

George F. List

Professor

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Education/Training

Ph.D., Civil Engineering, Univ. of Pennsylvania, 1984

M.E., Electrical Engineering, Univ. of Delaware, 1976

B.S., Electrical Engineering, Carnegie Mellon University, 1971

Positions and Employment

2005 – present: NC State, Raleigh, NC, Department of Civil, Construction, and Environmental Engineering, Professor and Head, 2005-2010; Professor 2010-2015.

1984 – 2005: Rensselaer Polytechnic Institute, Department of Civil and Environmental Engineering, Troy, NY, Assistant Professor, 1984-1990; Associate Professor, 1990-1995; Associate Professor and Chair, 1995-1996; Professor and Chair, 1995-2005.

1979 – 1984: Transportation and Distribution Associates, Philadelphia, PA, Transportation Engineer.

1976 – 1979: University of Pennsylvania, Department of Civil Engineering, Philadelphia, PA, Graduate Student.

1971 – 1976: US Navy Reserve, Naval Nuclear Power School, Bainbridge, MD, Commissioned Officer, Instructor.

Honors and Licenses

INFORMS, Finalist, Edelman Prize, May 1999; **ITS America**, Best of ITS Award – Research and Innovation, Capital District ATIS Project, June 2007; **ITS-NY**, Project of the Year Award, Wireless Solar-Powered ETTM Project, June 2007; Project of the Year Award, June 2005, Capital District ATIS Deployment; Project of the Year Award, Capital District ATIS Deployment, June 2003; Professional Engineer, New York, #066754 (1990-present).

Selected Peer-Reviewed Publications (2008-2015)

1. List, G.F., B. Yang, and N. Rouphail, "On the Treatment of Trucks for Freeway Capacity Analysis," *Journal of the Transportation Research Board*, (in press).
2. List, G.F., B. Yang, and B. Schroeder, "On the Treatment of Trucks in Roundabout Analyses," *Journal of the Transportation Research Board*, (in press).
3. Isukapati, I., G. F. List, B.M. Williams, and A.F. Karr, "Synthesizing Route Travel Time Distributions from Segment Travel Time Distributions," *Journal of the Transportation Research Board*, 2396: 71-81, 2013.
4. Sayyady, F. Y. Fathi, G.F. List, and J.R. Stone, "Locating Traffic Sensors on a Highway Network: Models and Algorithms," *Journal of the Transportation Research Board*, 2339: 30-38.
5. Sayyady, F., J.R. Stone, F.M. Jadoun, and Y. R. Kim, "Effects of Sampled Weigh-in-Motion Data on Axle Load Distribution for Mechanistic-Empirical Pavement Design in North Carolina," *Journal of the Transportation Research Board*, (in press).
6. List, G.F., and C. Boon, "Fully Distributed and Coordinated Traffic Control Strategy Using Mesh Control," *Proceedings of the 2013 ITS World Congress*, Tokyo, Japan, October 14-18, 2013.
7. Isukapati, I.K., and G.F. List, "Agent-Based Framework for Modeling Operations at Isolated Signalized Intersections," *Conference on Agent-based Modeling in Transportation Planning and Operations*, Virginia Tech, September 30 – October 2, 2013.
8. List, G.F., B. Williams, N. Rouphail, and A. Karr, "Forging an Understanding of Travel Time Reliability in Freeway and Arterial Networks," *Fifth International Symposium on Transportation Network Reliability (INSTR2012)*, Hong Kong, December 18-19, 2012.

9. Lei, H., X Zhou, G.F. List, and J. Taylor, "Predicting Corridor-level Travel Time Distributions Based on Stochastic Flow and Capacity Variations," *Transportation Research – Part C*, May 2012.
10. Mai, E., G.F. List, and R. Hranac, "Simulating Travel Time Impact of Missed Transit Connections," *Proceedings, 91st Annual Meeting of the Transportation Research Board (on CD)*, January 2012, Washington, DC.
11. Sayyady, F., J.R. Stone, G.F. List, F.M. Jadoun, Y. R. Kim, and S. Sajjadi, "Axle Load Distribution for Mechanistic–Empirical Pavement Design in North Carolina: Multidimensional Clustering Approach and Decision Tree Development," *Journal of the Transportation Research Board*, 2256, pp. 159-168, 2011.
12. Chen, X., X. Zhou, and G.F. List, "Using Time-Varying Tolls to Optimize Truck Arrivals at Ports," *Transportation Research, Part E*, 47:6 pp. 965-982, November 2011.
13. Zhou, X., and G.F. List, "An Information-Theoretic Sensor Location Model for Traffic Origin Destination Demand Estimation Applications," *Transportation Science*, Vol. 44, pp. 254-273, May 2010.

Selected Research Support

- Rouphail, N., and G. List, Technical Support, L-55 Projects, SHRP-2, March 2013 – present.
- List, G., Statewide Rail Plan, NCDOT, through AECOM, November 2012 – present.
- Williams, B., N. Rouphail, and G. List, Smartlink - Baseline for Measurement of Benefits, \$193,657, NCDOT, August 2012 – present.
- List, G., and T. Cook, Surveys to Generate Data for Updated Passenger Rail Ridership Estimates, \$144,137, NCDOT through AECOM, May 2012 – November 2012.
- List, G., N. Rouphail, and B. Schroeder, Incorporating Truck Analysis into the Highway Capacity Manual, NCFRP 41, Transportation Research Board, \$500,000 (\$140,081 to NCSU), May 2012 – present.
- List, G., and B. Edge, Supporting Wind Energy Study, \$135,029, State Energy Office, NC Commerce Department, through UNC-Chapel Hill, August 2011- March 2012.
- N. Rouphail, B. Schroeder, and G. List, Incorporation of Travel Time Reliability into the Highway Capacity Manual, \$1,500,000, SHRP-2, Transportation Research Board, February 2011-March 2013.
- List, G., R. Foyle, and A. Demers, Seven Portals Study, \$509,971, July 2010 - May, 2011.
- List, G., Establishing Monitoring Programs for Mobility and Travel Time Reliability, Strategic Highway Research Program II, \$1,800,000, PI, February 2009 – September 2012.
- List, G., R. Foyle, J.E. Hummer, J. Stone, and B. Williams, North Carolina Statewide Logistics Plan, \$700,000, NC Office of State Budget and Management, January 2008-December 2008.
- Kim, Y.R., W. Rasdorf, J. Stone, and G. List, Development of Traffic Data Input Resources for the Mechanistic Empirical-Pavement Design Process, \$339,030, NCDOT, July 2007 – December 2011.

Professional Memberships and Services

ASCE (Fellow, 1995-present; Member 1985-present; Body of Knowledge Educational Fulfillment Committee, Member, 2008-2010; Microcomputer Applications Committee: Member, 1985 – 2000; Hazardous Materials Transportation Committee: Member, 1985 – 2000, Chairman, 1990 – 1993; Conference Coordinator, State and Local Issues in the Transportation of Hazardous Materials: Toward a National Strategy, May 14-16, 1990, St. Louis, MO; Northeast Department Heads, 1995-2005; Department Heads Council Executive Committee: Member, 1995-2000, Secretary 1995-1996, Vice Chair, 1996-2000; Retreat Coordinator, The Future of Civil Engineering Education and Research, June 17, 2000, St. Louis, MO); **TRB** (Traffic Flow Theory Committee, Member, 2010-present; Joint Traffic Simulation Subcommittee, Chair, 2009-present, Member, 2005-present; Highway Capacity and Quality of Service Committee, Member, 2000-2006, Chair, Concepts and Modeling Subcommittee, 2000-2002, Member, Unsignalized Intersections Subcommittee, 1989-present, Chair, Strategic Planning Subcommittee, 2002-2004; Intermodal Freight Transportation Committee: Chair, 1990-1994, Member, 1985-2000; Freight Transportation and Marketing Committee: Member, 1985-1991); **INFORMS**; **ASEE**; **IEEE**; **ITE**; **AREMA**; **Chi Epsilon**.