



Seyed Behzad Aghdashi

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 Institute for Transportation Research & Education (ITRE)
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EDUCATION

North Carolina State University, Raleigh, NC

PhD in Operations Research (Minor in Transportation)

Dec 2012

Thesis: "Traffic Flow Optimization in a Freeway Facility with Stochastic Segments Capacity"

Sharif University of Technology, Tehran, Iran

BS and MS in Industrial and Systems Engineering

2006, 2008

MS Thesis: "Data Mining in Construction Project Management Data"

BS Thesis: "Simulation of Different Network Topologies Using Discrete Event Simulation"

SELECTED PUBLICATIONS

- **S.B. Aghdashi**, N.M. Roupail, A. Hajbabaie, "Estimating Incident Propensity for Reliability Analysis in the Highway Capacity Manual", Accepted for Publication in Transportation Research Record: Journal of the Transportation Research Board.
- B.J. Schroeder, N.M. Roupail, **S.B. Aghdashi**, "A Deterministic Framework and Methodology for Evaluating Travel Time Reliability on Freeway Facilities", Accepted for Publication in Transportation Research Record: Journal of the Transportation Research Board.
- B.J. Schroeder, **S.B. Aghdashi**, N.M. Roupail, X. Liu, Y. Wang, "Deterministic Approach for Managed Lane Analysis on Freeways in the Highway Capacity Manual", Transportation Research Record: Journal of the Transportation Research Board, Volume 2286 / 2012, Pages 122-132
- N.M. Roupail, **S. B. Aghdashi**, A. Hajbabaie "Enhanced Decision Making Framework Using Reliability Concepts for Freeway Facilities", Submitted to '16th Euro Working Group on Transportation' Conference in Porto Portugal

PROFESSIONAL AND TECHNICAL EXPERIENCE

Institute for Transportation Research and Education (ITRE), Raleigh, NC

Aug 2010 - present

Postdoctoral Research Scholar and Graduate Research Assistant

- **NCHRP 03-115 Project:** (Major Update to the Highway Capacity Manual 2010)
 - Key member in developing freeway facilities methodology and the computational engine
- **STRIDE Project 2013-009:** (Dynamic Traffic Control Interventions for Enhanced Mobility and Economic Competitiveness)
 - In charge of developing freeway facilities methodology for dynamic ATM interventions based on Highway Capacity Manual's freeway facilities methodology

- **SHRP2-L08 Project:** *(Incorporation of Travel Time Reliability into the Highway Capacity Manual)*
 - In charge of project deliverables including the Project Final Report, and Guide Books. Also in charge of managing the responses to the project panel comments on project deliverables.
 - Key member of a team developing a methodology to incorporate nonrecurring congestion effects into Travel Time Reliability analysis. In charge of generating a deterministic framework to incorporate delay of nonrecurring congestion on freeways.
 - Lead developer for developing a methodology for estimating incident probabilities on freeways by incorporating a queuing theory model. Led to be used in the freeway reliability methodology.
 - Lead developer of “Freeway Scenario Generator” for freeway reliability analysis. In charge of incorporating the methodology in the VBA/Excel environment and designing the computational procedures.
- **NCDOT 2013-9:** *(Delay and User Cost Estimation for Work Zones on Urban Arterials)*
 - In charge of assisting the methodological developments of the analysis.
 - Key developer of the computational engine for project analysis.
- **NCDOT 2012-36:** *(Work Zone Traffic Analysis & Impact Assessment)*
 - In charge of assisting the research team to identify and evaluate different Work Zones impact on the freeway facilities.
- **Federal Highway Administration (FHWA) Office of Operations:**
 - Lead developer of the computational engine for evaluating performance of Active Traffic Demand Management (ATDM) strategies on freeways (FREEVAL-ATDM). Done in 2 months time span as needed for FHWA workshops.
 - Methodological consultancy for modeling appropriate scenarios to reflect different ATDM strategies.
- **NCHRP 3-96 Project:** *(Analysis of Managed Lanes on the Freeway Facilities)*
 - Contributed to the development of Managed Lanes methodology analysis. Develop FREEVAL-ML computational engine.

Edward P. Fitts Department of Industrial and Systems Engineering, NC State University, Raleigh, NC Jan09 – Dec12
PhD Student in Operations Research

- Optimize system-wide planning level ramp metering policies on freeway facilities
 - Incorporate the stochastic nature of the capacity of the freeway segments.
 - Evaluate the effect of ramp metering on the reliability of the freeway facilities.
- Stochastic modeling of incidents for freeway facilities
 - Initiate a Markov Chain model for modeling stochasticity of incidents in the freeway facilities, led to the Incident’s Queuing Model used for SHRP2-L08 project.

Parsa Moshaver International Engineering and Consulting Company, Tehran, Iran May05 - Nov08

- Project Management and Industrial Engineering Specialist
 - Key member of a team developing long term strategies for “Government Transportation and Highway Administration of Iran”.
 - Leader of “Lean Construction” team, In charge of developing lean policies for construction industries.
- Chief Information Officer (CIO)
 - In charge of developing short and mid-term software and hardware development strategies
 - Designed network administration process flows.

Iran Tractor Foundry Company, Tabriz, Iran Sep05 - Nov08

- Computer Specialist and Network Advisor

AWARDS

- **Salah E. Elmaghraby Distinguished Student Award**, for outstanding contributions in the field of Operations Research, 2012
- **Provost Fellowship Award**, North Carolina State University, Spring 2009

COMPUTER SKILLS

- Programming and Database: Visual Basic, VBA(Advanced Level), SQL (MS-SQL, and MySQL)
- Optimization Packages: CPLEX (in C++ environment), SAS/OR, LINDO/LINGO
- Simulation and Modeling: ARENA, (Macro Simulation: FREEVAL)
- Computer Network Administration: Linux, Windows

TEACHING EXPERIENCE

North Carolina State University, Raleigh, NC Jan 2009 – May 2011

- Teacher assistant for “Statistical Quality Control”, “Applied Stochastic Modeling”, “Engineering Economics”, and “Quality Engineering”

Sharif University of Technology, Tehran, Iran March 2003 - Nov 2008

- Lectured on “Computer Basics Lab”, “Computer Information Systems (CIS)”, and “Management Information Systems (MIS)”

MEMBERSHIPS

- President, Vice-President, and Secretary of INFORMS Student Chapter at NC State University (*June 2009 – April 2012*)
- Member of Institute of Transportations Engineers student chapter (ITE) at NC State University (*Sep 2010 – Present*)
- Treasurer of Iranian Student Association at NC State University (*Jan 2011 - Jan 2012*)
- Member of Institute of Operations Research and the Management Sciences INFORMS (*Oct 2010 – Present*)