

Dr. Rakesh Kumar

Assistant Professor of Transportation Engineering and Planning
PhD, Indian Institute of Technology, Delhi, 2005



Rakesh Kumar is interested in factors that lead to a more efficient, equitable and Sustainable Urban and Regional Transportation System, with a focus on spatial allocation of public resources, regulation of land uses, and regional variations in NMV and pedestrian planning. He is involved in result-oriented research that brings together different stakeholders including business, civic and officials to create more effective and sustainable transportation growth policies. He is also in process to develop participatory and analytical tools to facilitate Sustainable Mobility Area planning processes at a regional level that will be useful to local and state governments in quantifying land use, transportation and environmental impacts of development and development policies.

Expertise: *Urban and regional Transportation planning, Sustainable mobility Area, Scenario Planning, Transportation & environment management, Traffic operations and Simulation, Public transportation system (BRTS) and Pedestrian and NMV behaviour planning and modeling*

Current Research

- ✓ Using geographic information systems (GIS) technology in Natural Resource management and Transportation system, Urban and regional Transport planning, Traffic Control System modeling
- ✓ Public Transportation system

Selected Publications

Impacts of Bus Rapid Transit Lanes on Traffic and Commuter Mobility, ASCE Urban Transportation Planning, Volume 133, number 2, 2007. Vaishali M. Patankar, Rakesh Kumar and Geetam Tiwari.

Heating and cooling potential of earth-to-air heat exchanger system using artificial neural network, International Journal of Renewable Energy, Volume 31 Page no. 1505-1511, 2005 Rakesh Kumar and S.C.Kaushik

Dynamic Earth-Contact Building: A sustainable Low Energy System, International Journal of Building and environment, Volume 42 page no. 2450-2460, 2006. Rakesh Kumar, Shweta Sachdeva and S.C.Kaushik.

Rakesh Kumar "Design Optimization Tool of Earth-To-Air Heat Exchanger using Genetic Algorithm", International Journal of Renewable Energy, Vol 33/10 pp 2282-2288. , 2008.

Technical Report

1. A report on "Traffic Analysis and Signal Plan" Rakesh Kumar, Vaishali M. Patankar, Geetam Tiwari and Fazio. Transportation Research and Injury Prevention Program, Indian Institute of Technology, Delhi, India, 2005
2. A report on "Trip Coordinated Traffic Signal Simulation Model." Rakesh Kumar, Geetam Tiwari and Fazio 2005.
3. A report on "Evaluation of Pedestrian Services on The HCBS Corridor." Rakesh, Geetam and Fazio, 2006.
4. A report on "Environmental Analysis on Bus Rapid Transit Corridor". Rakesh Kumar and Geetam Tiwari 2006.

Current Research Projects

Environmental and socio-economic assessment of bio-monitoring of water filter in mitigating water borne diseases 2007-2009, SSD, DST

Demonstration of Integrated Biodiesel Reactor System, 2009-2011, SERC, DST

Development of Laboratory Facility for Biodiesel Production centre, 2009-11, SERC, DST

Mapping and Monitoring of Water Resource Data and Modeling water System in Selected Watershed, 2009-2011, NRDMS, DST