29-31 August, 2018, Paper I.D: ICRITO - 162, page No. 460-465.
11. Panditharadhya, B.J., Sampath, V., Mulangi, R.H., Ravi Shankar, A.U., “Mechanical properties of pavement quality concrete with secondary Aluminium dross as partial replacement for Ordinary Portland Cement”, at 14th International Conference on Concrete Engineering and Technology (CONCET) held at Kaula Lumpur, Malaysia on August 8th and

- 9th, 2018. Published as a chapter in IOP Conference Series: Materials Science and Engineering, 431 (2018) DOI:10.1088/1757-899X/431/3/032011 (Scopus Indexed).
12. Anila Cyril, Varghese George and Raviraj H Mulangi, "Electronic Ticket Machine Data Analytics for Public Bus Transport Planning", IEEE conference (ICECDS 2017), at S K R Engineering College, Chennai, Tamilnadu, held on 1-2 August 2017. Paper I.D: SKR-IEEE-ECDS-0413, Issue No. 1, page No. 485-490. DOI:10.1109/ICECDS.2017.8390198
  13. Raviraj H Mulangi, Devaraj H and T.G. Sitharam "A non-parametric efficiency of KSRTC divisions: performance Analysis with respect to physical and financial parameters", ACIDIC 2014 conference, at National Institute of Technology Karnataka, Surathkal, Karnataka, INDIA, held on 19-20 May 2014. Paper I.D: 100, page No. 789-796
  14. T.G. Sitharam and Raviraj H. Mulangi, "Performance Evaluation of State Road Transport Undertakings of Karnataka", 10th CPPM, at I.I.M. Bangalore, Karnataka, held on 3-5 August 2015.
  15. T.G. Sitharam, Siddeshwar N. Hebbal, Devaraj Hanumappa and Raviraj H. Mulangi, "Performance evaluation of road transport undertakings in Karnataka: a comprehensive case study using data envelopment analysis", to be held at the conference of IES-2015, at Kumamoto, Japan, paper I. D: C1-8, Page No.C1-8-1 to C1-8-6, IES2015.proceedings, held on 4-6 March 2015.
  16. Devaraj Hanumappa, Parthasarathy Ramachandran, T.G. Sitharam, Lakshmana S and Raviraj H. Mulangi, "Performance evaluation of premium services in Bangalore metropolitan transport corporation (BMTTC)", Transportation Research Procedia, Elsevier publication. Vol. 17(2016), pp.184-192, held at I.I.T.B., Mumbai, Maharashtra, INDIA, on 10-12 December 2014.
  17. Anand V. Shivapur, Raviraj H. Mulangi & H.S. Govardhan Swamy, " Use of inclined compound triangular notch-weir to improve discharge range", HYDRO-2008, at Jaipur, held on 15-16 December 2008, Page Nos 490-498.