

# S. Reza Seyedshohadaie

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## Research Interests

Infrastructure asset management under operational and financial risks with emphasis on optimal resource allocation for maintenance and rehabilitation (M&R), valuing large-scale risky projects and right-of-way acquisition.

## Education

*Ph.D Candidate*, Industrial and Systems Engineering  
Texas A&M University, College Station, Texas, expected August 2011

Dissertation topic: Resource allocation decisions for civil infrastructure systems under operational and financial risks. Co-advised by Dr. Sergiey Butenko (ISEN Dept.) and Dr. Ivan Damnjanovic (CEE Dept.)

*M.S.*, Computer Information Systems, 2005  
Prairie View A&M University, Prairie View, Texas

*B.S.*, Industrial Engineering, 2000  
Iran University of Science and Technology, Tehran, Iran

## Industry Experience

*Software Developer (part-time)* 9/2009 – 9/2010  
Texas Transportation Institute

Developed EROW; an optimization tool that utilizes dynamic programming for determining optimal right-of-way budget allocation.

*Industrial Engineer* 9/2000 – 6/2002  
Morovat Group, Iran

As part of the project management team for the company's construction projects, conducted preliminary feasibility studies and project requirement analysis for a hospital project. Other duties involved tracking project milestones and the utilization of human resources, raw material and machinery.

*Intern* 3/2000 – 9/2000  
Pedash Manufacturing Co., Iran

Conducted work-time measurements and studied manufacturing processes for production cycle times and WIP analysis. Created a databases for the company's production information system.

## Teaching Experience

*Instructor* Spring 2010, 2011  
Industrial Engineering Department, Texas A&M University

Instructor for ISEN 302, economic analysis of engineering projects course.

*Instructor*  
Computer Science Department, Prairie View A&M University

9/2003 – 12/2004

Instructor for COMP-1003, introduction to computer education course for three semesters.

## Computer Skills

*Optimization:*

CPLEX 11, Consert 25, AMPL, MATLAB

*Languages & Software:*

Visual Studio .Net (C++, C#), PHP, Python, Client Server Programming with Windows and UNIX Socket APIs, Dreamweaver, MySql

## Publications

### *Journals*

SR. Seyedshohadaie, I. Damnjanovic, S. Butenko, Risk-based maintenance and rehabilitation decisions for transportation infrastructure networks, *Transportation Research Part A: Policy and Practice*, Volume 44, Issue 4, May 2010, Pages 236-248.

"Valuing Risky Projects in Partially Complete Markets". Working paper, with I. Damnjanovic, S. Butenko.

"Optimal Betting Strategies for Multiple Games". Working paper, with S. Butenko, I. Damnjanovic.

### *Technical Reports*

"Implementation Of TAMSIM and EROW Right-Of-Way Acquisition Decision-Support Tools".with P. Krugler, C.M. Chang-Albitres, R. Feldman, S. Butenko, D.H. Kang, Texas Transportation Institute. Project performed in cooperation with the Texas Department of Transportation and the Federal Highway Administration, 2010.

"Development of Decision-making Support Tools for Early Right of Way Acquisitions". with P. Krugler, S. Butenko, R. Feldman, D.H. Kang, C.M. Chang-Albitres, Project performed in cooperation with the Texas Department of Transportation and Texas Transportation Institute, 2009.

"Impact of Reconstruction Strategies on System's Performance Measures: Maximizing Safety and Mobility while Minimizing Life-cycle Costs". with I. Damnjanovic, A. Wimsatt, S. Butenko, Project performed for University Transportation Center for Mobility, Texas Transportation Institute, Texas A&M University, 2008.

### *Proceedings*

S. Butenko, I. Damnjanovic, R. Seyedshohadaie, "On Betting Strategies for Multiple Sporting Events". International Conference of Economic, Management and Optimization in Sports., Barcelona 2009.

R. Seyedshohadaie, M. Viseh and N. Tabrizi, "POD Project: Automatic Classification and Generation of Web Directories". Proceedings of 2005 International Conference on Information and Knowledge Engineering (IKE'05 Las Vegas, Nevada).

R. Seyedshohadaie, Y. Zhang, "Centralized Supply Chain Coordination: A Service Oriented Architecture". Proceedings of 2004 International Conference on Web Services and Application (ISWS'04 June 21-24 Las Vegas, Nevada).

M. Dayani, R. Seyedshohadaie and A. Tamadon, "Effective Strategic Deployment". Iran Society for Quality Workshop on Quality Management. Tehran, Iran Oct 2001.

## Presentations

"A Coherent Valuation Approach for Valuing Risky Projects", INFORMS annual meeting, November 2010, Austin, TX.

"Financial Viability of Transportation Infrastructure Public-private Partnerships", INFORMS annual meeting, October 2009, San Diego, CA.

"Risk-based Maintenance and Rehabilitation Decisions for Transportation Infrastructure", TRB annual meeting, January 2009, Washington D.C.

"Introduction to AMPL/CPLEX" workshop organized by INFORMS student Chapter at Texas A&M University, Fall 2007 and 2008.

## Academic Honors

INFORMS Future Academician colloquium (2010)

SIawe Scholarship Award (2006)

Pathways to Doctorate Fellowship Award, Texas A&M University (2005)

Graduate Assistantship Award, Computer Science Department, Prairie View A&M University (2003)

## Recent Coursework

Infrastructure Engineering	Non-linear and Dynamic Programming
Theory of Statistics	Applied Stochastic Processes
Theory of Inference	Material Handling Systems
Combinatorial Optimization	Linear Programming
Heuristic Optimization	Integer Programming
Analysis of Algorithms	Production Planning and Inventory Control
Large-Scale Stochastic Optimization	Game Theory
Global Optimization	Engineering Optimization (convex analysis)

## Professional Affiliation

Member of INFORMS Optimization Society

Member of INFORMS Decision Analysis Society

Member of INFORMS Transportation Science and Logistics Section

Member of INFORMS Financial Services Section