CURRICULUM VITAE

Hari Krishna Gaddam
Date of Birth: 14-06-1984

Present Address:
House No: 301, Nalanda Apartments,
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EDUCATION _____

2014 - Present	Ph.D. Transportation Engineering – 9.00 CGPA Indian Institute of Technology Delhi (IITD), Delhi, India Advisor: Prof. K. Ramachandra Rao, Ph.D.
2007 - 2009	M.Tech, Transportation Engineering- 8.99 CGPA National Institute of Technology Warangal (NITW), Telangana, India Advisor: Prof. CSRK Prasad, Ph.D.
2002 - 2006	B.TECH, Civil Engineering – 76.91% Jawaharlal Nehru Technological University Anantapur (JNTU-A) (Campus), Andhra Pradesh, India

ACADEMIC EMPLOYMENT _____

August 2012 - December 2013	**Assistant Professor – Senior,** Sir Padampat Singhania University (SPSU) - (JK Cement group), Udaipur, Rajasthan, India.
May 2011 - May 2012	**Assistant Professor**, Vellore Institute of Technology (VIT), Vellore, Tamilnadu, India.
May 2010 - April 2011	**Assistant Professor**, B. S. Abdur Rahman University (BSAU), Chennai, Tamilnadu, India.

INDUSTRIAL EMPLOYMENT _____

June 2006 -   **Management Trainee**, TATA Projects Ltd. (TPL),
April 2007   Hyderabad, Telangana, India.

NATIONAL AWARDS AND FELLOWSHIPS_____

2017   **International Travel Grant**
              Awarded by Science and Engineering Research Board (SERB), Department of
              Science and Technology (DST)
              Awarded for to attend a conference in Washington, D.C.

2017   **Fellowship for international Travel**
              Awarded by Ministry of Urban Development (MOUD), Government of India

2014-18   **Fellowship for Pursuing Ph.D.**
              Awarded by Ministry of Human Resource Development (MHRD), Government of
              India

2007-09   **Fellowship for Pursuing Masters**
              Awarded by Ministry of Human Resource Development (MHRD), Government of
              India

PUBLICATIONS _____

PEER-REVIEWED JOURNAL ARTICLES AND INVITED BOOK CHAPTERS

1. **Hari Krishna Gaddam** and K. Ramachandra Rao. "KdV-Berger Solution and Local Cluster Effect of Two-Sided Lateral Gap Continuum Model". *International Journal of Modern Physics Part B.* Accepted.

2. **Hari Krishna Gaddam** and K. Ramachandra Rao. 2018. "Speed-Density functional relationship for heterogeneous traffic data on urban arterials –statistical and theoretical investigation". *Journal of Modern Transportation*. https://doi.org/10.1007/s40534-018-0177-7.

3. Arroju, Ramu, **Hari Krishna Gaddam**, Lakshmi Devi Vanumu, and K. Ramachandra Rao. 2015. "Comparative evaluation of roundabout capacities under heterogeneous traffic conditions." *Journal of Modern Transportation*, Vol. 23, no. 4: 310-324. https://doi.org/10.1007/s40534-015-0089-8.

4. **Hari Krishna Gaddam**, Anjaneyulu Chinthireddy, and K. Ramachandra Rao. 2016 "Comparison of Numerical Schemes for LWR Model under Heterogeneous Traffic Conditions." *Periodica Polytechnica. Transportation Engineering*, Vol.44, no. 3, pp: 132. https://doi.org/10.3311/PPtr.8297.

5. **Hari Krishna Gaddam** and K. Ramachandra Rao. 2018. "Empirical Investigation of Multiclass Vehicle Behaviour under Heterogeneous Traffic Flow Conditions". *European Transport Journal*, Vol.6, no.68, pp: 1-13.

MANUSCRIPTS IN PREPARATION/SUBMITTED FOR REVIEW _____

1. **Hari Krishna Gaddam** and K. Ramachandra Rao. "A Two-Sided Lateral Gap Continuum Model and Its Numerical Analysis for Non-lane Based Heterogeneous Traffic". Journal of Intelligent Transportation Systems (JITS) - under communication.

2. **Hari Krishna Gaddam** and K. Ramachandra Rao. "Calibration and validation of non-lane based macroscopic continuum model using global search algorithms". Transportmetrica –A- under communication.

3. **Hari Krishna Gaddam** and K. Ramachandra Rao. "Vehicle Behavioural Attributes and Macroscopic Flow Characteristics under Non-Lane Based Heterogeneous Traffic flow". Canadian Journal of Civil Engineering - under communication.

4. **Hari Krishna Gaddam**, Aditya Arya, Lakshmi Devi Vanumu, and K. Ramachandra Rao. "Optimization of Pedestrian Simulation Parameters: A Case Study of Classroom Evacuation". Journal of traffic and Transportation Engineering - under communication.

5. Vaibhav Negi, **Hari Krishna Gaddam**, K. Ramachandra Rao., "Driver Gap Acceptance Characteristics at Roundabouts and Meta-analysis of Recent Studies in India", Transportation in Developing Economies- under communication.

PEER REVIEWED CONFERENCE PROCEEDINGS_____

1. **Hari Krishna Gaddam**, K. Ramachandra Rao., "Macroscopic Continuum Models for Non-Lane Based Heterogeneous Traffic Environment- A Methodological Review". *Transportation Research Board (TRB) - 98th Annual Meeting*, Washington D.C. USA, January 2019.

2. **Hari Krishna Gaddam**, K. Ramachandra Rao., "Calibration of Non-Lane based Macroscopic Continuum Model -Applying Global Search Algorithms". *Mathematics Applied in Transport and Traffic Systems (MATTS-2018)*, TU Delft, Netherlands, October 2018.

3. **Hari Krishna Gaddam**, Aditya Arya, Lakshmi Devi Vanumu, and K. Ramachandra Rao. "Calibration and Validation of Pedestrian Simulation Parameters: A Case Study of Classroom Evacuation". *Transportation Research Board 97th Annual Meeting Transportation Research Board (TRB)*. No. 18-02911. Washington, D.C, USA, January 2018.

4. **Hari Krishna Gaddam**, K. Ramachandra Rao., "Higher-Order Continuum Model and Its Numerical Solution for Heterogeneous Traffic Flow with Non-lane discipline". *12th edition of Traffic and Granular Flow (TGF-17)*, George Washington University, Washington, D.C, USA, July 2017.

5. Lakshmi Devi Vanumu, Aditya Arya, **Hari Krishna Gaddam**, and K. Ramachandra Rao. "Modelling Emergency Evacuation of Classroom with Different Age Profiles". *9th Pedestrian and Evacuation Dynamics (PED-2018)*. Lund, Sweden, August 2018.

6. Vaibhav Negi, **Hari Krishna Gaddam**, K. Ramachandra Rao., "Driver Gap Acceptance Characteristics at Roundabouts and Meta-analysis of Recent Studies in India", Recent Advances in Traffic Engineering (RATE- 2018). National Conference, Sardar Vallabhbhai National Institute of Technology, Surat, Gujarat, India, August 2018.

7. Mohit Kumar Singh, **Hari Krishna Gaddam**, Vanumu, Lakshmi Devi., K Ramachandra Rao. "Traffic Data Extraction Using MATLAB® Based Tool". In Transportation Planning and Implementation Methodologies for Developing Countries (TPMDC-2016), International Conference, Indian Institute of Technology, Bombay. pp. 1–9. 2016.

8. **Hari Krishna Gaddam**, Mohit Kumar Singh, Lakshmi Devi Vanumu, K. Ramachandra Rao., "Calibration of Vissim for Roundabouts Using Genetic Algorithm", PTV VISSIM User group meeting- Urban Mobility India, New Delhi. 2015.

TRAINING COURSES/CONFERENCES ATTENDED

1. GIAN course on "Pedestrian Dynamics – Empirics and Modelling" conducted during 8th to 14th November 2017 at Indian Institute of Technology, Delhi, India.

2. Workshop on "Road safety audit: moving India forward in safety", sponsored by World Bank at IIT Delhi on 22nd May, 2015.

3. 25th International Course and Symposium on "Transportation Planning and safety", held at the Indian Institute of Technology Delhi (India) from 29th November to 5th December, 2015. http://www.trippsymposium2015.in/.

4. QIP short term course on "Traffic Data Collection Methods and Technologies (TDCM-2014)" organized by Department of Civil Engineering, IIT Delhi during 19th to 23rd May 2014.

5. International workshop on "Urban Freight a Global Perspective" organized by TRIPP, IIT Delhi during 7th -8th April 2014.

6. QIP short term course on "Principles and Applications of GIS And Remote Sensing" sponsored by AICTE, New Delhi conducted by IISc-Bangalore during 28th February to 4th March 2011.

7. Workshop conducted in IIT Madras on "Sustainable Concrete Pavements, Practices and directions" held on 13th October 2010.

TEACHING EXPERIENCE _____

INSTRUCTOR OF RECORD

Odd semester 2012	**Pavement Analysis and Design,** SPSU
Even semester 2013	**Geotechnical Engineering,** SPSU
Odd semester 2013	**Surveying-I**, SPSU
Odd semester 2011	**Highway Engineering,** VIT University
Even semester 2012	**Rail and Airport Engineering,** VIT University
Odd semester 2010	**Environmental Engineering-I,** BSAU
Even semester 2011	**Surveying-I,** BSAU

TEACHING ASSISTANTSHIPS

Odd semester 2015	**Traffic Engineering Lab (CEL 783),** Indian Institute of Technology Delhi (IITD), India.
Even semester 2015	**Traffic Flow Modelling and Simulation Lab (CEL 843),** Indian Institute of Technology Delhi (IITD), India.
Even semester 2016	**Introduction to Transportation Engineering Lab (CVL 261),** Indian Institute of Technology Delhi (IITD), India.

TEACHING INTERESTS _____

Core Lectures: Traffic Engineering, Highway Engineering, Traffic flow modelling and simulation, Statistics for Transportation applications, Application of R for statistical analysis.

Other Lectures: Surveying, Geotechnical Engineering, Pavement Analysis and Design, Railway and Airport Engineering.

Programmable Software's: MATLAB, R, MINITAB, SPSS.

Simulation Packages: PTV Vissim, PTV Viswalk, SIDRA.

RESEARCH INTERESTS _____

Traffic flow theory, simulation and Modelling. In specific, microscopic and macroscopic modelling of vehicular and pedestrian flow, roundabout design and analysis, calibration and validation of simulation models, pedestrian emergency evacuation studies.

REFERENCES_____

1. **Dr. K. Ramachandra Rao**, Professor

   Department of Civil Engineering and Transportation Research and Injury Prevention Programme (TRIPP)

   Indian Institute of Technology Delhi

   Hauz Khas, New Delhi - 110 016, India

   Phone: +91-11-2659-1235

   Email: rrkalaga@civil.iitd.ac.in

2. **Dr. Geetam Tiwari**, Professor

   Department of Civil Engineering and Transportation Research and Injury Prevention Programme (TRIPP)

   Indian Institute of Technology Delhi

   Hauz Khas, New Delhi - 110 016, India.

   Phone: +91-11-26591047

   Email: geetamt@gmail.com

3. **Dr. CSRK Prasad**, Professor

   Department of Civil Engineering

   National Institute of Technology Warangal

   Warangal, Telangana, India – 506004

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