

## Curriculum Vitae

### Dr. RAJAT RASTOGI

#### Associate Professor

Department of Civil Engineering

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#### I. Experience

1. Associate Professor in Department of Civil Engineering, Indian Institute of Technology Roorkee, from October 23, 2012 with basic Rs 54,320.00 in the pay band of Rs 37400 – 67000 with Academic Grade Pay Rs 9500.
2. Assistant Professor in Department of Civil Engineering, Indian Institute of Technology Roorkee, from June 30, 2009 to October 22, 2012 with basic Rs 37400 in the pay band of Rs 37400 – 67000 and Grade pay Rs 9000.
3. Assistant Professor in Department of Civil Engineering, Indian Institute of Technology Roorkee, from June 30, 2006 with basic Rs 30000 in the pay band of Rs 37400 – 67000 and Grade pay Rs 8000 (old basic Rs14520 in the pay scale of 12000-420-18300).
4. Assistant Professor in Civil Engineering Department, Motilal Nehru National Institute of Technology, Allahabad, from July 28, 2005 to June 28, 2006 with last basic Rs13260 in the pay scale of 12000-420-18300.
5. Lecturer (senior scale) in the Department of Civil Engineering, Engineering College Kota, from August 20<sup>th</sup>, 1996 to July 26<sup>th</sup>, 2005 with last basic 12600 in the scale of 10000-325-15200.
6. Lecturer in Department of Civil Engineering, Engineering College Kota, from August 20<sup>th</sup>, 1990 to August 19<sup>th</sup>, 1996 with last basic 2800 in the scale of 2200-75-4000 (pre-revised).
7. Research Experience from July 1998 to July 2001 at Indian Institute of Technology Bombay.

#### II. Academics

<u>Degree</u>	<u>University</u>	<u>Year</u>	<u>Percentage</u>
Doctor of Philosophy	Indian Institute of Technology Bombay, Mumbai.	2002	9.25 CGPA
P. G. Diploma in Ecology & Environment	Indian Institute of Ecology and Environment, New Delhi.	1997	72.10
ME Highway Engineering	Punjab Engineering College, Panjab University, Chandigarh.	1990	76.96 Distinction

BE Civil Engineering	Punjab Engineering College, Panjab University, Chandigarh.	1988	73.46 Honours
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### III. Publications and Presentations

#### In International Refereed Journals

- Jain, U. and Rastogi, R. (2017) Re-examination of PV<sup>2</sup> criteria for Developing Pedestrian Crossing Warrants. In Transport Research Procedia (under process).
- Ahmad, A. and Rastogi, R. (2017), An Approach to Deal with Heterogeneity on Roundabouts. International Journal of Civil Engineering, vol., 1-14. DOI: 10.1007/s40999-017-0189-4
- Ahmad, A. and Rastogi, R. (2016), Regression Model for Entry Capacity of a Roundabout Under Mixed Traffic Condition – An Indian Case Study. Transportation Letters – An International Journal of Transport Research, vol., 1-15. doi:10.1080/19427867.2016.1203603.
- Jain, U and Rastogi, R (2016), Pedestrian Crossing Warrants – A Global Perspective. Current Science, Vol. 111 (6), 1016-1027.
- Mahesh, S., Ahmad, A. and Rastogi, R. (2016), An Approach for the Estimation of Entry Flows on Roundabouts. Transportation Research Procedia 17, Elsevier Science, 52-62.
- Ahmad, A., Rastogi, R. and Chandra, S. (2015), Estimation of Critical Gap on a Roundabout by Minimizing the Sum of Absolute Differences in Accepted Gap Data. Canadian Journal of Civil Engineering, 42, 1011-1018.
- Gupta, A., Kumar, P. and Rastogi, R. (2015), Critical Pavement Response Analysis of Low Volume Pavements considering Nonlinear Behaviour of Materials. Journal of Transportation Research Record (TRR) - 2474, Low Volume Roads 2015, Vol. 3, Transportation Research Board, US.
- Rastogi, R., Harikrishna, M. and Patil, A (2015), Segmentation Analysis of Domestic Tourists: A Case Study. KSCE Journal of Civil Engineering, Vol. 19 (5), 1509-1522.
- Chandra, S., Rastogi, R., Das, V. R. and Illango, T. (2014), Pedestrian Behaviour Under Varied Traffic and Spatial Conditions. European Transport (Trasporti Europei), Vol 56, ISSN 1825-3997.
- Jain, A., Gupta, A., and Rastogi, R. (2014), Pedestrian Crossing Behaviour Analysis at Intersections. International Journal for Traffic and Transportation Engineering, Vol. 4 (1), 103-116. DOI: [http://dx.doi.org/10.7708/ijtte.2014.4\(1\).08](http://dx.doi.org/10.7708/ijtte.2014.4(1).08)
- Gupta, A, Kumar, P and Rastogi, R. (2014), Mechanistic – Empirical Approach for Design of Low Volume Pavements. International Journal of Pavement Engineering, DOI: [10.1080/10298436.2014.960999](https://doi.org/10.1080/10298436.2014.960999)
- Gupta, A., Kumar, P. and Rastogi, R. (2014), Critical Review of Flexible pavement Performance Models. KSCE Journal of Civil Engineering 18 (1), 142-148.

- Chandra, S., Rastogi, R. and Das, V. R. (2014), Descriptive and Parametric Analysis of Pedestrian Gap Acceptance in Mixed Traffic Conditions. *KSCE Journal of Civil Engineering* 18 (1), 284-293.
- Rastogi, R., HariKrishna, M., and Jacob, Mani (2014), Choice-based Modelling by Destination Value and Type of Planning for Domestic Leisure Travellers in India. *Journal of Urban Planning and Development*, 140 (1), ASCE.
- Rastogi, R., Illango, T. and Chandra, S. (2013), Pedestrian Flow Characteristics for Different Pedestrian Facilities and Situations. *Journal of European Transport (Trasporti Europei)*. Vol 53, ISSN 1825-3997.
- HariKrishna, M. and Rastogi, R. (2013), Social and psychological factors influencing destination preferences of domestic tourists in India, *Leisure Studies*, vol. 32 (2), Routledge, Taylor and Francis, UK, 207-217.
- Chandra, S., Rastogi, R. and Das, V. R. (2012), Risk Analysis and Pedestrian Crossing Behaviour. *Traffic Engineering and Control*, Vol. 53 (10), UK, 383-386.
- HariKrishna, M. and Rastogi, R. (2012), Identification of decision parameters influencing destination choices of Indian domestic tourists, *International Journal of Physical and Social Sciences*, vol. 2(1), *International Journals of Multidisciplinary Research Academy*, 233-263. (e-Journal)
- Rastogi, R., Ilango T, Chandra, S. (2011), Design implications of walking speed for pedestrian facilities, *Journal of Transportation Engineering*, vol. 137 (10), American Society of Civil Engineers, USA, 687-696.
- Rastogi, R. (2011), Promotion of non-motorized modes as sustainable transportation option: policy and planning issues, *Journal of Current Science*, Vol. 100 (9), Association of Current Science and Indian Academy of Sciences, Bangalore, India, 1-9.
- Gupta, A., Kumar, P. and Rastogi, R. (2011), Pavement deterioration and maintenance model for low volume roads, *International Journal of Pavement Research and Technology*, vol. 4 (4), Chinese Society of Pavement Engineering, 195-202.
- Rastogi, R., Chandra S., Vamsheedhar, J. and Das, V. R. (2011), A parametric study of pedestrian speeds at midblock crossings, *Journal of Urban Planning and Development*, Vol. 137 (4), American Society of Civil Engineers, USA, 381-389.
- Kotkar, K. L., Rastogi, R. and Chandra, S. (2010), Pedestrian Flow Characteristics in Mixed Flow conditions. *Journal of Urban Planning and Development*, vol. 136 (3), American Society of Civil Engineers, USA, 23-33.
- Rastogi, R. (2010), Willingness to Shift to Walk or Bicycle for Accessing Suburban Rail - A Case Study in Mumbai, India. *Journal of Urban Planning and Development*, vol. 136 (3), American Society of Civil Engineers, USA, 3-10.

- Rastogi, R. and K. V. Krishna Rao (2009), Segmentation Analysis of Commuters Accessing Transit: A Mumbai Study. Journal of Transportation Engineering, vol. 135 (8), American Society of Civil Engineers, USA, 506-515.
- Rastogi, R. and K. V. Krishna Rao (2003), Defining transits accessibility with environmental inputs. Transportation Research Part D: Transport and Environment, Vol. 8 (5), USA, 383-396.
- Rastogi, R. and K. V. Krishna Rao (2003), Travel characteristics of commuters accessing transit: A case study. Journal of Transportation Engineering, vol. 129 (6), American Society of Civil Engineers, USA, 684-694.
- Rastogi, R. and K. V. Krishna Rao (2002), Survey design for studying transit access behaviour in Mumbai City, India. Journal of Transportation Engineering, vol. 128 (1), American Society of Civil Engineers, USA, 69-79.
- Rastogi, R. and K. V. Krishna Rao (1999), A policy framework for a sustainable multi-mode urban transportation planning. Trasporti Europei, Italy, Vol. V (13), 65-75.

### **In National Refereed Journals**

- Ahmad, A. and Rastogi, R. (2017), 'Influence of Roundabout Size and Circulating Traffic on Critical Gaps, Follow-up Times and Speeds, Indian Highways, Vol. 45 (1), Indian Roads Congress, New Delhi, India, 37-48.
- Khadiaya, P. and Rastogi, R. (2014), 'Effect of Lane Friction on Speed of Non-Motorized Vehicles', Journal of Institute of Urban Transport, Vol. 13(1), New Delhi, India, 26-38.
- Ahmad, A., Mahesh, S. and Rastogi, R. (2014), 'Selection of Roundabout Entry Capacity Model for Indian Condition', Journal of Institute of Urban Transport, Vol. 13(1), New Delhi, India, 78-86.
- Gupta Ankit, Kumar, P. and Rastogi, R. (2014), 'Performance Evaluation and Design Criteria for Low Volume Flexible Pavements', Indian Highways, Vol. 42 (12), Indian Roads Congress, New Delhi, India, 35-42.
- Rastogi, R., Chandra, S. and Mohan, M. (2014), 'Development of Level of Service Criteria for Pedestrians', Journal of the Indian Roads Congress, Vol. 75-1, Indian Roads Congress, New Delhi, India, 61-70.
- Rastogi, R., Harikrishna, M. and Pawanram, T. (2014), 'Destination and Leisure Attributes Influencing Leisure Destination Choice', Highway Research Journal, Vol. 7 (1), Jan-June, 2014, Indian Roads Congress, New Delhi, India.
- Chandra, S., Rastogi, R. and Das, V. R. (2013), 'Crossing Behaviour of Pedestrians at Midblocks in Mixed Traffic', Journal of Indian Roads Congress, Vol 73-4, Indian Roads Congress, New Delhi, India, 100-110.
- Harikrishna M., Rastogi, R. and Purushothaman, D. (2012), 'Influence of Socio-demographic Attributes in Travel Mode Selection for Single Day Excursion Trips'. Highway Research Journal, Vol 5 (1), Indian Roads Congress, New Delhi, India, 15-31.

- Chandra, S. and Rastogi, R. (2012), 'Mixed Traffic Flow Analysis on Roundabouts', Journal of Indian Roads Congress, Vol.73 Part 1, Indian Roads Congress, New Delhi, India, 69-77.
- Kumar P., Rastogi R., Gupta A. and Jain A. (2012), 'Land-Uses and Activity- Based Traffic Forecasting Model'. Indian Highways, 40(4), Indian Roads Congress, New Delhi, India, 25-41.
- Gupta, A., Kumar, P. and Rastogi, R. (2012), "A Critical Review of Flexible Pavement Performance Models Developed for Indian Perspective", Indian Highways 40(3), Indian Roads Congress, New Delhi, India, 41-60.
- Chandra, S., Rastogi, R. and Das, V. R. (2012), 'Pedestrian delay during crossing at uncontrolled locations', Indian Highways, 40(2), Indian Roads Congress, New Delhi, India, 33-42.
- Rastogi, R. and Nayeem, M. R. (2011), 'Effect of Left-Turn Treatments on Left Turning Behaviour in India', Journal of Indian Roads Congress, Vol. 72-2 (July-September), Indian Roads Congress, New Delhi, 135-144,
- Ilango, T., Chandra S. and Rastogi, R. (2011), 'Comparison of Pedestrian Characteristics of North and South India'. Indian Highways, 39 (4), Indian Roads Congress, New Delhi, 29-37.
- Rastogi, R. and Meena, U. (2011), 'Inter-city travel characteristics and Travel burden for populations with unequal travel opportunities'. Indian Highways, 39 (3), Indian Roads Congress, New Delhi, India, 25-37.
- Rastogi, R. and Molla, D. (2010), 'Estimation of Bus Operation handling capacity at an Intercity Bus Terminal – A case study of Roorkee city'. Indian Highways, 38(10), Indian Roads Congress, New Delhi, India, 55-64.
- Rastogi, R. (2009), 'Study of Unreported Accidents occurring in Kota City.' Indian Highways, 37(8), Indian Roads Congress, New Delhi, India, 23-33.
- Rastogi, R. (2007), 'Household Survey design – Regional applicability and adaptability'. Indian Highways, 35(5), Indian Roads Congress, New Delhi, India, 25-32.
- Rastogi, R. (2006), 'A study of accidents in and around Kota City'. Indian Highways, 34(4), Indian Roads Congress, New Delhi, India, 5-16.
- Rastogi, R. (2006), 'Preferences of vehicle parkers' in Kota City – A stated preference study'. Indian Highways, 34(3), Indian Roads Congress, New Delhi, India, 45-59.
- Rastogi, R. and Bhatia, H. C. (1998), Parking analyses of Central Business Area of Chandigarh City-A TSM approach. Indian Highways, 26(2), Indian Roads Congress, New Delhi, India, 13-28.
- Kaushik, N. P. and Rastogi, R. (1997), Road Network in Kota district-A critical study. Indian Highways, 25(9), Indian Roads Congress, New Delhi, India, 35-46.

### **In Research Reports**

- Highway Research Record No. 27 (2000), A policy sensitive behavioural model of transit access. Highway Research Board, Indian Roads Congress, New Delhi, India, 156.

Highway Research Record No. 28 (2001), A policy sensitive behavioural model of transit access. Highway Research Board, Indian Roads Congress, New Delhi, India, 86-90.

### **In International Conferences**

- Jain, U. and Rastogi, R. (2017). Evaluating Methods of Critical Gap Estimation at Midblock Pedestrian Crossings under Mixed Traffic Conditions. *In proceedings of the 96<sup>th</sup> Annual Meeting of Transportation Research Board (TRB)*, National Academy of Sciences, Washington D.C., January 08-12, 2017.
- Jain, U. and Rastogi., R. (2016) Assessment of Appropriate Methods of Critical Gap Estimation for Pedestrians under Heterogeneous conditions. In Transportation Planning and Research Methodologies for Developing Countries (TPMDC-2016), held at IIT Bombay, India, December 19-21, 2016.
- Bamney A. and Rastogi R. (2016) Willingness to use Non-Motorized Vehicles for Trips in Urban Areas. In Transportation Planning and Research Methodologies for Developing Countries (TPMDC-2016), held at IIT Bombay, India, December 19-21, 2016.
- Jain, U. and Rastogi, R. (2016) Guidelines for Selection of Appropriate Pedestrian Crossing Facility at Mid-Block Section. In 9<sup>th</sup> Urban Mobility India Conference – Planning Mobility for City's Sustainability, organised by Institute of Urban Transport, Ministry of Urban Development, GOI, India, held at Gandhinagar, November 8-11, 2016.
- Illango, T., Rastogi, R. and Chandra, C. (2016) Influence of Bottlenecks on Pedestrian Walking Speed and Pedestrian Behaviour at Sidewalks. In International Conference on emerging Trends in Engineering Research (ICETER'16), held at VELS University, Chennai, India, October 20-21, 2016.
- Jain, U. and Rastogi, R. (2016) Re-examination of PV<sup>2</sup> criteria for Developing Pedestrian Crossing Warrants. In Proceedings of 14<sup>th</sup> World Conference of Transport Research (WCTR), Shanghai, China, July 10-14, 2016.
- Gupta, A., Kumar, P. and Rastogi, R. (2015) Critical Pavement Response Analysis of Low Volume Pavements considering Nonlinear Behaviour of Materials. In proceedings of 11th International Conference on Low-Volume Roads, Pittsburgh, Pennsylvania, July 12-15, 2015.
- Jain, U. and Rastogi, R. (2015). Development of Pedestrian Crossing Warrants – A Global Perspective and Way Forward. *In Proceedings of the 2<sup>nd</sup> Conference of Recent Advances in Traffic Engineering (RATE)*, SVNIT Surat, India, July 03-04, 2015.
- Rastogi, R. and Doley, G. (2015), Sustainable Transport Option for University Campus. As poster presentation in 16<sup>th</sup> International Conference on Urban Transport entitled 'Energy, Climate and Air Quality Challenges – The Role of Urban Transport Policies in Developing Countries' (CODATU), organised at Istanbul Technical University, Macka campus, Istanbul, Turkey, February 02 – 05, 2015.

- Maresh, S., Ahmad, A. and Rastogi, R. (2014), An Approach for the Estimation of Entry Flows on Roundabouts. In Transportation Planning and Research Methodologies for Developing Countries (TPMDC-2014), held at IIT Bombay, India, December 10-12, 2014.
- Rastogi, R., and HariKrishna, M. (2012) Identification of Decision Paths in Modal Choices: A Structural Equation Modelling Approach. In proceedings of 10<sup>th</sup> International Conference Transportation Planning and Implementation Methodologies for Developing Countries, IIT Bombay, India, December 12-14, 2012.
- Praveen, S., and Rastogi, R. (2012) Mode Choice Models Defining Travel to Leisure Destinations. In proceedings of 10<sup>th</sup> International Conference Transportation Planning and Implementation Methodologies for Developing Countries, IIT Bombay, India, December 12-14, 2012.
- Patil, A. J., HariKrishna, M. and Rastogi, R. (2011) Mode Choice Modelling in Context of Domestic Leisure Travel. In Proceedings of Conference of Transportation Research Group of India, Bangalore, India, December 7-10, 2011.
- Jacob, M., HariKrishna, M. and Rastogi, R. (2011) Modelling of Destination Choice for Domestic Leisure Travel Context. In Proceedings of Conference of Transportation Research Group of India, Bangalore, India, December 7-10, 2011.
- Rastogi, R. and HariKrishna, M. (2011), Identification of Latent Constructs influencing Destination Choice of Domestic Tourists – A Factor Analytic Approach. In proceedings of International Conference on Computers in Urban Planning and Management, Lake Lousania, Alberta, Canada, July 5-8, 2011.
- Gupta, A., Kumar, P. and Rastogi, R. (2011), Rating Based Approach for Performance Evaluation of Low Volume Roads. In proceedings of International conference on Advances in Materials and Techniques for Infrastructure Development, NIT Calicut, India, June 22-24, 2011.
- Vivek Durgadath, Chandra, S., and Rastogi, R. (2011), Risk analysis and pedestrian crossing behaviour under varying road width. In proceedings of International conference on Advances in Materials and Techniques for infrastructure development, NIT Calicut, India, June 22-24, 2011.
- Gupta, A., Kumar, P. and Rastogi, R. (2011), Effect of Environmental Factors on Flexible Pavement Performance Modeling. Proceedings of 8<sup>th</sup> International Conference on Managing Pavement Assets (ICMPA-2011), Santiago, Chile, November 15-19, 2011.
- Gupta, A., Kumar, P. and Rastogi, R. (2011), Flexible Pavement Performance Model for Low Volume Roads. Proceedings of 8<sup>th</sup> International Conference on Managing Pavement Assets (ICMPA-2011), Santiago, Chile, November 15-19, 2011.
- Rastogi, R. (2010), Planning for Pedestrians. In International workshop Transportation Planning and Management for Developing Countries (TPMDC10)-Sustainable Transportation, IIT Bombay, Mumbai, India, December 15-17, 2010.
- HariKrishna M. and Rastogi, R. (2010), Attitudinal analysis of factors influencing out of city travel. In proceedings of 12<sup>th</sup> WCTR (Paper ID 3263R), Lisbon, Portugal, July 11-15, 2010.

- Vamsheedhar, J., Chandra, S., Rastogi, R. and Das, V. R. (2010), Pedestrian Crossing Behaviour on Midblock Sections. In proceedings of International Conference on Materials Mechanics and Management, College of Engineering Trivandrum, Thiruvananthapuram, Kerala, India, January 14-16, 2010.
- Gupta, A., Kumar, P. and Rastogi, R. (2010), Application of Finite Element Based Models in Flexible Pavement Performance Analysis. Proc. of International Conference on Developments in Road Transportation (DRT-2010), NIT Rourkela, India, 692-702, October 8-10, 2010.
- Chandra, S., Rastogi, R. and Das, V. R. (2010), Pedestrian Crossing Behaviour on Midblock Sections. Presented at and in proceedings of International Conference on Advances in Materials, Mechanics and Management, College of Engineering, Trivandrum, Thiruvananthapuram, Kerala, India, January 14-16, 2010.
- Rastogi, R (2009), 'Scale factor estimation using maximum information procedure'. Transportation Research Board 88<sup>th</sup> Annual Meeting, National Academy of Sciences, Washington D.C., US, January 11 – 15, 2009
- Gupta, A., Kumar, P. and Rastogi, R. (2009), Overview of Flexible Pavement Performance Models: An Indian Perspective. Proc. of International Conference on Pavement Engineering (ICPE-2009), College of Engineering and Technology, B.P.U.T. Bhubaneswar, India, 14-29.
- Gupta, A, Kumar P, and Rastogi R. (2009), Overview of Flexible Pavement Performance Models: An Indian Perspective'. In proceedings of International Conference on pavement Engineering (ICPE-09), College of Engineering and Technology Bhubaneswar, Orissa, India, Feb 14-15, 2009.
- Rastogi, R., Kotkar, K. L. and Chandra, S. (2008), Pedestrian Flow Characteristics on a Walkway near Bus Terminus. International Conference on Best Practices to Relieve Congestion on Mixed-traffic Urban Streets in developing Countries, IIT Madras, September 12-14, 2008.
- Gupta, A. Rastogi, R. and Kumar, P. (2008), 'Flexible Pavement Performance Models: A Review'. International Conference and Workshop on Transportation Planning and Management for Developing Countries (TPMDC08), IIT Bombay, December 3-6, 2008.
- Chandra, S., Rastogi, R. and Sikdar, P. K. (2008), 'Empirical Method for estimating Turning Counts from Link Flows.' International Conference and Workshop on Transportation Planning and Management for Developing Countries (TPMDC08), IIT Bombay, December 3-6, 2008.
- Rastogi, R. (2008), Validating Stated Parking Duration of drivers in Kota City, India. In International Conference on Transport Infrastructure, held at Beijing, China, April 24-26, 2008.
- Rastogi, R. (2008), Development of Practical Sustainability Indicator for MPOs. In International Conference on Transport Infrastructure, held at Beijing, China, April 24-26, 2008.
- Rastogi, R. (2008), Issues in Data Collection and Non-Motorized Transport Planning. In Indo-US Symposium on 'Mass Transit and Travel Behaviour Research' (MTTBR 2008), held at IIT Guwahati, India, Feb. 12-16, 2008.



- Rastogi, R., Chandra S. and Illango, T. (2008), Pedestrian Needs and Probable Solutions – An Indian Perspective. In Indo-US Symposium on 'Mass Transit and Travel Behaviour Research' (MTTBR 2008), held at IIT Guwahati, India, Feb. 12-16, 2008
- Rastogi, R. (2004), Stated Preference survey: Experience from developing country. Paper on CD ROM of Seventh International Conference on Travel Survey Methods held at Costa Rica during August 1-6, 2004.
- Rastogi, R. (2004), Household Survey Design: Regional Applicability and Adaptability. Paper on CD ROM of Seventh International Conference on Travel Survey Methods held at Costa Rica during August 1-6, 2004.
- Rastogi, R. (2004), Parking policy options in residential cum shopping area: A case study. Paper accepted and in CD Proceedings of X<sup>th</sup> World Conference on Transport Research held at Istanbul, Turkey, July 4-8, 2004.-
- Rastogi, R. (2004), Policy sensitive behavioural analysis for bicycle promotion using mixed modeling. Presented at and in proceedings of *The International Conference on Transportation Systems Planning and Operation (TRANSPO 2004)*, held at Indian Institute of Technology Madras, Chennai, India, February 18-20, vol. I, 21-30.
- Rastogi, R. and K. V. Krishna Rao (2004), Identifying policies for promoting non-motorized access modes: A case study. Presented at and in proceedings of *The International Conference on Transportation Systems Planning and Operation (TRANSPO 2004)*, held at Indian Institute of Technology Madras, Chennai, India, February 18-20, vol. I, 121-130.
- Rastogi, R. (2002), Problems in the collection and dissemination of accident information – A case study. In Proceedings of *the 10<sup>th</sup> World Conference on Transport and Urban Development (CODATU X)*, Lome, Republic of Togo, Africa, November 12-15.
- Rastogi, R. and K. V. Krishna Rao (2001), Modelling transit access behaviour using revealed preference and stated preference information. Presented at and in CD-ROM Proceedings of *The 9<sup>th</sup> World Conference on Transport Research*, Seoul, Korea (South), July 22-27.
- Rastogi, R. (1998), Low Cost Traffic System Management options for main traffic corridor in medium sized Indian city-A case study. In Proceedings of *the International Seminar on Highway Safety, Management and Devices*, New Delhi, India, November 6-7, I-151 – I-160.

### **In National Conferences / Courses**

- Jain, U., Singh, M., Vijay, R., Raj, R., Verma, R. and Rastogi, R. (2016). Guidelines for Selection of Appropriate Pedestrian Crossing Facility at Mid-Block Sections. In *proceedings of the 9<sup>th</sup> Urban Mobility India Conference*, Gandhinagar, India, November 08-11, 2016.
- Jain, U. and Rastogi, R. (2015), Need of Pedestrian Crossing Warrants in India. In proceedings of 2<sup>nd</sup> National Conference on Recent Advances in Traffic Engineering (RATE), SVNIT, Surat, India, July 03-05, 2015.

- Rastogi, R. (2012). Pedestrian Mobility and Safety: Issues and Design Improvements. Presented in Half day seminar on 'Planning for Pedestrian Mobility and Safety', organized by Department of Civil Engineering, IISc Bangalore in association with Transportation Research Group of India, March 24, 2012.
- Rastogi, R. (2012). Parametric study of pedestrian speeds at midblock crossings. Presented in national symposium on 'Design of roads for disabled pedestrians', organized by SDRS and held at ISRC, New Delhi, India, March 1-4, 2012, pp. 73.
- Harikrishna, M. and Rastogi, R. (2011), Latent factors in destination choice selection: An exploratory study. In proceeding of conference on Sustainable Urban and Transportation Planning: Issues and Management Strategies, SVNIT Surat, India, July 08-10, 2011, pp. 202-209.
- Gupta, A., Kumar, P. and Rastogi, R. (2010), Field and Laboratory Investigations of Subgrade Layer of Low Volume Roads. Proceedings of GeoTrendz, Indian Geotechnical Conference (IGC-2010), Indian Institute of Technology Bombay, India, vol. 2, 1019-1022, December 16-18, 2010.
- Gupta, A., Kumar, P. and Rastogi, R. (2010), Field and Laboratory Investigations of Pavement Layers of Low Volume Roads. Proceedings of Conference on Infrastructure, Sustainable Transportation and Urban Planning (CISTUP-2010), Indian Institute of Science, Bangalore, India, 33-34, October 18-20, 2010.
- Rastogi, R. (2009), Stated Preference Data Collection and Analysis. In proceedings of workshop on Recent Trends in Sustainable Transportation Planning, Centre for Infrastructure, Sustainable Transportation and Urban Planning (CiSTUP), IISc, Bangalore, Dec 12-14, 2009, pp. 258-267.
- Rastogi, R. (2009), Sustainable Transportation: NMT Options and Policies. In proceedings of workshop on Recent Trends in Sustainable Transportation Planning, Centre for Infrastructure, Sustainable Transportation and Urban Planning (CiSTUP), IISc, Bangalore, Dec 12-14, 2009, pp. 223-232.
- Gupta, A., Kumar, P. and Rastogi, R. (2009), Rating Based Performance Evaluation of Low Volume Hill Roads. Proc. of Uttarakhand State Science and Technology Congress, 4<sup>th</sup> USSTC, GB Pant University of Agriculture and Technology, Pantnagar, India, 191, November 10-12, 2009.
- Gupta, A., Kumar, P. and Rastogi, R. (2009), Review of Finite Element based studies in Flexible Pavement Performance Analysis. In proceedings of Civil Engineering Conference (CEC-2009) – Innovations without Limits, NIT Hamirpur, Himachal Pradesh, India, September 18-19, 2009.
- Jain, A, Vamsheedhar, J. And Rastogi, R. (2009), Pedestrian Crossing Behaviour Analysis at Intersections: A Case Study of Roorkee City. In proceedings of Student Symposium on 'Research in Civil Engineering', IIT Madras, India, March 5-6, 2009.

- Rastogi, R. (2007), Working with revealed preference and stated preference data for analyzing travel choices. Delivered at and in lecture notes of short term training programme on Recent advances in transportation planning and traffic engineering, held at IIT Guwahati, January 15-19, 2007.
- Rastogi, R. (2007), Sustainable transportation: Need for promoting walk and bicycle. Delivered at and in lecture notes of short term training programme on Recent advances in transportation planning and traffic engineering, held at IIT Guwahati, January 15-19, 2007.
- Rastogi, R. (2006), Experimental Design for Incorporating Consumer Choices in Product Development. Presented at and in proceedings of All India Seminar on Advances in Product Development, organised by Institution of Engineers (Allahabad Chapter) and MNNIT, Allahabad, February 16-18, 2006.
- Rastogi, R. (2005), Discrete Choice Analysis for Modal-Split Models. Delivered at and in lecture notes of short-term course on 'Emerging Trends in Transportation Engineering' organised by L. D. College of Engineering, Ahmedabad, May 30<sup>th</sup> – June 4<sup>th</sup>, 2005.
- Rastogi, R. and R. C. Gaur (2003), Energy Conservation through Solar Passive Architecture. Presented at and in Proceedings of *Seminar on Energy Conservation* organised by Institution of Engineers (India) Kota Local Chapter, February 28 – March 1, 2003.
- Rastogi, R. and K. V. Krishna Rao (2002), Collection of stated information for prediction of travel behaviour. Presented at and in proceedings of *the National Seminar on Road Transportation in India: Emerging trends and techniques (ROTRAN 2002)*, IIT Kharagpur, India, vol. II, 4.37 – 4.48, September 12-13, 2002.
- Rastogi, R. and K. V. Krishna Rao (2000), Economic importance of non-motorised modes for sustainable development. Presented at and in proceedings of *the National Seminar on Renewable Energy Sources, Environment Pollution and Sustainable Development, RESEPSD-2000*, Kota, January 27-29, 84-93.
- Rastogi, R. (1998), Effect of localized factors on traffic noise-A review. In Proceedings of *the 14<sup>th</sup> National Convention of Environmental Engineers* entitled 'Environmental Protection–Need of the hour', The Institution of Engineers (India) AP State center, Hyderabad, India, August 7-9.
- Rastogi, R. (1997), Quality up-gradation of technical education system through policy development and retrospection. In Proceedings of *the 26<sup>th</sup> ISTE Annual convention*, MREC, Jaipur, India, January 4-6.
- Rastogi, R. (1996), Network planning of roads-Need for reappraisal of strategies. In Proceedings of Seminar on *Perspective Planning for Road Development in India*, Indian Roads Congress, New Delhi, India, October 7-8, I-193 – I-201.
- Rastogi, R. (1996), Sealant for Joints. Delivered at and in lecture notes of short-term course on '*Deterioration and Repair of Concrete Structures*', Engineering College Kota, Rajasthan, India, February 5-7, 42-52.

Rastogi, R. (1996), Testing of Road Materials and I. S. code Specifications. Delivered at and in lecture notes of short-term course on '*Civil Engineering Materials' Testing*', Engineering College Kota, Rajasthan, India.

#### **IV. Papers / Book Refereed / Edited -**

Accident Analysis and Prevention

Current Science

Indian Roads Congress, New Delhi, India.

International Journal of Pavement Engineering, T&F

Journal of Advanced Transportation

Journal of Transportation Engineering, ASCE

Journal of Transportation Safety and Security

Journal of Urban Planning and Development, ASCE

Korean Society of Civil Engineers

Tourism Management

Transportation in Developing Economies

Transportation Letters – International Journal of Transportation Research

Transportation Research, Part A and D

Papers of Conference of Transportation Research Group of India – 2011, 2013, 2015

Paper of Transportation Research Board, National Academy of Sciences, Washington D.C., US

Papers of International Workshop and Conference TPMDC, IIT Bombay, India

Papers presented in annual session of Indian Roads Congress, Madurai.

Book on Railway Engineering published by Oxford University Press.

#### **V. Conference / Annual Session / Workshops / Courses Attended**

##### **International Conferences / Workshops / Courses**

International Conference on Transportation Planning and Implementation Methodologies for Developing Countries (TPMDC 2016), held at IIT Bombay, Mumbai, India, December 19-21, 2016.

20<sup>th</sup> International Conference on Hydraulics, Water Resources and River Engineering (HYDRO 2015), held at IIT Roorkee, Uttarakhand, India, December 17-19, 2015.

16<sup>th</sup> International conference on Urban Transport entitled '*Energy, Climate and Air Quality Challenges: The Role of Urban Transport Policies in Developing Countries (CODATU 2015)*', held at ITU Macka Campus, Istanbul, Turkey, February 2 – 5, 2015.

International Conference on Transportation Planning and Implementation Methodologies for Developing Countries (TPMDC 2014), held at IIT Bombay, Mumbai, India, December 10-12, 2014.

Executive course on Development and Transportation, Aalto University Summer School on Transportation, Aalto University, Otaniemi, Espoo, Finland, August 11 – 15, 2014.

International Conference on Transportation Planning and Implementation Methodologies for Developing Countries (TPMDC 2012), held at IIT Bombay, Mumbai, India, December 12-14, 2012.

International Conference on Computers in Urban Planning and Management (CUPUM-2011), held at Lake Louise, Calgary, Alberta, Canada, July 5-8, 2011. (organized by University of Calgary)

International Workshop on Transportation Planning and Implementation Methodologies for Developing Countries: Sustainable Transportation (TPMDC 2010), held at IIT Bombay, Mumbai, India, December 15-17, 2010.

The 88<sup>th</sup> Annual Meeting of Transportation Research Board, USA, held at Washington, D.C. during January 11-15, 2009.

International Conference on Best Practices to Relieve Congestion on Mixed-traffic (BPRCM) Urban Streets in Developing Countries, IIT Madras, Chennai, India, September 12-14, 2008.

First Indo-US symposium on Mass Transit and Travel Behaviour Research (MTTBR 2008), held at IIT Guwahati, Assam, India, February 12-16, 2008.

The 6<sup>th</sup> International Workshop on Transportation Planning and Implementation Methodologies for Developing Countries: *Transportation Infrastructure Systems* (TPMDC-2004) held at IIT Bombay, Mumbai, India, December 16-18, 2004.

International Conference on Transportation Systems Planning and Operation (TRANSPO 2004), held at Indian Institute of Technology Madras, Chennai, India, February 18-20, 2004. Attended and *presented* papers.

International course on Transportation Planning and Road Safety held at IIT Delhi, India, in association with INRETS, France, December 14 – 21, 2002.

International Conference on Transport Survey Quality and Innovation held in Kruger National Park, South Africa, August 5-10, 2001. Attended as *invited delegate* from India.

The 9<sup>th</sup> World Conference on Transport Research held at Seoul, Korea (South), July 22-27, 2001. Attended and *presented* a paper.

The 4<sup>th</sup> International Workshop on Transportation Planning and Implementation Methodologies for Developing Countries: *Transportation Infrastructure* (TPMDC-2000) held at IIT Bombay, Mumbai, India, December 5-7, 2000. Attended and *Assisted* in organizing it.

The 3<sup>rd</sup> International Workshop on Transportation Planning and Implementation Methodologies for Developing Countries: *Emerging Trends* (TPMDC-98) held at IIT Bombay, Mumbai, India, December 9-11, 1998. Attended and *Assisted* in organizing it.

### **National Conferences / Seminars / Workshops / Courses**

National Conference titled "Numerical Modeling in Geomechanics" CoNMiG-2017, held at IIT Roorkee, March 03-04, 2017, *attended as delegate*.

8<sup>th</sup> Task Force Committee Meeting of 'Development of Indian Highway Capacity Manual (Indo-HCM)', Sponsored by CSIR-CRRI, held at IIT Roorkee, September 9-10, 2016.

National Conference on Fifteen Years of PMGSY (FYPMGSY), Sponsored by NRRDA, Ministry of Rural Development, GOI, held at IIT Roorkee, August, 6-7, 2016.

Workshop on Innovative Construction Machinery, Materials and Methods (ICMMM-2015), held at IIT Roorkee, October 26-27, 2015. *Attended as delegate*

National Conference on Transportation and Water Resource Engineering (NCTWE) 2015, L D College of Engineering, Ahmedabad, April 24-25, 2015. *Attended as an expert*.

75<sup>th</sup> Annual Session of Indian Roads Congress held at Bhubaneshwar, Odissa, India from January 18 – January 22, 2015, *Attended and presented a paper*.

National Symposium on High Speed Rail at SJCE, Mysore, May 9-10, 2013. *Attended as an Expert member*.

73<sup>rd</sup> Annual Session of Indian Roads Congress held at Coimbatore, Tamilnadu, India from January 7 – January 11, 2013, *Attended and presented a paper*.

Half day seminar on 'Planning for Pedestrian Mobility and Safety', organized by Department of Civil Engineering, IISc Bangalore in association with Transportation Research Group of India, March 24, 2012, *Attended and Presented a paper*.

All India Seminar on 'Advances in Product Development', organized by Institution of Engineers (Allahabad Chapter) and MNNIT, Allahabad, February 16-18, 2006. *Attended and presented a paper*.

QIP short-term summer course on 'Recent Developments in Urban Transportation Systems Planning' held at IIT Bombay, July 21-25, 2003.

ISTE-AICTE short-term summer course on 'Seismic Design and Control Methods' held at MNIT, Jaipur, Rajasthan, India, June 30 – July 5, 2003.

Seminar on 'Energy Conservation', organised by Institution of Engineers (India) Kota Local Chapter, February 28 – March 1, 2003. *Attended and presented a paper*.

ISTE-AICTE short-term winter course on 'Recent Advances in Technology for Waste to Energy Conversion', held at MNIT, Jaipur, Rajasthan, December 23, 2002 – January 3, 2003.

National Seminar on 'Road Transportation in India: Emerging trends and techniques (ROTRAN 2002)', held at IIT Kharagpur, India, September 12-13, 2002. *Attended and presented a paper*.

Workshop on 'Innovation and Optimization using TRIZ and Taguchi Techniques', held at IIT Bombay, Mumbai, India, April 28-29, 2001.

Indian Geotechnical Conference, IGC – 2000 'The Millennium Conference' held at IIT Bombay, Mumbai, India, December 13-15, 2000.

All India Seminar on 'Urban Mass Transportation Systems', organized by The Institution of Engineers (India) Mumbai Local Chapter, India, September 15-16, 2000. Attended and *Assisted* in organizing sessions.

National seminar on 'Renewable Energy sources for Environmental Protection and Sustainable Development' held at Engineering College Kota, Rajasthan, India, January 28-29, 2000. Attended and *presented* a paper.

The 61<sup>st</sup> annual session of Indian Roads Congress held at Madurai, Tamilnadu, India, January 4-7, 2000.

The 11<sup>th</sup> Indian Engineering Congress on 'Innovation: Technology for the Next Millennium', organized by Institution of Engineers (India) Bangalore Local Chapter, India, December 20-24, 1996.

ISTE short-term summer course on 'Environmental Management of Urban Areas', held at MREC, Jaipur, Rajasthan, June 26 – July 8, 1995.

ISTE short-term summer course on 'Management, Operation and Control of Traffic in City Center', held at SVREC, Surat, Gujrat, June 5–17, 1995.

ISTE short-term summer course on 'Ecology, Ecosystem and Eco-management', held at DYPCE, Pune, Maharashtra, May 30 – June 11, 1994.

ISTE short-term winter course on 'Pump and Valve Selection for Optimum Performance', held at MNREC, Allahabad, Uttar Pradesh, December 27, 1993 – January 8, 1994.

## **VI. Thesis Work Done / Guided (Transportation Studies Undertaken)**

### **Research Work Done**

1. Rastogi, R. (1990) 'Studies of traffic in Chandigarh City center – Parking characteristics of main shopping complex' Unpublished M. E. thesis submitted to Punjab University Chandigarh, India.
2. Rastogi, R. (1997) 'The state of ambient air quality in Kota City' Unpublished Post Graduate Diploma thesis submitted to Indian Institute of Ecology and Environment, New Delhi, India.
3. Rastogi, R. (2001) 'A policy sensitive behavioral model of transit access' Unpublished Ph.D. thesis submitted to Indian Institute of Technology Bombay, Powai, Mumbai, India.

### **Research Work Guided**

1. T. Illango, 'Modelling of Pedestrian Behaviour in Urban Areas,' Awarded 2011. Co-supervisor Prof. Satish Chandra.
2. Vivek R. Das, "Pedestrian Crossing Behaviour under Mixed Traffic Conditions". Awarded 2012. First supervisor Prof. Satish Chandra.
3. Ankit Gupta, 'Structural and Functional Modeling of Low Volume Roads'. Awarded 2012. First supervisor Prof. Praveen Kumar.

4. Harikrishna, M., "Behavioural Modelling of Leisure Travel". Awarded 2013.
5. Abdulla Ahmad, 'Analysis and Design of Roundabouts', Awarded 2016.
6. Pawar Sachin, 'Analysis of Delays on Roundabouts'. Joined July 2013.
7. Udit Jain, 'Development of Guidelines for Pedestrian Crossing Facilities', Joined July 2014.
8. Dharitri Kahali, 'Comparative Analysis of Pedestrian flows on Stairs and Ramps', Joined December 2015.

#### **Thesis / Project Guided: Second Degree Level**

1. Prateek Jain (2016), 'Flow Characteristics of Motorized Three Wheelers', M. Tech. Dissertation submitted to Department of Civil Engineering, IIT Roorkee.
2. Manjit Singh (2016), 'Re-examining Function PV for deciding Pedestrian Crossing Facility', M. Tech. Dissertation submitted to Department of Civil Engineering, IIT Roorkee.
3. Rohan Sharma (2016), 'Flow Characteristics of Motorized Two Wheelers', M. Tech. Dissertation submitted to Department of Civil Engineering, IIT Roorkee.
4. Suryansh Gupta (2016), 'Effect of mixed traffic on saturation flows', M. Tech. Dissertation submitted to Department of Civil Engineering, IIT Roorkee.
5. Anshu Bamney (2015), 'Study on willingness to use non-motorized modes for trips in urban areas', M. Tech. Dissertation submitted to Department of Civil Engineering, IIT Roorkee.
6. Mohammad Wasim Akhtar (2015), 'Effect of physical factors of gap acceptance on roundabouts', M. Tech. Dissertation submitted to Department of Civil Engineering, IIT Roorkee.
7. Prasham Khadaiya (2014), 'Flow characteristics of non-motorized traffic', M. Tech. Dissertation submitted to Department of Civil Engineering, IIT Roorkee.
8. Srinath Mahesh (2014), 'Influence of mixed traffic flows on capacity of a roundabout,' M. Tech. Dissertation submitted to Department of Civil Engineering, IIT Roorkee.
9. Mayank Sharma (2014), 'Willingness to shift to mass rapid transit system: A case study of Jaipur,' M. Tech. Dissertation submitted to Department of Civil Engineering, IIT Roorkee.
10. T N Teja (2013), 'Development of Criteria for Provision of Pedestrian Crossing Facilities', M. Tech. Dissertation submitted to Department of Civil Engineering, IIT Roorkee.
11. Pawar Sachin (2013), 'Characterization of Peak-hour Traffic', M. Tech. Dissertation submitted to Department of Civil Engineering, IIT Roorkee.
12. Sudhir Kumar Meshram (2013), 'A Study of Commercial vehicle Flows at Intersections', M. Tech. Dissertation submitted to Department of Civil Engineering, IIT Roorkee.
13. T N Teja (2012), 'Walkability Index of urban areas', M. Tech. Project submitted to Department of Civil Engineering, IIT Roorkee.
14. Pawar Sachin (2012), 'Estimation of Peak-hour factor for major roads in Roorkee city', M. Tech. Project submitted to Department of Civil Engineering, IIT Roorkee.
15. Sudhir Kumar Meshram (2012), 'Evaluation of a traffic calming technique', M. Tech. Project submitted to Department of Civil Engineering, IIT Roorkee.



16. Balkeshwar Mishra (2012), 'Pedestrian flow on stairs', M. Tech. Dissertation submitted to Department of Civil Engineering, IIT Roorkee.
17. Ganesh Dolly (2012), 'A policy sensitive model of modes chosen in campus areas', M. Tech. Dissertation submitted to Department of Civil Engineering, IIT Roorkee.
18. S. Praveen (2012), 'Combined logit model of destination and mode choice for leisure travel', M. Tech. Dissertation submitted to Department of Civil Engineering, IIT Roorkee.
19. Abhishek Rajput (2011), 'Pedestrian and Vehicle Routing Plan for IIT Roorkee campus', M. Tech. Project submitted to Department of Civil Engineering, IIT Roorkee.
20. Amit K. Damde (2011), 'Analysis of destination image and travellers perception', M. Tech. Project submitted to Department of Civil Engineering, IIT Roorkee.
21. Balkeshwar Mishra (2011), 'Planning for parking of vehicles in shopping area', M. Tech. Project submitted to Department of Civil Engineering, IIT Roorkee.
22. Mani Jacob (2011), 'Development of a destination choice model for leisure trips', M. Tech. Dissertation submitted to Department of Civil Engineering, IIT Roorkee.
23. Ajit J. Patil (2011), 'Development of a mode choice model for leisure trips', M. Tech. Dissertation submitted to Department of Civil Engineering, IIT Roorkee.
24. Chelluri Siakrishna (2011), 'Estimation of LOS at pedestrian crossings on mid blocks', M. Tech. Dissertation submitted to Department of Civil Engineering, IIT Roorkee.
25. Amol A. Naik (2011), 'Pedestrian crossing behaviour at intersections', M. Tech. Dissertation submitted to Department of Civil Engineering, IIT Roorkee.
26. Mani Jacob (2010), 'Volume and Speed Analysis in Old Roorkee City', M. Tech. Project submitted to Department of Civil Engineering, IIT Roorkee.
27. Amol A. Naik (2010), 'Parking Assessment in Hostel and Residential Areas of IIT Roorkee Campus', M. Tech. Project submitted to Department of Civil Engineering, IIT Roorkee.
28. Ajit J. Patil (2010), 'Access Mode Choice Analysis for Railway Station, Roorkee City', M. Tech. Project submitted to Department of Civil Engineering, IIT Roorkee.
29. Akash Chevercode Prakasan (2010), 'Study of Accesses to Educational Institutes'. M. Tech. Project submitted to Department of Civil Engineering, IIT Roorkee.
30. Bhargav Ruparathi (2010), 'Analysis of Risk during Pedestrian Crossing'. M. Tech. Dissertation submitted to Department of Civil Engineering, IIT Roorkee.
31. Krishna Mohan Meena (2010), 'Modeling Mode Choices for Inter-city Travel'. M. Tech. Dissertation submitted to Department of Civil Engineering, IIT Roorkee.
32. Mithun Mohan (2010), 'Development of Level of Service criteria for pedestrian movements'. M. Tech. Dissertation submitted to Department of Civil Engineering, IIT Roorkee.
33. More Prasad Jagannath (2010), 'Study of turning movements at uncontrolled intersections'. M. Tech. Dissertation submitted to Department of Civil Engineering, IIT Roorkee.
34. Patil Kiran Prakash (2010), 'Effect of geometry on capacity of a traffic rotary'. M. Tech. Dissertation submitted to Department of Civil Engineering, IIT Roorkee.

35. Pawan Ram Thirumalashetty (2010), 'Analysis of travelers' choices associated with leisure trips'. M. Tech. Dissertation submitted to Department of Civil Engineering, IIT Roorkee.
36. Bhargav Ruparathi (2009), 'Bicycle movements in a class-I city', M. Tech. Project submitted to Department of Civil Engineering, IIT Roorkee.
37. Patil Kiran Prakash (2009), 'Safety audit of a segment of a hill road', M. Tech. Project submitted to Department of Civil Engineering, IIT Roorkee.
38. Pawan Ram Thirumalashetty (2009), 'Estimation of parking needs within campus area of IIT Roorkee', M. Tech. Project submitted to Department of Civil Engineering, IIT Roorkee.
39. Pushpendra Singh (2009), 'Non-motorized movements in campus area of IIT Roorkee', M. Tech. Project submitted to Department of Civil Engineering, IIT Roorkee.
40. Umakant Meena (2009), 'Long Distance Travel patterns in Institutional Areas'. M. Tech. Dissertation submitted to Department of Civil Engineering, IIT Roorkee.
41. J. Vamsheedhar (2009), 'Pedestrian Crossing Behaviour under Uncontrolled Traffic Condition'. M. Tech. Dissertation submitted to Department of Civil Engineering, IIT Roorkee.
42. Mukesh Kumar Jain (2009), 'Spatial-Temporal Analysis of Human Activities using GIS'. M. Tech. Dissertation submitted to Department of Civil Engineering, IIT Roorkee.
43. Akash Jain (2009), 'Land-uses and Activity Based traffic Forecasting Model'. M. Tech. Dissertation submitted to Department of Civil Engineering, IIT Roorkee.
44. Akash Jain (2008), 'Pedestrian Crossing Behaviour Analysis', M. Tech. Project submitted to Department of Civil Engineering, IIT Roorkee.
45. A. S. Subramanyam (2008), 'Road Safety Audit for IITR Campus', M. Tech. Project submitted to Department of Civil Engineering, IIT Roorkee.
46. Md. Rezwan Nayeem (2008), 'Development of a Policy Sensitive Model of Transit Access using ANN', M. Tech. Dissertation submitted to Department of Civil Engineering, IIT Roorkee.
47. V. NarayanaMurthy Made (2008), 'Development of Access Modal Split models with Behavioural Intent', M. Tech. Dissertation submitted to Department of Civil Engineering, IIT Roorkee.
48. Kotkar Kishore Luxman (2008), 'Pedestrian Flow Characteristics in a medium sized city', M. Tech. Dissertation submitted to Department of Civil Engineering, IIT Roorkee.
49. Daniel Molla (2007), 'Modeling of Long Distance Bus Arrival and Departures at a Bus Station', M. Tech. Project submitted to Department of Civil Engineering, IIT Roorkee.
50. Md. Rizwan Nayeem (2007), 'Study of Turning Behaviour of Drivers', M. Tech. Project submitted to Department of Civil Engineering, IIT Roorkee.
51. V. NarayanaMurthy Made (2007), 'Optimization of railway station area processing time', M. Tech. Project submitted to Department of Civil Engineering, IIT Roorkee.
52. Biswajit Das (2007), 'Traffic Flow Analysis of Roundabouts', M. Tech. Dissertation submitted to Department of Civil Engineering, IIT Roorkee, Co-supervisor – Prof. Satish Chandra.

### **Thesis Guided – First Degree Level**

1. 'Development of Pedestrian Crossing Facility Criteria based on PV<sup>2</sup>', Project report submitted by Rishabh Vijay, Rishiraj and Robin Verma, Final year Civil Engg students, submitted under SURA to SRIC office IIT Roorkee, Uttarakhand, India (2016).
2. 'Analysis and Design of New Building Complex in Niti agar Area of IIT Roorkee Campus', Unpublished final year project report, Civil Engineering Department, IIT Roorkee, Uttarakhand, India (2015).
3. 'Intracity Traffic Study of Roorkee', Unpublished final year mini project report, Civil Engineering Department, IIT Roorkee, Uttarakhand, India (2014).
4. 'Design of a Bridge for a City', Unpublished final year project report, Civil Engineering Department, IIT Roorkee, Uttarakhand, India (2013).
5. 'Analysis of Traffic on National Highway section passing through Roorkee city', Unpublished final year mini project report, Civil Engineering Department, IIT Roorkee, Uttarakhand, India (2012).
6. 'Planning for Non-Motorized Traffic in Campus Area', Unpublished final year project report, Civil Engineering Department, IIT Roorkee, Uttarakhand, India (2011).
7. 'Development of Pedestrian Network for Roorkee City using GIS' Unpublished final year project report, Civil Engineering Department, IIT Roorkee, Uttarakhand, India (2011).
8. 'Sensor based Street Lighting System' Unpublished final year project report, Civil Engineering Department, IIT Roorkee, Uttarakhand, India (2010).
9. 'Design of an isolated intersection' Unpublished final year project report, Civil Engineering Department, IIT Roorkee, Uttarakhand, India (2010).
10. 'Design of Hill Roads: Road Safety Audit and Slope Stability Analysis' Unpublished final year project report, Civil Engineering Department, IIT Roorkee, Uttarakhand, India (2009).
11. 'Application of Nailing Technique in Transportation' Unpublished final year project report, Civil Engineering Department, IIT Roorkee, Uttarakhand, India (2009).
12. 'Modifying Pavement Characteristics using Crushed Concrete'. Unpublished final year project report, Civil Engineering Department, IIT Roorkee, Uttarakhand, India (2008).
13. 'Speed Flow Characteristics of NH Section using GIS Platform' Unpublished final year project report, Civil Engineering Department, IIT Roorkee, Uttarakhand, India (2008).
14. 'Speed analysis on bridges over Ganga and Yamuna in Allahabad City' Unpublished final year project report, Civil Engineering Department, M.N.N.I.T., Allahabad, UP, India (2006).
15. 'Analyzing parking options in shopping areas of Kota City' Unpublished final year project report, Civil Engineering Department, Engineering College Kota, Rajasthan, India (2003).
16. 'Accident analysis of unreported accidents in Kota City' Unpublished final year project report, Civil Engineering Department, Engineering College Kota, Rajasthan, India (2003).

17. 'Studies of parking characteristics of walled city of Kota' Unpublished final year project report, Civil Engineering Department, Engineering College Kota, Rajasthan, India (2002).
18. 'Socioeconomic development and road lengths in four districts of Rajasthan – A case study' Unpublished final year project report, Civil Engineering Department, Engineering College Kota, Rajasthan, India (1998).
19. 'Speed studies on a section of NH-12 passing through municipal limit of Kota' Unpublished final year project report, Civil Engineering Department, Engineering College Kota, Rajasthan, India (1997).
20. 'Evaluation and design of major rotaries and roundabouts in Kota city' Unpublished final year project report, Civil Engineering Department, Engineering College Kota, Rajasthan, India (1996).
21. 'Computer aided analysis of road accidents' Unpublished final year project report, Civil Engineering Department, Engineering College Kota, Rajasthan, India (1996).
22. 'Planning and designing of a section of Kota bypass connecting Kota-Jabalpur highway (NH-12) with Kota-Rawatbhata road (SH)' Unpublished final year project report, Civil Engineering Department, Engineering College Kota, Rajasthan, India (1995).
23. 'An analysis of road accidents on major transportation corridors in and around Kota city' Unpublished final year project report, Civil Engineering Department, Engineering College Kota, Rajasthan, India (1995).
24. 'Soil investigation and pavement design for residential complex in Kunhari area' Unpublished final year project report, Civil Engineering Department, Engineering College Kota, Rajasthan, India (1994).
25. 'NH-12 Bypass Road connecting Anantpura check post on Jabalpur-Kota road to Bawari check post on Kota-Jaipur road' Unpublished final year project report, Civil Engineering Department, Engineering College Kota, Rajasthan, India (1991).

## **VII. Academic – Industry Interaction**

### **Organized Training Programmes**

8<sup>th</sup> Task Force Committee Meeting of 'Development of Indian Highway Capacity Manual (Indo-HCM), Sponsored by CSIR-CRRI, held at IIT Roorkee, September 9-10, 2016. (Coordinator – Technical Sessions)

National Conference on Fifteen Years of PMGSY (FYPMGSY), Sponsored by NRRDA, Ministry of Rural Development, GOI, held at IIT Roorkee, August, 6-7, 2016. (Coordinator – Technical Sessions)

Short Term Programme of Two week on Experimentation in Civil Engineering at IIT Roorkee from June 9 – June 21, 2014. (Organised for RTU, Kota under TEQIP)

QIP Short Term Programme of one week on Urban Transportation Systems Planning at IIT Roorkee from June 17 – June 21, 2013.

QIP Short-Term Training programme of one week on *Urban Transportation Planning*, at IIT Roorkee from June 24 – June 28, 2007.

Training programme for AEN / JEN of PWD working on Rural Roads under Pradhan Mantri Gram Sarak Yojna, National Rural Road Development Agency (NRRDA), Ministry of Rural Roads, Govt. of India, at Engineering College Kota, July 18-23, 2005.

Assisted in organising the fourth international workshop on *Transportation Planning and Implementation Methodologies for Developing Countries* conducted by the Transportation Systems Engineering Group of Indian Institute of Technology Bombay during Dec 5-7, 2000.

Assisted in organising the third international workshop on *Transportation Planning and Implementation Methodologies for Developing Countries* conducted by the Transportation Systems Engineering Group of Indian Institute of Technology Bombay during Dec 9-11, 1998.

### **Expert Lectures in Academic Programmes**

Lecture delivered as resource person on 'Identification of Traffic Problems for Cities in Hilly Areas' in a Three Day Training Programme on 'Effective Planning for Mobility in Urban Areas' held at Uttarakhand Academy of Administration, Nainital, Uttarakhand, October 03-05, 2016.

Lecture delivered as resource person on 'Transportation Solutions to Traffic Problems in Hilly Areas' in a Three Day Training Programme on 'Effective Planning for Mobility in Urban Areas' held at Uttarakhand Academy of Administration, Nainital, Uttarakhand, October 03-05, 2016.

Lecture delivered as resource person on 'Role of ITS and Smart Technologies in Mitigating Traffic problems in Hill States' in a Three Day Training Programme on 'Effective Planning for Mobility in Urban Areas' held at Uttarakhand Academy of Administration, Nainital, Uttarakhand, October 03-05, 2016.

Lecture delivered as resource person on 'Promotion of Sustainable Transport Options in Urban Areas' in a Three Day Training Programme on 'Effective Planning for Mobility in Urban Areas' held at Uttarakhand Academy of Administration, Nainital, Uttarakhand, October 03-05, 2016.

Lecture delivered as resource person on 'Integration of Walk and Bicycle – A Policy Framework' in a Three Day Training Programme on 'Effective Planning for Mobility in Urban Areas' held at Uttarakhand Academy of Administration, Nainital, Uttarakhand, October 03-05, 2016.

Lecture delivered as resource person on 'Influencing Factors for Development of Tourist Locations' in a Three Day Training Programme on 'Effective Planning for Mobility in Urban Areas' held at Uttarakhand Academy of Administration, Nainital, Uttarakhand, October 03-05, 2016.

Lecture delivered as resource person on 'Analysis of Trends in Engineering Education in India.' in Expert Session of Annual Planning and Review Meeting of University of Petroleum and Energy Studies, Dehradun, Uttarakhand, August 31, 2016.

Lecture delivered as resource person on 'Planning for Non-Motorised Vehicle Users' in QIP STC on 'Urban Transport Systems Planning' at NIT Calicut, Kerala, Nov 25 – 29, 2013.

Lecture delivered as resource person on 'Revealed and Stated Preference Modelling' in QIP STC on 'Urban Transport Systems Planning' at NIT Calicut, Kerala, Nov 25 – 29, 2013.

Lecture delivered as resource person on 'Sustainable Transport for Diversity' in QIP STC on 'Planning Strategies for Accessibility and Universal Design' at QIP Centre, IIT Roorkee, Nov 11-15, 2013.

Lecture delivered as resource person on 'Sustainable Transportation' in QIP STC on 'Urban Transportation Systems Planning' at QIP Centre, IIT Roorkee, June 17-21, 2013.

Lecture delivered as resource person on 'Urban Structures and Transportation' in QIP STC on 'Urban Transportation Systems Planning' at QIP Centre, IIT Roorkee, June 17-21, 2013.

Lecture delivered as resource person on 'Trip Assignment Techniques' in QIP STC on 'Urban Transportation Systems Planning' at QIP Centre, IIT Roorkee, June 17-21, 2013.

Lecture delivered as resource person on 'Modal Split Models' in QIP STC on 'Urban Transportation Systems Planning' at QIP Centre, IIT Roorkee, June 17-21, 2013.

Lecture delivered as resource person on 'Trip Distribution Methods' in QIP STC on 'Urban Transportation Systems Planning' at QIP Centre, IIT Roorkee, June 17-21, 2013.

Lecture delivered as resource person on 'Pedestrian Mobility and Safety: Issues and Design Improvements in Half day seminar on 'Planning for Pedestrian Mobility and Safety', organized by Department of Civil Engineering, IISc Bangalore in association with Transportation Research Group of India, March 24, 2012.

Lecture delivered as resource person on 'A Parametric Study of Pedestrian Speeds at Midblock Crossings', in National Symposium on 'Designing Roads for Disabled Pedestrians in India' organised by The Society for Disability and Rehabilitation Studies (SDRS) New Delhi, India, March 1-4, 2012.

Lecture delivered as resource person on "Soil and Aggregate Tests" in Training programme of Rural Engineering Services and Ambedkar Villages, organised by Department of Civil Engineering, IIT Roorkee, April 22-24, 2011

Lecture delivered as resource person on "Soil and Aggregate Tests" in Training programme of Rural Engineering Services and Ambedkar Villages, organised by Department of Civil Engineering, IIT Roorkee, January 21-23, 2011.

Lecture delivered as resource person on "Stated Preference data Collection and Analysis" in Short term course on Discrete Choice Modelling (DCM 09) organised by Department of Civil Engineering, SVNIT Surat, Dec 21-25, 2009.

Lecture delivered as resource person on "Discrete Choice Modelling" in Short term course on Discrete Choice Modelling (DCM 09) organised by Department of Civil Engineering, SVNIT Surat, Dec 21-25, 2009.

Lecture delivered as resource person on “Stated Preference data Collection and Analysis” in workshop on Recent Trends in Sustainable Planning, organised by Centre of Infrastructure, Sustainable Transportation and Urban Planning (CiSTUP), IISc Bangalore, Dec 12-14, 2009

Lecture delivered as resource person on “Sustainable Transportation: NMT Options and Policies” in workshop on Recent Trends in Sustainable Planning, organised by Centre of Infrastructure, Sustainable Transportation and Urban Planning (CiSTUP), IISc Bangalore, Dec 12-14, 2009.

Lecture delivered as resource person on “Soil and Aggregate Tests” in Training programme of NREGA, organised by Department of Civil Engineering, IIT Roorkee (2009).

Lecture delivered as resource person on “Soil and Aggregate Tests” in Training programmes of NREGA, organised by Department of Civil Engineering, IIT Roorkee (2008).

Lecture delivered as resource person on “Urban Transportation Planning” in QIP short-term course on Urban Transportation Planning, IIT Roorkee (2007).

Lecture delivered as resource person on “Modal Split Models” in QIP short-term course on Urban Transportation Planning, IIT Roorkee (2007).

Lecture delivered as resource person on “Stated Preference Surveys” in QIP short-term course on Urban Transportation Planning, IIT Roorkee (2007).

Lecture delivered as resource person on “Behavioural Analysis and Estimation” in QIP short-term course on Urban Transportation Planning, IIT Roorkee (2007).

Lecture delivered as resource person on “Transportation Demand, Supply and Cost” in QIP short-term course on Urban Transportation Planning, IIT Roorkee (2007).

Lecture delivered as resource person on “Urban Structures and their Evaluation” in QIP short-term course on Urban Transportation Planning, IIT Roorkee (2007).

Lecture delivered as resource person on “Rigid pavements for rural roads” in QIP short-term course on Planning, design, construction and maintenance of rural roads, IIT Roorkee (2007).

Lecture delivered as resource person on “Working with revealed preference and stated preference data for analyzing travel choices” in short term training programme on Recent advances in transportation planning and traffic engineering, IIT Guwahati (2007).

Lecture delivered as resource person on “Sustainable transportation: Need for promoting walk and bicycle”, in short term training programme on Recent advances in transportation planning and traffic engineering, at IIT Guwahati, (2007).

Lecture delivered as resource person on “Design of Rigid Pavements for Rural Roads” in 15<sup>th</sup> and 16<sup>th</sup> Training programme of PMGSY organised by Principal Technical Agency, IIT Roorkee (2006).

Laboratory demonstration of “Testing of Bituminous Material” in 15<sup>th</sup> and 16<sup>th</sup> Training programme of PMGSY organized by Principal Technical Agency, IIT Roorkee (2006).

Lecture delivered as resource person on “Management Information System” in training programme entitled ‘Municipal Solid Waste Management’ organized under Ministry of Urban Development for Engineers, at MNNIT, Allahabad (2006).

Lecture delivered as invited speaker on “Water Conservation and Management’ in Seminar on ‘Water Management’ organised by Rotary Allahabad (2005).

Lecture delivered as invited speaker on “Sky Bus – A Technology for Urban Transportation” as invited talk at Institution of Engineers, Allahabad Chapter, MNNIT Allahabad (2005).

Lecture delivered as invited speaker on “Water Conservation and Management’ in convention on ‘Water Conservation’ organised by Rotary Allahabad Elite (2005).

Lecture delivered as co-ordinator on “Aggregates and Bituminous Materials” in training programme organized by State Technical Agency, Engineering College Kota, under PMGSY, NRRDA (2005).

Lecture delivered as co-ordinator on “PMGSY Guidelines” in training programme organized by State Technical Agency, Engineering College Kota, under PMGSY, NRRDA (2005).

Lecture delivered as co-ordinator on “Geometric Design and Safety Aspects” in training programme organized by State Technical Agency, Engineering College Kota, under PMGSY, NRRDA (2005).

Laboratory demonstration of “Road Materials Testing” in training programme organized by State Technical Agency, Engineering College Kota, under PMGSY, NRRDA (2005).

Lecture delivered as resource person on “Discrete Choice Analysis for Modal-Split Models” in training programme organised by L. D. College of Engineering, Ahmedabad (2005).

Lecture delivered as resource person on ‘Quality Control in Design and Construction of Roads’ in training programme organized by Agricultural Marketing Board, Kota division (2001).

Lecture delivered as resource person on ‘Traffic Signs – Changes in IRC specifications’ in training programme organized by Agricultural Marketing Board, Kota division (2001).

Lecture delivered as resource person on 'Sealant for joints' in a short-term course on 'Deterioration and Repair of Concrete Structures', conducted by Civil Engineering Department, Engineering College Kota (1996).

Lecture delivered as resource person on 'Testing of road materials and IS code specifications' in a short term course on 'Civil Engineering Materials’ testing’ conducted by Civil Engineering Department, Engineering College Kota (1995).

### **Consultancy Provided**

1. Testing of BM and SDBC works on Chilyabsod – Jogat motor marg, WB Div., PWD Uttarkashi.
2. Testing if DBM and BC layers on Pashulok Barrage marg to AIIMS Rishikesh, Temp. Div., PWD Rishikesk.
3. Inspection and testing of SDBC works on Buwakhel – Pauri – Dev Prayag motor marg, ADB Disaster Div., PWD Pauri.
4. Inspection and testing of Kalsi-Chakrata / Haripur – Ichadi motor marg of PWD Sahiya, Temp. Div., PWD Sahiya.



5. Inspection and testing of motor marg in Chakrata and Vikas Nagae Assembly Constituencies, Temp. Div., PWD, Sahiya.
6. Testing of SDBC layers on roads at NCPS Dadri, AGM Town Admn., NCPS, Vidhyut Nagar, Dadri.
7. Inspection, analysis and testing of local roads in Moradabad, Moradabad Development Authority, Moradabad.
8. Inspection, analysis and testing of Buwakhal – Pauri – Dev Prayag Motor marg, ADB Disaster Div., PWD, Pauri.
9. Proof checking for pavement design for four laning of Muzaffarnagar – Haridwar section, ERA Group, Noida.
10. Site Visit and Design of Flexible Pavement for Master Plan roads in Narela Sub-city, Northern Div. -12, DDA, Narela, Delhi.
11. Vetting of RFP of works in city of Noida, Distt. Gautam Budh Nagar, UP, Noida Traffic Cell, Noida.
12. Vetting of Geometric Design of Ramps and Loops on connectivity between NH-2, Yamunan Expressway and ROB towards Fatehabad, Agra Development Authority, Agra.
13. Design of CC mix for Kalpana Cinema to Chlkana road, Saharanpur Development Authority, Saharanpur.
14. Training of technical staff of Department of Civil Engineering, Rajasthan Technical University, Kota.
15. Inspection and strengthening works done on Bhurarani – Chchtarpur road, Udham Singh Nagar, PWD Rudrapur.
16. Inspection of BM and SDBC works on New Tehri – Kirti Nagar marg, PWD New Tehri.
17. Post construction tests on BC layers (NH-58), PWD Roorkee.
18. Field tests on Shimla Bypass road, PWD Dehradun.
19. Field tests on two roads in Ghansali, PWD Ghansali.
20. Sampling and Testing of Bituminous Core Samples of Bituminous Macadam and Semi-Dense Bituminous Macadam layers, IIT Roorkee Campus.
21. CBR and PI values for Samples from Mori-Naitwar-Saakri Road, Purola, Uttarakhand, PWD, Purola.
22. Design of Flexible Pavement for Roads passing through Jhabreda, PWD, Roorkee.
23. Flexible Overlay Design for Lambarpur - Barotiwala – Ambari Motor Marg, Sahiya, PWD, Sahiya.
24. Design of Overlay for Dobra – Bhaldiyana Band Motor Marg, PWD, New Tehri.
25. Flexible Pavement Design for Roads of Construction Division, PWD, Amroha.
26. Design of Pavement on Mandi Samiti Road between Kalpana Cinema and Chilkana Road, Saharanpur Development Authority, Saharanpur.

27. Overlay Design Using Benkelman Beam equipment for Roads in and around Amroha, PWD Amroha.
28. Flexible Overlay Design for Barotiwala – Ambari Motor Marg, Sahiya, PWD, Sahiya.
29. Overlay Design using Benkelman Beam Test for Roads around Chandpur, PWD, Bijnor.
30. Traffic Management Plan for Dariba Smelter Plant at Udaipur, M/s Hindustan Zinc Limited, Udaipur.
31. Design of Flexible Pavement for Shantershah Sehdevpur Marg to Bawali Kalanjar Marg, PWD, Roorkee.
32. Design of Flexible pavement for Kudakwala to Buggawala (Biharigarh) in district of Haridwar, Uttarakhand.
33. Evaluation of EIRR on roads under UP State road Project, Chief Engineer, World Bank (Roads) Project, UPPWD, Lucknow, UP.
34. Benkelman Beam deflection study and design of overlay on roads in Saharanpur, PWD, Saharanpur, UP.
35. Design of overlay for Moradabad Haridwar road to Meerut Pauri Road via Puranpur Bijori Jottiwala, PWD, Bijnor, UP.
36. Benkelman Beam studies and overlay design for roads in Bijnor, PWD, Bijnor, UP.
37. Design of BC mix at Bhiwadi Four Lanning Project, RIDCOR, Jaipur. (0.55 Lac)
38. Benkelman beam deflection study and design of overlay on roads in Khurja, PWD, Khurja, UP.
39. Benkelman beam deflection study and design of overlay for roads in Amroha, PWD, Amroha, UP.
40. Design of overlay using Benkelman Beam deflection data for Sambhal-Adampur road and Saidnagli – Manauta – Chaudarpur road, PWD, Moradabad, UP.
41. Evaluation of Thiopave with different types of Aggregates and Additives, M/s Shell Research Limited, United Kingdom.
42. Design of overlay for Modinagar – Hapur and Dasna – Gulawathi road, PWD, Ghaziabad, UP.
43. Design of overaly for Bijnor – Nangal – Najibabad marg and Bijnor Kotwali marg, PWD, Bijnor, UP.
44. Design of overlay for Gaindikhata to Laldhang road, PWD, Haridwar, Uttarakhand.
45. Design of Overlay for Mohan Nagar – Loni – Wazirabad road, PWD, Ghaziabad, UP.
46. Design of flexible pavement for Dunda – Dhanari – Sem – Mukhem motor marg, PWD, Uttarkashi, Uttarakhand.
47. Traffic Management Plan for Ambuja Plant at Suli and Rauri, M/s Ambuja Cement, Himachal Pradesh.
48. Design of flexible pavement for Dhanauri – Sidcul link marg, Irrigation Division, Hardwar, Uttarakhand.
49. Design of overlay for roads in Moradabad, PWD, Moradabad, UP.

50. Strengthening and rehabilitation of roads in NDMC area, New Delhi, NDMC, New Delhi. (12.73 Lac)
51. Design of overlay for roads in Moradabad (SH-41 and MDR-65), PWD, Moradabad, UP.
52. Evaluation of Thiopave with different types of aggregates, M/s Shell Global Solutions.
53. Design of overlay for roads in Bijnor, PWD, Bijnor, UP.
54. Audit of completed road works under NH division, PWD Haldwani, Nainital, Uttarakhand. (8.75 Lac)
55. Benkelman beam deflection studies on Kotwali-Nahtor marg, Bijnor, PWD Bijnor, UP. (0.72 Lac)
56. Design of overlay on Panipat – Khatima road (SH-12), PWD, Muzaffarnagar, UP.
57. Deflection study and design of overlay on Chhapar – Rohana and Rohana – Charthwal road, UPPWD, Muzaffarnagar, UP.
58. Laboratory evaluation of Dense Bituminous Macadam with Thiopave, M/s Shell Global Solutions, United Kingdom.
59. Traffic Management Plan for Ambuja Cement Plant at Ropar, Punjab, M/s Ambuja Cement.
60. Quality control inspection of roads in Narendranagar, PWD Narendranagar, Uttarakhand. (0.55 Lac)
61. Design of overlay for roads in Moradabad, PWD, Moradabad, UP.
62. Site visit report on Haldwani – Ramnagar road (MDR-32), PWD, Ramnagar, UP.
63. Quality control inspection of NH-74 and NH-87 road sections under PWD Haldwani, Uttarakhand. (6.42 Lac)
64. Site visit report on Majhra – Bhuddi – Shekuwala - Dharamawala road, PWD, Dehradun, Uttarakhand.
65. Design of overlay for Nainital – Kaladhungi – Bazpur – Doraha road (km 34-49), PWD, Ramnagar, UP.
66. Report on Suitability of RBI Grade-81 in road construction, Legend Surface Developers Pvt. Ltd., New Delhi.
67. Deflection study and design of overlay on Muzaffarnagar – Saharanpur road, PWD, Meerut, UP.
68. Vehicle Damage Factor on Muzaffarnagar – Saharanpur road, UPPWD, Meerut, UP.
69. Benkelman beam deflection study and design of overlay in km 0.00 to 14.00 of NH-72A, PWD, Ghaziabad, UP.
70. Report on site visit to Parking area at IOCL Bottling Plant, Haridwar, IOCL, Haridwar, Uttarakhand.
71. Site visit report on Shimla Bypass Radial Road, Dehradun, PWD, Dehradun, Uttarakhand.
72. Benkelman beam deflection study and design of overlay on different roads in Rudrapur, PWD, Rudrapur, Uttarakhand.
73. Quality control inspection of roads, PWD Thatyur, Uttarakhand.

74. Field Testing of Roads in Rudrapur, PWD Rudrapur.
75. Deflection studies in Rudrapur and mix design for bituminous works, PWD Rudrapur.
76. Scrutinizing of design for Kurukshetra and Pehowa roads, PWD Kurukshetra.
77. Quality control inspection for NH-24 Gaziabad-Delhi Road, PWD Delhi.
78. Design of Bituminous mixes and field tests, PWDs. (1.85 Lac)
79. Quality Control inspection for Canal Road (left bank) between Manglore and Murad nagar, U.P. Projects Corporation Ltd. Meerut.
80. Design of Job Mix formula for Gugaon, Mohali, Roorkee, Hapur and Narela, respective PWDs. (2.00 Lac)
81. Quality Control supervision for Old Delhi Road, connecting NH-65 with NH-1, Ambala PWD.
82. Design of Bituminous mixes for Taxi track as AF Station Kheria, Agra, UP. (0.44 Lac)
83. Quality control supervision for newly constructed roads in Karnal district (Karnal-Ramba-Indri-Ladwa Road and Karnal – Kaithal road), Haryana.
84. Design of overlays using Benkelman beam deflections for NH-72A section between Dehradun and Chhutmalpur, Uttarakhand.
85. Remedial measures for deformed bituminous surface in parking area of Indian oil Corporation Bottling plant at Haridwar.
86. Remedial measures for distressed roads in Dehradun (Radial Road) City, Uttaranchal.
87. Design of overlays using Benkelman beam deflections for various roads in Sardar Udham Singh Nagar, Uttaranchal.
88. Design of concrete road for roads near carpet production units within city area, Bhadohi, UP.
89. Bituminous Road design for Carpet City Plan, Bhadohi, UP.
90. Scrutiny of DPRs under PMGSY for Allahabad, Mirzapur, Chitrakoot, Ballia, Pratapgarh, Fatehpur, Bhadohi districts of Uttar Pradesh.
91. Soil characteristics required for design of roads under different districts of Eastern UP.
92. Bituminous Mix Design for Runway landing strip, Air Force Station, Bareilly, NH-Div. PWD, Mirzapur, Air Force Station, Bamrauli, Allahabad, and Military Engineering Services, Kota.
93. Scrutiny of DPRs under PMGSY for Kota, Bundi, Swai Madhopur, Jhalawar, Baran districts of Rajasthan.
94. Pavement crust design for NH-12 bypass road between Daknia Talav station and DCM railway crossing for Urban Improvement Trust Kota (testing involved).
95. Recommendation of safe Bearing Capacity for RCC Overhead tank at Sunel for Resident Engineer, PHE-I, RHB, Jaipur (testing involved).
96. Discussed and suggested remedial measures for repeated failures of DCM road with Urban Improvement Trust Kota.
97. Discussed and suggested remedial measures relating to road failures with NTPC Anta, Baran.

## **Sponsored Projects**

1. 'Development of Indian Highway Capacity Manual', In coordination with CRRI, New Delhi, under Government of India scheme, funded by CSIR, PI – Prof. Satish Chandra, Cost 90 Lakh.
2. "Pedestrian Behaviour under varied Traffic and Spatial conditions', CSIR, New Delhi, cost 15.90 Lakh, as co-investigator, PI – Prof. Satish Chandra. (Completed June 2011)
3. 'Inter-city Travel Behaviour of Residents in Higher Education Institutions', Awarded under Research initiation grant of IIT Roorkee, cost 5.0 Lakh. (Completed June 2010)

## **VIII. Areas of Interest**

Integrated transportation planning with non-motorized and motorized modes; Travel behaviour modeling; Land use and transportation interactions; Stated and Revealed Preference Survey planning and design; Urban traffic congestion; Road safety; Accident Analysis and Prevention, and Pavement Design and Evaluation.

## **IX. Courses Taught**

### **Within Transportation Engineering**

- ✓ Transportation Planning
- ✓ Geometric Design
- ✓ Traffic Engineering and Transportation Planning.
- ✓ Transportation Modeling and Simulation.
- ✓ Transportation Systems Analysis.
- ✓ Highway Materials and Testing.
- ✓ Transportation Systems and Planning / Transportation Planning.
- ✓ Transportation Engineering (-I) including Highway Engineering.
- ✓ Transportation Engineering (-II) including Railway Engineering and Airport Engineering.
- ✓ Advance Transportation Engineering including Traffic Engineering.
- ✓ Road Material Testing Lab including testing of road aggregates, soil and bitumen.

### **Outside Transportation Engineering**

- ✓ Numerical Analysis and Computer Programming
- ✓ Computer Graphics
- ✓ Modeling, Simulation and Analysis
- ✓ Environment and Ecology
- ✓ Material Testing Lab including testing of bars, cubes, blocks etc.
- ✓ Engineering Mechanics and Experimental Techniques Lab including verification of laws of static etc.
- ✓ Structural Engineering Lab including verification of theorems of structures.
- ✓ Building Planning and Design – I

## **X Course Curriculum Developed**

01. Developed course material for M. Tech course on 'Geometric Design', 'Transportation Planning', 'Urban Mass Transit Systems', and 'Transport Economics' under New Scheme 2014.
02. Developed course material of B. Tech Course (new syllabus – 2013) on 'Numerical Methods and Computer Programming' CE-103 for Department of Civil Engineering, IIT Roorkee.
03. Finalized course curriculum of B. Tech in Civil Engineering (2012) of Rajasthan Technical University, University College of Engineering as a member of BOS of Civil Engineering.
04. Finalized course curriculum of M. Tech in Transportation Engineering (2011) of Rajasthan Technical University, University College of Engineering as a member of BOS of Civil Engineering.
05. Scrutinized courses of Sharda University (Highway Engg, Transport Systems and Planning and Railway Engg).
06. Developed course syllabi of three courses 'Transportation Modelling and Simulation', 'Highway Materials and Testing' and 'Traffic Engineering and Transportation Planning' to be run in M. Tech. Transportation Engineering (revised) of Department of Civil Engineering at IIT Roorkee, 2010.
07. Submitted a Proposal for starting Master of Technology in Civil Engineering with specialization in Transportation Systems Engineering at MNNIT, Allahabad. Proposal under consideration of Senate.
08. Detailing of course contents of elective course in 'Transportation Systems and Planning' run in VIII Semester of Civil Engineering Department at M.N.N.I.T., Allahabad.
09. Advanced Transportation Engineering [8<sup>th</sup> Semester, Elective, 3L] at Engg. College Kota  
The course deals with traffic engineering in detail. It covers road user characteristics, fundamental relationships between traffic parameters, various traffic studies, statistical methods for dealing with data, design of facilities, impact assessment and road safety.
10. Transportation Engineering – II [7<sup>th</sup> Semester, Core, 3L] at Engg. College Kota  
The course contains both railway engineering and airport engineering. The aspects covered are components of track and related issues, geometric design of track, points and crossings, signals and interlocking, urban railway systems, airport site selection, aircraft components, runway design, taxiway design, pavement design, aprons, hangers, terminals, lighting etc.
11. Transportation Engineering – I [6<sup>th</sup> Semester, Core, 3L] at Engg. College Kota  
This is the basic course in Highway Engineering. It covers aspects like highway planning, road development plans, geometric design, pavement design, materials and construction, elementary traffic engineering, hill roads and roadside arboriculture.

## 12. Road Material Testing Laboratory [6<sup>th</sup> Semester, Core, 2/2] at Engg. College Kota

Bitumen testing facilities were enhanced through the purchase of different equipments.

Handouts were prepared in a way that they can be directly used in the field, if so required.

### Other Areas

Course structure was developed for Engineering Mechanics and Experimental Techniques Lab, and Building Planning and Design.

Question Bank was developed for Material Testing Lab, Engineering Mechanics and Experimental Techniques Lab, and Structural Engineering Lab.

### Student Evaluation

Apart from the midterm tests specified in course curriculum of theory subjects, the students were also evaluated based on assignments and course seminars.

For Practical subjects, they were evaluated based on question bank assignments, quizzes and viva-voce for each experiment.

At Times Field Oriented problems are given in groups to find its solution.

## XI. Computer Proficiency

I am Comfortable with presentations using transparencies and Overhead Projectors, and computer system with LCD projectors.

Conversant with software likes ALOGIT (for behavioural modeling), TransCAD (for transportation planning), TRIPPS (for traffic assignment), TRYNSIT (for intersection control), HDM-4 (for highway decisions), SPSS (Statistical Software), Snap Surveys (Survey questionnaire preparing software) and Microstation (General design tool). Learning MX Road.

Also having working knowledge of applications like MS Word, Excel Worksheets, Power Point, Fox Pro etc. working in updated Windows operating system environment.

## XII. Membership of Professional / Academic Bodies

- Life Member, Transportation Research Group of India, Bangalore.
- Member, Board of Studies, Rajasthan Technical University, Kota. [2009-2012, 2012-2014].
- Member, IRC committee H-8 on Urban Roads, Street and Transport, 2008-2011, 2012-2015.
- Indian Society for Construction Materials and Structures, Roorkee. [LM-705, 2007]
- American Society of Civil Engineers, USA. [ID. 391624, 2002, **Expired**]
- Institute of Urban Transport (India), New Delhi. [LM – 343, 1999]
- Indian Geotechnical Society, New Delhi. [LM – 1425, 1995]
- Indian Society of Rock Mechanics and Tunneling Technology, New Delhi. [LM – 1008, 1995]
- Indian Roads Congress, New Delhi. [LM – 19832, 1993]

- Institution of Engineers (India), Calcutta. [F – 117388-6, 2012]
- Indian Society of Technical Education, New Delhi. [LM – 11247, 1992]

### **XIII. Fellowships / Honors / Invitations Received**

- July 1982                      Secondary School **Merit Scholarship** certificate from Rajasthan Government.
- July 1988 – Jan. 1990      Fellowship from MHRD, Government of India for doing M. Tech. at PEC Chandigarh.
- July 1998 – July 2001      Fellowship from MHRD, Government of India for doing Ph.D. at I.I.T. Bombay.
- August 2001                Received travel grant for attending International conference at Kruger National park in South Africa from the organizers, as sole invited delegate from Indian sub-continent.
- 2003                          Nominated for 7<sup>th</sup> and 8<sup>th</sup> Edition of Who's Who in Science and Engineering, MARQUIS Who's Who, USA.
- 2004                          Nominated as INTERNATIONAL EDUCATOR of the Year 2004, International Biographical Centre, Cambridge, England.
- June 2004                    Received invitation for CHAIRING A TECHNICAL SESSION (H-5) at Xth WCTR held at Istanbul, Turkey during July 4-8, 2004.
- 2005                          Invited for special talk by Allahabad Local chapter of Institution of Engineers (delivered talk on Skybus)  
Invited for expert lecture on water conservation by Rotary Allahabad and Rotary Allahabad Elite.  
Invited as resource person in ISTE short-term training programme at LD College of Engineering, Ahmedabad, Gujarat, May 29-June3.  
Nominated as LEADING SCIENTISTS of the World 2005, International Biographical Centre, Cambridge, England.
- 2006                          Invited as resource person in MOUD sponsored training programme for municipal engineers at MNNIT Allahabad.  
Nominated for Who's Who in Asia 2006, MARQUIS Who's Who, USA
- 2007                          Invited as resource person in DONAR sponsored short term training programme at IIT Guwahati, January 15-19.
- 2008                          Invited as a Theme Speaker for Indo-US Symposium on Mass Transit and Travel Behaviour Research held at IIT Guwahati, February 12-16.



Chaired technical session on Travel Behaviour Research in Indo-US Symposium on Mass Transit and Travel Behaviour Research held at IIT Guwahati, February 12-16.

Member, IRC H-8 Committee on Urban Roads, Streets and Transport, Indian Roads Congress, New Delhi

- 2009  
Member, Board of Studies, Rajasthan Technical University, Kota  
Invited as resource person for workshop on Sustainable Planning at IISc Bangalore (Dec 12-14, 2009) and for STC on Discrete Choice Modelling at SV NIT Surat (Dec 21-25, 2009)
- 2010  
Chaired technical session in International Workshop on Transportation Planning and Implementation methodologies for Developing Countries: Sustainable Transportation, TPMDC-2010, at IIT Bombay, Mumbai, India, December 15-17, 2010.
- 2012  
Gave invited presentation in the national symposium on 'Design of roads for disabled pedestrians' on March 2, 2012 organised by SDRS at ISRC, New Delhi. Also chaired a session on 'Role of ICT in sensitization about road safety rules and norms for disabled pedestrians' in the symposium on March 2, 2012.  
Invited as a resource person for Half day seminar on Planning for Pedestrian Mobility and Safety on March 24, 2012, organized by Department of Civil Engg IISc Bangalore and TRG of India.  
Chaired technical session in International Workshop on Transportation Planning and Implementation methodologies for Developing Countries, TPMDC-2012, at IIT Bombay, Mumbai, India, December 12-14, 2012.
- 2013  
Attended as an expert National Symposium on High Speed Rail at SJCE, Mysore, May 9-10, 2013.
- 2014  
Commendation Medal for Paper in IRC Annual Meeting, Guwahati, Jan 2014.  
Chaired technical session in International Workshop on Transportation Planning and Implementation methodologies for Developing Countries (TPMDC 2014) at IIT Bombay, India, December 10-12, 2014.
- 2015  
Invited as an expert for evaluation of M Tech Thesis in Transportation Planning at Gujarat Technical University, Ahmedabad.

Chaired technical session in National conference on Transportation and Water Resources Engineering held at LD College of Engineering Ahmedabad, April 24-25, 2015.

- 2016  
Invited as External Examiner to examine M. Tech Thesis of Transportation Engineering section of Department of Civil Engineering, National Institute of Technology, Srinagar, J&K, September 10, 2016.  
Invited as Expert Speaker for a talk on Engineering Education in India by University of Petroleum and Energy Studies, Dehradun on August 30, 2016  
Invited as Resource person to talk on mobility in urban areas by Uttarakhand Academy of Training, Nainital, in a course for District officials (Ward members, police personals, PWD engineers, etc.) on October 3-4, 2016  
Chaired technical session in International Workshop on Transportation Planning and Implementation methodologies for Developing Countries (TPMDC 2016) at IIT Bombay, India, December 19-21, 2016.

#### **XIV. Administrative Experience**

##### **1. AT IIT Roorkee**

- a. Convener, Building and Maintenance Committee, 2016 – 2018
- b. Member, Departmental Academic Programme Committee, 2016 – 2018
- c. Member, Departmental Administrative Committee, 2016 – 2018
- d. Chairman, JEE Advanced 2016
- e. Vice Chairman, JEE Advanced 2015
- f. Member, Departmental Research Committee, 2014 – 2016.
- g. Chief Advisor – Hobbies Club, IIT Roorkee, 2014 – 2016.
- h. Nominated Member, Senate, IIT Roorkee, 2012 – 2015.
- i. Vice Chairman, GATE, IIT Roorkee Office, 2013 – 2014.
- j. Member, Training, Tour and Placement Committee, 2012 – 2014.
- k. Member, Departmental Academic Committee (DAC), 2010 – 2012.
- l. Member, Departmental Time Table Committee, 2010 – 2012.
- m. Deputy Chief Advisor (Administration), THOMSO – 2010.
- n. In-charge, Transportation Laboratory, 2010 - 2012.
- o. CPO, Coordination Committee of Bhawans, 2010 – 2013.
- p. Chief Warden, Jawahar Bhawan, DOSW Organisation, June 2009 – March 2013.

- q. Warden, Govind Bhawan Mess, DOSW organisation, January 2008 – May 2009.
- r. Member, LCD Purchase committee for Institute, 2007.
- s. Member, Departmental Academic Committee (DAC), DOCE, 2008-2010
- t. Member, Training, Tour and Placement Committee, In-charge Tour and Placement, DOCE, 2008-10
- u. Member, Building and Maintenance Committee, DOCE, 2007-08
- v. Member, Web Information committee, DOCE, 2007-08

## **2. AT MNNIT Allahabad (July 2005 – June 2006)**

- a. Coordinator, State Technical Agency, under National programme – PMGSY.
- b. OC Transportation Engineering Lab.
- c. Member, Institute Library Committee
- d. Member, Geographical Information Systems Cell.
- e. Member, Institute Planning and Development Committee.
- f. Member, Research and Consultancy Committee.
- g. OC Civil Maintenance (Colony) and Member Secretary, Institute Advisory Committee on Civil Maintenance.
- h. Member, Departmental Under-Graduate Committee
- i. Member secretary, Building and House Allotment Committee

## **3. AT Engineering College Kota**

- a. Coordinator, State Technical Agency, under National Programme - PMGSY.
- b. Assistant Estate Officer, looking after Civil Engineering maintenance.
- c. Assistant Professor, Training and Placement.
- d. Member of Parking Committee of College, as an expert and member secretary.
- e. Member of Building and House Allotment Committee, as member secretary.
- f. Worked as member of Library Committee.
- g. In-charge of Road Materials Testing Laboratory.
- h. Looking after accreditation work as representative of Civil Engineering Department.
- i. Looking after attendance of students, at departmental level.
- j. Previously in-charge of Hydraulics Laboratory.
- k. Remained in-charge of examination work at departmental level.
- l. Worked as internal evaluator of final year Training and Placement Reports.
- m. Worked as in-charge of Final year student Projects.
- n. Worked as in-charge of Final year student Seminars.
- o. Managed activities of Academy of Civil Engineers, as secretary cum treasurer.

## **XV. Personal Particulars**

Present Designation	Associate Professor
Residential Address	59/7, Ravindra Lok Indian Institute of Technology Roorkee – 247 667. Tel. +91 1332 27 6447 Mo. 94115 01555 Email: <a href="mailto:rrastogi_in@yahoo.com">rrastogi_in@yahoo.com</a> , <a href="mailto:rajat.iitr@gmail.com">rajat.iitr@gmail.com</a>
Permanent Address	C-5, Vallabham Apartment Opp. Lake, Ballabh-Bari KOTA – 324 007. Mo. 09460054937
Date of Birth	18 – 04 – 1967
Father's Name	Shri Jitendra Kumar Rastogi
Mother's Name	Smt. Alka Rastogi

**[Rajat Rastogi]**