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EDUCATION

PhD Program, City and Regional Planning (Transportation economics and planning), University of North Carolina at Chapel Hill (1990-1994)

Master of Science, Economics (Econometrics and public finance), University of North Carolina at Chapel Hill (1994)

Master of Arts, Urban Studies (Urban and economic development), University of Maryland at College Park (1990)

PhD Program, Physics, Worcester Polytechnic Institute, Worcester, Massachusetts (1987-1988)

Bachelor of Science, Physics (Physics and computer science), Beijing Normal University, P.R. China (1985)

PROFESSIONAL EXPERIENCE

Institute for Transportation and Research/North Carolina State University
(September, 2004 – Present)

Senior Research Associate

- Development of Triangle area regional traffic demand model
- Research project of air quality and land use pattern

NCDOT/Model and Research Unit (December, 2002–September, 2004)

Senior Transportation Planning Engineer

- NCDOT Project manager for the development of Metrolina (Greater Charlotte) regional traffic demand model
- Review and design methodologies/questionnaires and conduct statistical analysis of Household Travel Behavior Survey, Business Establishment Survey, and External Station Survey data
- Review and evaluate land-use and socio-economic data forecast methodologies and data quality

Parsons Transportation Group (October, 1994-November, 2002)

Senior Transportation Planner

Highway Transportation Planning and Traffic Demand Modeling (TDM)

- Develop and validate various regional multi-modal traffic demand models
- Analyze highway deficiencies, forecast future highway traffic and develop long-term transportation alternatives

Highway Toll Revenue and Traffic Forecast

- Forecast toll revenue and toll traffic with various toll structures

Multi-Modal Transportation System Planning

- Assist in developing mode choice models
- Estimate potential light rail patronage and parking spaces requirement at light rail stations
- Estimate access markets to transit (rail and bus modes)
- Examine highway traffic movement and project growth at potential light rail station related intersections
- Develop regional long-term multi-modal transportation plan
- Estimate operation and maintenance costs for multi-modal planning alternatives
- Analyze transit schedules, routing and patronage; and plan future bus routes

Highway-Railroad At-Grade Crossing Safety and Delay

- Estimate highway traffic delay and accident risk probability for at-grade highway and railroad crossings

Environmental Impact of Highway System

- Estimate highway air pollution emission and noise

Survey Designing and Analysis

- Design and review survey questionnaires and methodologies, sampling and survey procedures, and training manuals of household travel behavior survey, transit on-board survey, commercial vehicle travel survey, and employee travel survey
- Conduct survey data quality control, weighting and statistical analysis, apply survey data to regional TDMs

Statistical Modeling

- Examine the relations between regional real estate data and household travel behavior pattern
- Conduct statistical models as an alternative way to conventional household trip generation procedure in TDMs

Socioeconomic Data Forecast

- Analyze regional socioeconomic data and forecast future change

Project Management

- Coordinate with clients and sub-consultants
- Manage project progress
- Conduct training sessions for clients with modeling software usage and TDM procedure

Highway Safety Research Center, University of North Carolina at Chapel Hill
(1991-1994)

Research Assistant

Work on numerous research projects concerning pedestrian and bicyclists safety issues: conduct statistical analysis for various highway traffic and safety related data; estimate non-parameter highway accident models; write highway accident analysis reports

Department of City and Regional Planning, University of North Carolina at Chapel Hill (1990-1991)

Research Assistant

Assist in several transportation economics related research projects including economic efficiency models comparing bus-way and light rail alternatives; examine transit fare policies.

Institute of Urban Study, University of Maryland at College Park (1988-1990)

Research Assistant

Literature review for research projects covering regional employment and economic development and forecast, demographic change, transportation economics and finance, and office location models; conduct data analysis using various economic and business data and census data, and estimate regression forecast models using SAS.

SKILLS

Familiar with TRANPLAN, EMME/2, TransCAD, QRS II, AtlasGIS, SAS, and Excel; knowledge in programming languages of FORTRAN and C. Speak, read and write English, Chinese and some Japanese.

PUBLICATIONS

C.V. Zegeer, J.C. Stutts, H. Huang, M. Zhou, and E. Rodgman, "Prevention of motor vehicle injuries to elderly pedestrians." *Family and Community Health - The Journal of Health Promotion and Maintenance*. 15-4; 38-56, January 1993.

C.V. Zegeer, J.C. Stutts, H. Huang, M. Zhou, and E. Rodgman, "Analysis of elderly pedestrian accidents and recommended counter-measures." *Transportation Research Record*.