Curriculum Vitae (as on August 5, 2014)

Name: Partha Chakroborty

Current Affiliation: Rajeeva and Sangeeta Lahri Chair Professor, Department of Civil Engineering, I.I.T. Kanpur, India

Addresses and Homepage
      Postal: Professor
           Department of Civil Engineering
           Indian Institute of Technology, Kanpur; Kanpur 208 016, INDIA
      E-mail: partha@iitk.ac.in
      Tel.: 91-512-2597037 (office), 91-512-2598430 (home); Fax: 91-512-2597395
      Home: http://home.iitk.ac.in/~partha

Education

Degree	Year	Specialization	University
B.Tech. (Hons.)	1988	Civil Engineering	I.I.T. Kharagpur, India
M.C.E.	1990	Transportation Engineering	Univ. of Delaware, USA
Ph.D.	1993	Transportation Engineering	Univ. of Delaware, USA

Experience

Teaching: I have been teaching as a regular faculty at the *Indian Institute of Technology, Kanpur* from *1993* onwards. I have also taught undergraduate and graduate students at the *University of Delaware, USA* as a visiting faculty during *1996* and *2002*. I have taught courses in (i) Transportation Engineering, (ii) Traffic Engineering, (iii) Transportation Planning, (iv) Urban Transport Systems, (v) Systems Analysis, (vi) Statistics, (vii) Probability Theory, etc.

Research: I am involved in research in the following areas from 1988 onwards: (i) Traffic Flow Theory, (ii) Traffic Engineering, (iii) Transit Routing and Scheduling, (iv) Uncertainty Modelling in Transportation and a few other associated topics.

Theses
Supervision: Five Ph.D. scholars have worked with me and graduated;
           One Ph.D. Scholar is due to submit by October 2014;
           One Ph.D. scholar is currently working with me;
           I have also supervised more than 30 master's degree students.

Editorship

1. Member, Editorial Board, Transportation Research Procedia. Published by Elsevier**.**

2. (Founding) Editor-in-Chief, Transportation in Developing Economies. (To be) Published by Springer.

Awards, Honours and Recognitions

1. University of Delaware Competitive Fellowship (1991); this is awarded by the **University of Delaware** to outstanding graduate students.

2. **Best Paper Award** (1992); awarded at the **Sixth World Conference on Transport Research** held at Lyon, France for the paper "Examination of Fuzzy Notion of Level of Service: Case of Freeway Traffic Flow".

3. Neural Network Leadership Award (1995); awarded by the **International Neural Network Society** at the **World Congress on Neural Networks** held at Washington D.C., U.S.A.

4. ASCE Journal of Transportation Engineering **Best Paper Award** (1996); awarded by **American Society of Civil Engineers** for the paper "Optimal Scheduling of Urban Transit Systems Using Genetic Algorithms".

5. AICTE Career Award for Young Teachers (1998); awarded by **All India Council of Technical Education**.

6. Received silver plaque from the Department of Civil Engineering for being chosen as an inspiring teacher by the **2007 batch of Civil Engineering students**.

7. Chosen as Track Chair for Transport Session in the **National Frontiers of Engineering Symposium (New Delhi, 2007)**

8. Chosen as Track Chair for Infrastructure Session in the **Second Indo-American Frontiers of Engineering Symposium (Irvine, 2008)**

9. Received the Frontiers of Engineering Award (2008); awarded by the **Indo-US Science and Technology Forum**.

10. Rajeeva and Sangeeta Lahri Chair Professorship (2012); selected by the **Board of IIT Kanpur**.

11. Chosen as Chair of the 2nd (International) Conference of the Transportation Research Group of India to be held at Agra in December of 2013.

12. Considered a pioneer in developing rule-based acceleration (car-following) models of traffic flow (see homepage; this document is jointly developed by **Federal Highway Authority, Cambridge Systematics, MIT and others**).

13. Received letters of commendation from **Directors of IIT Kanpur** for excellence in teaching.

14. Ex-Member of the Transport Planning, Traffic Engineering and Road Safety Committee of the **Indian Roads Congress** (this is a committee responsible for framing transportation related codes in India).

15. Member of the IMRA committee of the **Indian Roads Congress** (this is a committee responsible for identifying areas in which research efforts should be concentrated)

16. Member of Core Group of **National Disaster Management Authority** for Studying Crowd Behaviour and Stampedes.

17. Member of the Program Advisory Committee (PAC) on Civil and Environmental Engineering of the Science and Engineering Research Board (SERB) of the **Department of Science and Technology**, Government of India.

18. Member of the Governing Council of the Centre of Excellence in Urban Transport at IIT Madras (this centre has been set up by the **Ministry of Urban Development**, Government of India).

19. **Member, Screening Committee, Fullbright Fellowship** in Engineering, Physics and Computer Science (International Fulbright Science and Technology Award for Ph.D. study at top US institutions) in 2009

20. Review articles for journals such as Transportation Research (Parts A, B and C), European Journal of Operations Research, Engineering Optimization, Journal of Heuristics, Transportation Research Record, ASCE Journal of Transportation Engineering, ASCE Journal of Infrastructure Systems, ASCE Journal of Urban Planning and Development, and others.

Invited / Plenary Talks

I have delivered invited talks / plenary talks on Traffic Flow Theory, Optimization and its Applications, and Fuzzy Set Theory and its Applications at various conferences, universities and other organizations. These include, among others,

University of Delaware	Virginia Tech.
University of North Carolina (at Charlotte)	University College London
University of Paris (Sud)	Transportation Research Board (Washington, D.C.), USA
IIT Delhi	IIT, Kharagpur
IIT Guwahati	IIT Madras
IISc Bangalore	MNNIT, Allahabad
SVNIT Surat	BESU Shibpur (BE College)
Jadavpur University	Central Road Research Institute, New Delhi
Institute of Engineers, Kolkata	Tata Steel, Jamshedpur

Publications

Refereed International Journals

1. Vivek Agarwal and Partha Chakroborty. (2014). Stochastic Analysis of Duration of Occlusion of Overhead Sign by Leading Heavy Vehicle: Application to Sign Design. **ASCE Journal of Transportation Engineering,** Vol. 140. No. 8.

2. Ashish Kumar, Animesh Das and Partha Chakroborty. (to appear). Effect of angle of repose of aggregates on asphalt IDT value, **Construction Materials** (full name: Proceedings of Institution of Civil Engineers: Construction Materials)**.**

3. Ripunjoy Gogoi, Animesh Das, and Partha Chakroborty. (2013). Are fatigue and rutting distress modes related?. I**nternational Journal of Pavement Research and Technology**, Vol. 6, No. 4, pp 269-273.

4. Avinash Dubedi; Partha Chakroborty; Debasis Kundu; K. Harikishan Reddy (2012). Modelling Automobile Driver's Toll-Lane Choice Behaviour at a Toll Plaza. **ASCE Journal of Transportation Engineering,** Vol. 138, No. 11, pp. 1350 – 1357.

5. Partha Chakroborty, P. K. Agarwal and Animesh Das. (2012). Comprehensive Pavement Maintenance Strategies for Road Network through Optimal Allocation of Resources. **Transportation Planning and Technology,** Vol. 35, No. 3, pp. 317 – 339.

6. Durgesh Vikram, Sanjay Mittal and Partha Chakroborty. (2011). A stabilized finite element formulation for continuum models of traffic flow. **CMES: Computer Modeling in Engineering & Sciences**, Vol. 79, pp. 237 – 259.

7. Partha Chakroborty. (2011). Sustainable Transportation for Indian Cities: Role of Intelligent Transportation Systems. **Current Science**, Vol. 100, No. 9, pp. 1386 - 1390.

8. Partha Chakroborty, Animesh Das and Piyush Ghosh (2010). Determining Reliability of a Bituminous Mix Design: Case of Marshall Mix Design. **ASCE Journal of Transportation Engineering**, Vol. 136, No. 1, pp. 31-37.

9. Ujjal Chattaraj, Armin Seyfried and Partha Chakroborty (2009). Comparison of Pedestrian Fundamental Diagram across Cultures. **Advances in Complex Systems**, Vol. 12, No. 3, pp. 393-405.

10. Partha Chakroborty and Akhilesh K. Maurya (2008). Microscopic Analysis of Cellular Automata based Traffic Flow Models and an Improved Model. **Transport Reviews**, Vol. 28, No. 6, pp. 717-734.

11. Partha Chakroborty and Durgesh Vikram (2008). Optimum Assignment of Trains to Platforms under Partial Schedule Compliance. **Transportation Research, Part B**, Vol. 42, pp. 169-184.

12. Shinya Kikuchi and Partha Chakroborty. (2007). Frameworks to Represent the Uncertainty when Determining the Level of Service. **Transportation Research Record**, 1968, pp. 53-62.

13. Partha Chakroborty. (2006). Models of Vehicular Traffic: An Engineering Perspective. **Physica A: Statistical Mechanics and its Applications**, Vol. 372, pp. 151-161.

14. Shinya Kikuchi and Partha Chakroborty. (2006). Place of Possibility Theory in Transportation Analysis. **Transportation Research, Part B**, Vol. 40, pp. 595-615.

15. P. K. Agarwal, Animesh Das, and Partha Chakroborty. (2006). A Simple Model for Structural Evaluation of Asphalt Concrete Pavements at the Network Level. **ASCE Journal of Infrastructure Systems**, Vol. 12, No. 1, pp. 41-49.

16. Partha Chakroborty and Arijit Mandal. (2005). An Asexual Genetic Algorithm for the General Single Vehicle Routing Problem. **Engineering Optimization**, Vol. 37, No. 1, pp. 1-28.

17. Shinya Kikuchi, Kii Masanobu, and Partha Chakroborty (2004). Lengths of Double (Dual) Left Turn Lanes. **Transportation Research Record**, 1881, pp. 72-81.

18. Partha Chakroborty and Shinya Kikuchi. (2004). Estimating Travel Times on Urban Corridors using Bus Travel Time Data. **Transportation Research Record**, 1870, pp. 18-25.

19. Partha Chakroborty, Saurabh Agrawal, and Kyatham Vasishtha. (2004). Microscopic Modeling of Driver Behavior in Uninterrupted Traffic Flow. **ASCE Journal of Transportation Engineering,** Vol. 130, Issue 4, pp. 438-451.

20. Partha Chakroborty. (2003). Genetic Algorithms for Optimal Urban Transit Network Design. **Journal of Computer Aided Civil and Infrastructure Engineering**, Vol. 18, pp. 184-200.

21. Partha Chakroborty and Shinya Kikuchi. (2003). Calibrating the Membership Functions of Fuzzy Inference System: Instantiated by Car-following Data. **Transportation Research, Part C,** Vol. 11, Issue 2, pp. 91-119.

22. Partha Chakroborty and Tathagat Dwivedi. (2002). Optimal Route Network Design for Transit Systems using Genetic Algorithms. **Engineering Optimization**, Vol. 34, No. 1, pp. 83-100.

23. Partha Chakroborty, K. Deb and Raj. K. Sharma. (2001). Optimal Fleet Size Distribution and Scheduling of Urban transit Systems using Genetic Algorithms. **Transportation Planning and Technology,** Vol. 24, No. 3, pp. 209-226.

24. Partha Chakroborty and Shinya Kikuchi. (1999). Evaluation of the General Motors based Car-Following Models and a Proposed Fuzzy Inference Model. **Transportation Research, Part C,** Vol. 7, Issue 4, pp. 209-235.

25. K. Harikishan Reddy and Partha Chakroborty. (1999). Procedure to Estimate the Origin Destination Matrix from Marginal Trip Totals and Ordinal Information on Matrix Elements. **Transportation Planning and Technology,** Vol. 22, No. 4, pp. 247-270.

26. K. Harikishan Reddy and Partha Chakroborty. (1998). A Fuzzy Inference based Assignment Algorithm to Estimate O-D Matrix from Link Volume Counts. **Journal of Computers, Environment and Urban Systems,** Vol. 22, No. 5, pp. 409-423.

27. K. Deb and Partha Chakroborty. (1998). Time Scheduling of Transit Systems with Transfer Considerations using Genetic Algorithms. **Journal of Evolutionary Computation,** Vol. 6, No. 1, pp. 1-24.

28. Partha Chakroborty, K. Deb and B. Srinivas. (1998). Network-wide Optimal Scheduling of Transit Systems using Genetic Algorithms. **Journal of Computer Aided Civil and Infrastructure Engineering,** Vol. 13, pp. 363-376.

29. Partha Chakroborty, K. Deb and P. S. Subrahmanyam. (1995). Optimal Scheduling of Urban Transit Systems using Genetic Algorithms. **ASCE Journal of Transportation Engineering,** Vol. 121, Issue 6, pp. 544-553.

30. Partha Chakroborty, Shinya Kikuchi and Mark Luszcz. (1995). Lengths of Left-Turn Lanes at Unsignalized Intersections. **Transportation Research Record,** 1500, pp. 193-201.

31. Ardeshir Faghri and Partha Chakroborty. (1994). Development and Evaluation of a Statistically Reliable Traffic Counting Program. **Transportation Planning and Technology,** Vol. 18, No. 4, pp. 223-237.

32. Shinya Kikuchi, Partha Chakroborty and K. Vukadinovic. (1993). Lengths of Left-Turn Lanes at Signalized Intersections. **Transportation Research Record,** 1385, pp. 162-171.

33. Shinya Kikuchi, V. Perincherry, Partha Chakroborty and H. Takahashi (1993). Modelling of Driver Anxiety during Signal Change Intervals. **Transportation Research Record,** 1399, pp. 17-25.

34. Shinya Kikuchi and Partha Chakroborty (1992). Car-Following Model based on Fuzzy Inference System. **Transportation Research Record,** 1365, pp. 82-91.

35. Shinya Kikuchi and Partha Chakroborty (1991). Analysis of Left-Turn Lane Warrants at Unsignalized T-intersections on Two Lane Roadways. **Transportation Research Record,** 1327, pp. 80-88.

Conference Proceedings

36. Ujjal Chattaraj, Armin Seyfried, Partha Chakroborty, and Manoj Kumar. (2013). Modelling Single File Pedestrian Moton Across Cultures. **Proceedings of the 2nd CTRG**, Agra, India (published by Elsevier as Procedia – Social and Behavioral Sciences, Vol. 104, pp. 698-707).

37. Ujjal Chattaraj, Partha Chakroborty, and A. Subhasini. (2013). Empirical Studies on Impact of Obstactles inside Corridors on Pedestrian Flow. **Proceedings of the 2nd CTRG**, Agra, India (published by Elsevier as Procedia – Social and Behavioral Sciences, Vol. 104, pp. 668-677).

38. Hemangini Parmar, Partha Chakroborty, and Debasis Kundu. (2013). Modelling Automobile Drivers' Toll-Lane Choice Behaviour at a Toll-Plaza using Mixed Logit Model. **Proceedings of the 2nd CTRG**, Agra, India (published by Elsevier as Procedia – Social and Behavioral Sciences, Vol. 104, pp. 593-600).

39. Durgesh Vikram, Partha Chakroborty, and Sanjay Mittal. (2013). Exploring the Behaviour of LWR Continuum Models of Traffic Flow in Presence of Shock

Waves. **Proceedings of the 2nd CTRG**, Agra, India (published by Elsevier as Procedia – Social and Behavioral Sciences, Vol. 104, pp. 412-421).

40. Vivek Agarwal and Partha Chakroborty (2013). Analysis on Probability of Missing an Overhead Sign due to Heavy Vehicle Induced Occlusion: Application to Sign Design. **Proceedings of the 92nd Annual Meeting of the Transportation Research Board,** Washington, D.C. , USA.

41. Partha Chakroborty. (2012). Uncertainties in Transportation Analysis. **Proceedings of the International Symposium on Engineering under Uncertainty: Safety Assessment and Management,** Shibpur, India.

42. Partha Chakroborty, Amol A. Deshmukh, Pradeep Panwar, and Onkar Dikshit (2011). Empirical study on impact of road width on individual driver behaviour. **Proceedings of the 1st Conference of Transportation Research Group,** Bangalore, India.

43. Durgesh Vikram, Partha Chakroborty, and Sanjay Mittal (2011). Studying Effect of Road Geometry using Continuum Model of Traffic Flow. **Proceedings of the 1st Conference of Transportation Research Group,** Bangalore, India.

44. Ujjal Chattaraj, Partha Chakroborty, and Armin Seyfried (2011). Some Empirical Studies on Evacuation from a Hall. **Proceedings of the 9th Conference on Traffic and Granular Flow**, Moscow, Russia.

45. Ujjal Chattaraj, Armin Seyfried, and Partha Chakroborty (2010). Empirical Studies on Pedestrian Motion through Corridors of Different Geometries. **Proceedings of the 89th Annual Meeting of the Transportation Research Board,** Washington, D.C. , USA.

46. Ujjal Chattaraj, Armin Seyfried, and Partha Chakroborty (2009). Single File Pedestrian Motion across Cultures: Experiments, Modelling and Simulation Issues. **Proceedings of the 8th Conference on Traffic and Granular Flow**, Shanghai, China.

47. Partha Chakroborty (2008). Urban Transit Network Design: An Optimization Problem. **Proceedings of the First Indo-US Symposium on Advances in Mass Transit and Travel Behaviour Research (MTTBR-08)**, Guwahati, India.

48. Maurya, A. K., and Chakroborty, P. (2008). Microscopic Model for Simulation of Uninterrupted Mixed Traffic Streams Without Lane Discipline. **Proceedings of the International conference on Best Practices to Relieve Congestion on Mixed-Traffic Urban Streets in Developing Countries,** IIT Madras, India.

49. Partha Chakroborty (2007). Modelling of Traffic Flow from an Engineer's Perspective. **Proceedings of the 7th Conference on Traffic and Granular**

Flow, Eds.: C. Appert-Rolland, F. Chevoir, P. Gondrett, S. Lassarre, J-P. Lebacque, and M. Schreckenberg, Orsay, France. Springer.

50. Akhilesh K. Maurya and Partha Chakroborty (2007). CASIM: A Realistic CA based Traffic Flow Model. **Proceedings of the 11th World Conference on Transport Research**, Berkeley, USA

51. Partha Chakroborty and Akhilesh K. Maurya (2007). The Need for A Comprehensive Traffic Flow Model and the Indian Context. **Proceedings of the International Conference on Civil Engineering in the New Millennium: Opportunities and Challenges**, Shibpur, India.

52. Partha Chakroborty, Pradeep Agarwal, and Animesh Das (2007). Simple Model to Predict the Structural Condition of Asphalt Concrete Pavements at the Network Level, **Proceedings of the 86th Annual Meeting of the Transportation Research Board,** Washington D.C., USA.

53. Pradeep Agarwal, Animesh Das, and Partha Chakroborty (2004). A Rational Approach to Prioritizing Highway Sections for Maintenance, **6th International Conference on Managing Pavements**, Brisbane, Australia.

54. Shinya Kikuchi and Partha Chakroborty. (2003). Ways to treat Uncertainty in Level of Service Determination. **Proceedings of the 82nd Annual Meeting of the Transportation Research Board,** Washington D.C., USA.

55. Shami Gupta, Partha Chakroborty and A. Mukherjee. (1998). Microscopic Simulation of Vehicular Traffic on Congested Roads. **Proceedings of the International Symposium on Industrial Robotic Systems-98,** Bangalore, India.

56. Harikishan Reddy and Partha Chakroborty. (1997). A Fuzzy Inference based Assignment Algorithm to Estimate O-D Matrix from Link Volume Counts. **Proceedings of Fifth International Conference on Computers in Urban Planning and Urban Management,** Mumbai, India, pp. 318-329.

57. Partha Chakroborty, K. Deb and Himangshu Porwal. (1997). A Genetic Algorithm based Procedure for Optimal Transit System Scheduling **Proceedings of Fifth International Conference on Computers in Urban Planning and Urban Management**, Mumbai, India, pp. 330-341.

58. Harikishan Reddy and Partha Chakroborty. (1997). O-D Matrix Estimation using Ordinal and Cardinal Information. **Proceedings of Conference on Trends and Techniques in Transportation,** Warangal, India, pp. I-19 to I-27.

59. B. K. Mishra and Partha Chakroborty. (1995). Explorations into Fuzzy Logic Control of Stratification in Jigs. **Proceedings of the Nineteenth International Mineral Processing Congress,** San Francisco, USA.

60. Partha Chakroborty and Shinya Kikuchi. (1995). Emulation of Car-Following Behaviour: Use of Fuzzy Neural Systems. **Proceedings of World Congress on Neural Networks,** Washington, D.C., USA, pp. 14-16 (Vol. III).

61. Shinya Kikuchi and Partha Chakroborty. (1995). Fuzzy Neural Network Control of Complex Systems: A Study on Longitudinal Vehicular Control. **Proceedings of World Congress on Neural Networks**, Washington, D.C., USA, pp. 84-92 (Vol. III).

62. Partha Chakroborty and Shinya Kikuchi. (1992). Examination of Fuzzy Notion of Level of Service: Case of Freeway Traffic Flow. **Proceedings of the Sixth World Conference on Transport Research**, Lyon, France.

63. Partha Chakroborty and Shinya Kikuchi. (1990). Application of Fuzzy Set Theory to the Analysis of Capacity and Level of Service of Highways. **Proceedings of the First International Symposium on Uncertainty Modelling and Analysis**, Maryland, USA, pp. 146-151.

Books, Edited Volumes and Book Chapters

1. Partha Chakroborty and Animesh Das. (2003). **Principles of Transportation Engineering**. Prentice Hall (India), New Delhi. (Ninth printing in 2014)

2. Kalyanmoy Deb, Partha Chakroborty, N. G. R. Iyenger, and S. K. Gupta (editors). (2007). **Advances in Computational Optimization and Its Applications.** University Press (India), New Delhi.

3. K. Deb, A. Bhattacharya, N. Chakraborti, P. Chakroborty, S. Das, J. Dutta, S.K. Gupta, A. Jain, V. Aggarwal, J. Branke, S. J. Louis, K. C. Tan (editors). (2010). **Simulated Evolution and Learning**. Springer.

4. P. Chakroborty, H. K. Reddy, A. Amekudzi, A. Das, A. Seyfried, B. Maitra, D. Teodorovic, K. K. Srinivasan, L. Devi, S. S. Pulugurtha and T. V. Mathew (editors). (2013). **Procedia – Social and Behavioral Sciences: 2nd Conference of Transportation Research Group of India.** Elsevier.

5. **Chapter on Public Transportation Systems** (under preparation) for the **Handbook on Transportation** to be published by Routledge (Edited by Dusan Teodorovic of University of Belgrade and Virginia Tech.).

Citations and Applications

Citations in other papers:	1000+ (as per scholar.google.com); h-index: 18 450+ (as per Scopus)[1]; h-index: 11 (in all likelihood the highest in Transportation in India)
Citations in design standards / handbooks:	Cited in Highway Capacity Manual (2000); this is the most used highway capacity design manual around the world. It is published by the Transportation Research Board of the National Academies (of Engineers and Sciences), USA.
	Cited in NCHRP[2] Synthesis Report 299 (2002): Recent Geometric Design Research for Improved Safety and Operations
	Cited in NCHRP Synthesis Report 225 (1996): Left-turn Treatments at Intersections
	Cited in McGraw Hill's Handbook on Transportation Engineering (2004, 2011)
Application in commercial software:	Rule-based models of car-following which were pioneered by me are used in HUTSIM, a commercially available traffic simulation model from the Helsinki University of Technology (see homepage)

---

[1] Scopus shows about 390. However, one of the papers (as per Scopus) could not be listed for technical reasons. As per Scopus it has a citation of about 60. This number has been included to calculate the citation.

[2] NCHRP Synthesis Reports are published by the Transportation Research Board (part of the National Research Council jointly administered by the National Academy of Engineers and the National Academy of Sciences, USA). These reports are aimed at providing "a compendium of the best knowledge available on those measures (as identified by the title of the report) found to be most successful in resolving specific problems." (Reference: www.trb.org/news/blurb_browse.asp?id=5)

Other Information (includes administrative responsibilities, projects, outreach activities, etc.)

1. Developed a web-based course (with Dr. Animesh Das, of CE, IIT Kanpur) on transportation under NPTEL.

2. Started the Transportation Engineering Laboratory for under-graduate and post-graduate education in IIT Kanpur; remained the faculty-in-charge of the laboratory for many years.

3. Organized (with Dr. Kalyanmoy Deb, ME, IIT Kanpur and others) two international conferences.

4. Organized many short courses in the areas of Transportation, Optimization and Fuzzy Set Theory.

5. Served as warden of Hall 1 and warden and warden-in-charge of Hall 4.

6. Served on the departmental UG review committee responsible for the present (pre 2011) under-graduate curriculum in civil engineering; served on the departmental PG review committee responsible for the present post-graduate curriculum in civil engineering.

7. Served on various department level committees; was also the Convenor, DPGC.

8. Served on (and serving on) many institute level committees as member as well as chairman / convenor.

9. Dean (Students' Affairs) of IIT Kanpur from (June 2008 --- May 2011).

10. Served on the institute level academic review committee of IIT Kanpur and also the Department level academic review committee.

11. Founder member of the Transportation Research Group of India (registered society dedicated to the improvement of research activities in Transportation in India)

12. Developing a web course on Mathematical methods for transportation engineering.

13. Have been involved in few projects in the area of highway engineering funded by organizations such as United Nations Development Programme (UNDP), Ministry of Rural Development (MORD), Central Public Works Department (CPWD), Public Works Department (PWD), Border Roads Organization (DGBR), Kanpur Development Authority (KDA), National Highway Authority of India (NHAI) and others.