

Rushikesh B. Amrutsamanvar

PH.D. CANDIDATE · DRIVER BEHAVIOR MODELING, INTELLIGENT TRANSPORTATION SYSTEMS

Research Scholars Laboratory (BSB-238), Building Science Block, Indian Institute of Technology Madras

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Education

Indian Institute of Technology Madras (IITM)

Tamilnadu, India

PH.D. IN CIVIL ENGINEERING (TRANSPORTATION ENGINEERING)

July 2013 - July 2020

Thesis Submitted

- Modeling of Power Two Wheeler Movements in Multi-Class Disordered Traffic
- Advisor: Dr. Lelitha Devi Vanajakshi
- Coursework CGPA: 7.5

Sardar Valabhbhai National Institute of Technology, Surat (SVNIT)

Gujrat, India

M.TECH (TRANSPORTATION ENGINEERING & PLANNING)

July 2011 - 2013

- Assesment of Travel Time Reliability on Indian Arterial Roads
- Advisor: Dr. Gaurang J. Joshi & Dr. Chalumuri Ravisekhar
- Coursework CGPA: 8.54

Shivaji University, Kolhapur

Maharashtra, India

BACHELOR OF ENGINEERING (CIVIL ENGINEERING)

July 2005 - 2009

- First Class: 65.76%
- Undergraduate Project: Evaluating the Performance of Geopolymer Concrete for Construction Works in India

Government Polytechnic, Kolhapur

Maharashtra, India

DIPLOMA IN CIVIL ENGINEERING

July 2002 - 2005

- First Class with Distinction: 65.44%

Shri Shahu Highschool, Kagal

Maharashtra, India

HIGHER SECONDARY SCHOOLING (MAHARASHTRA STATE BOARD: MARATHI MEDIUM)

July 2002

- Percentage Marks Scored : 70.13%

Skills

Programming	Matlab, R
Softwares	SPSS, VISSIM, MX-Road, Inkscape, Carmaker (elementry)
Office Suites	LaTeX, Microsoft Office, Libre Office
Languages	English, Hindi, and Marathi

Experience

Sankalp Construction

Ichalkaranji, Maharashtra

ENGINEER TRAINEE & SITE ENGINEER

July 1, 2009 - March 31, 2011

Central Road Research Institute (CRRI), India

New Delhi, India

RESEARCH INTERN (TRAFFIC AND PLANNING ENGINEERING LAB)

May, 2012 - July, 2012

- Advisor: Dr. Chalumuri Ravisekhar
- Worked for the project of development of Indian Highway Capacity Manual (Indo-HCM)
- Head of the field survey group
- Planning and execution of multiple field surveys for different research groups from Traffic and Planning Engineering lab

Central Road Research Institute (CRRI), India

New Delhi, India

GRADUATE RESEARCH (TRAFFIC AND PLANNING ENGINEERING LAB)

November, 2012 - April, 2013

- Advisor: Dr. Chalumuri Ravisekhar
- Selected for carrying out the graduate research work for the Development of the Highway capacity manual of India (Indo-HCM: Work Package-9). The project was sponsored by Planning commission, Government of India.
- Received appreciation certificate, and name is included in the working team of Indo-HCM:Work Package-9

- CE6780: Traffic Engineering and Management (Even semester-2015, 2016, 2017)
- CE5740: Traffic Flow Theory (Odd semester-2015, 2016, 2017)
- CE5730: Intelligent Transportation Systems (Even semester 2015, 2016, 2017)
- Worked as coordinator for summer interns (B.Tech and M.Tech) in Department of Civil Engineering (2017 & 2018)

Publications

Journal Publications

- **Amrutsamanvar R.**, Muthurajan, B., and Vanajakshi, L. (2019) Extraction and Analysis of Microscopic traffic Data in Disordered Heterogeneous Traffic Conditions, *Transportation letters*.
[DOI: 10.1080/19427867.2019.1695563](https://doi.org/10.1080/19427867.2019.1695563)
- **Amrutsamanvar R.** (2020) Modeling Lateral Movement Decisions of Powered Two Wheelers in Disordered Heterogeneous Traffic Conditions, *Transportation letters*.
[DOI: 10.1080/19427867.2020.1839718](https://doi.org/10.1080/19427867.2020.1839718)
- Deshpande P. **Amrutsamanvar, R.** and Subramanian S. (2020) Vehicle Path Generation and Tracking in Mixed Road Traffic. *IFAC-PapersOnLine*, 53(1), 524-529.
[DOI: 10.1016/j.ifacol.2020.06.088](https://doi.org/10.1016/j.ifacol.2020.06.088)
- Chepuri, A., Borakanavar, M., **Amrutsamanvar, R.**, Arkatkar, S., Joshi, G. (2018) Examining Travel Time Reliability under Mixed Traffic Conditions - A Case Study of Urban Arterial Roads in Indian cities. *Asian Transport Studies: 5(1)*, 30-46.
[DOI: 10.11175/eastsats.5.30](https://doi.org/10.11175/eastsats.5.30)

Conference- Book Chapters

- **Amrutsamanvar, R.**, Joshi, G., Ravisekhar C., Arkatkar S. (2020) Empirical Travel Time Reliability Assessment of Indian Urban Roads. In: *Arkatkar S., Velmurugan S., Verma A. (eds) Recent Advances in Traffic Engineering. Lecture Notes in Civil Engineering, vol 69 (11), pp. 165-182*, Springer, Singapore.
[DOI: 10.1007/978-981-15-3742-4_11](https://doi.org/10.1007/978-981-15-3742-4_11)

International Conferences

- **Amrutsamanvar, R.**, Vanajakshi L. (2021) Staggered Vehicle Following Model for Multi-Class Disordered Traffic Conditions. *100th Annual Meeting Transportation Research Board*, Washington DC, USA.
(Under Review)
- **Amrutsamanvar, R.**, Vanajakshi L. (2019) Modeling Path Choice Behavior of Powered-Two-Wheelers in Disordered Heterogeneous Traffic. *Presented In: 98th Annual Meeting Transportation Research Board*, Washington DC 12-17 January, 2019.
- **Amrutsamanvar, R.**, Vanajakshi L. (2017) Empirical Analysis of disordered heterogeneous traffic flow. *Presented In: ASCE India Conference: Urbanization Challenges in Emerging Economies*, New Delhi, India 12-14 December, 2017.
- Dhivyabharathi, B., Fulari, S., **Amrutsamanvar, R.**, Vanajakshi L., Subramanian, S., and Panda, M. (2015) Performance Comparison of Filtering Techniques for Real Time Traffic Density Estimation under Indian Urban Traffic Scenario. *In proceedings: IEEE 18th International Conference on Intelligent Transportation Systems (ITSC)*, Gran Canaria, Spain: September 15-18, 2015.
[DOI:10.1109/ITSC.2015.23](https://doi.org/10.1109/ITSC.2015.23)
- **Amrutsamanvar, R.**, Joshi, G., Ravisekhar C. (2013) Relation between Travel Time Reliability and Space Mean Speed under Mixed Traffic Conditions - A Case Study of Urban Arterial in Surat. *10th EASTS conference on "Towards a harmonized transport society"*, Taipei, Taiwan: 9-12 December, 2013.

Domestic Conferences

- **Amrutsamanvar, R.**, Joshi, G., Ravisekhar C., Arkatkar S. (2018) Empirical Travel Time Reliability Assessment of Indian Urban Roads. *Presented in : Recent Advances in Traffic Engineering* Surat, India: 11-12 August 2018.
- **Amrutsamanvar, R.**, Vanajakshi L. (2017) A Semi-Automated Image Processing Solution for Extracting Microscopic Traffic Data. *Presented In: 10th Urban Mobility India and CODATU XVII Conference*, Hyderabad, India 6-8 November, 2017.
- Fulari S., **Amrutsamanvar, R.**, Raj V., Vanajakshi L. (2014) Delay Estimation on Urban Arterials Using Vehicle Based Sensor Data. *Presented in : Colloquium on Transportation Systems Engineering and Management* Calicut, India: May 2014.

Extracurricular Activity

Indian Institute of Technology, Madras

Chennai, India

July 2013 - present

- Worked as a member of the volunteering committee in various workshops taking place in the department

Sardar Valabhbhai National Institute of Technology (SVNIT)

Surat, India

July 2011- 2013

- Worked as a member of the volunteering committee in various workshops taking place in the department under TEQIP.
- Core committee member in the organization of domestic conference named RATE 2012 in the department.

Shivaji University (KIT's college of Engineering, Kolhapur)

Kolhapur, India

July 2005- 2009

- Selected as a member of STUDENT DISCIPLINE COUNCIL of KIT's College of Engineering for the sessions 2007-08 and 2008-09
- Worked as an organizer in the committee of PIONEER-2007 (A National Level Technical Paper Presentation Competition)- 2006-07
- Worked as an organizer in the committee of PIONEER-2008 (A National Level Technical Paper Presentation Competition)- 2007-08
- Presented a Technical Paper in PIONEER-2008 (A National Level Technical Paper Presentation Competition)- 2007-08
- Participated in various events CEA-2007 (A National Level Technical Competition) at Indian Institute of Technology Madras 2006-07
- Participated in various events AAKAR-2007 (A National Level Technical Competition) at Walchand Collage of Engineering, Sangli India 2006-07
- Participated in various events CEA-2008 (A National Level Technical Competition) at Indian Institute of Technology Madras 2007-08
- Participated in various events AAKAR-2008 (A National Level Technical Competition) at Walchand Collage of Engineering, Sangli India 2007-08

Shri Shahu Highschool, Kagal

Kagal, India

July 1998- 2001

- Selected as a cadet for National Cadet Corps (NCC): C Certificate
 - Indian Army Division, 5 maharashtra battalion kolhapur (Maratha Light Infantry)
- Selected for Annual Training Camp as a cadet in Kolhapur
- Selected for official NCC parade at district office (2000 & 2001)

Achievements & Awards

2017	Best Research Paper Award , in 10 th Urban Mobility India and CODATU XVII Conference for the research paper titled- "A Semi-Automated Image Processing Solution for Extracting Microscopic Traffic Data"	Hyderabad, India
2020	Best Presentation Award , in 6 th Conference on Advances in Control and Optimization of Dynamical Systems (ACODS 2020) for the research paper titled- "Vehicle Path Generation and Tracking in Mixed Road Traffic."	Chennai, India