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CURRICULUM VITAE

(January 2017)

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A. Education

Ph.D. (Civil / Transportation Engineering)

Purdue University, 1978

Dissertation: *Development of a System for the Evaluation of Pavements in the State of Indiana*

M.S. (Civil / Traffic Engineering)

Kansas State University, 1975

M.S. Thesis: *Lab Exercises in Traffic Engineering*

B.Tech. (Hons) (Civil Engineering)

Indian Institute of Technology (IIT), Khargpur, India, 1959

B. Employment History

Summary

January 2010 – Present	University at Buffalo, Department of Civil, Structural, and Environmental Engineering, Associate Professor
Jan. 2006 – Dec. 2009	Town Supervisor* (elected), Town of Amherst, State of New York. On 4 years leave of absence from the University
Aug. 1986 – Dec. 2005	University at Buffalo, Department of Civil, Structural, and Environmental Engineering, Associate Professor
Aug. 1985 – July 1986	Stanford University, Department of Civil Engineering, Post Doctoral Scholar and Visitor
July 1980 – July 1985	King Saud University, Department of Civil Engineering, Saudi Arabia, Associate Professor
Aug. 1978 – June 1980	University of Central Florida, Department of Civil Engineering and Environmental Sciences, Associate Professor

* The State of New York designates the elected leader of a village or a city as the MAYOR, and the elected leader of a town as the TOWN SUPERVISOR

- Aug. 1975 – July 1978 Purdue University, School of Civil Engineering,
Graduate Instructor
- Aug. 1974 – July 1975 Kansas State University, Department of Civil Engineering,
Graduate Teaching / Research Assistant
- July 1970 – May 1974 United Republic of Tanzania, Ministry of Communications and Works,
**Executive Engineer (Construction) and Resident Engineer,
Kilimanjaro International Airport**
- Oct. 1964 – June 1970 Government of India, Ministry of Transport,
Divisional Engineer Consultant
- July 1959 – Sept 1964 Government of the State of Uttar Pradesh, India, Public Works Department,
Assistant Engineer

Academia

1986-Date **Associate Professor of Civil Engineering (Construction Engineering and Management, and Transportation Engineering)**, Department of Civil, Structural and Environmental Engineering, State University of New York at Buffalo.

- (a) **Developed and Managed a new Graduate Program in Construction Engineering and Management.** At the request of the Dean of the School of Engineering and Applied Sciences, I started a professional practice-oriented graduate degree program in Construction Engineering and Management and ran the program, almost single-handed, for 18 years. One other faculty was recruited for a short period, and a research professor participated in teaching and advising graduate students. The program, started in 1987, had a steady enrollment of 10-15 full-time and part-time graduate students per year, and graduated 217 students (198 Masters and 19 Ph.Ds), mostly self-paying domestic students. Dean Lee, in his letter to the Provost on my tenure application, commented as below:

"Dr. Mohan has successfully developed a program of high student and industrial demands. This, in my opinion, is a superior service contribution to our university."

Program growth required: **developing new courses, directing graduate research, and establishing contacts with the local construction industry** for student internships, and for training their engineers and managers in project management and in construction safety. During this period: (i) **I guided 48 M.Eng. and M.S. research projects and four (4) Ph.D. dissertations, as major professor - three of my 4 Ph.D. graduates are faculty members in the universities** (Auburn, Ferris State, and one in Saudi Arabia); and (ii) **I received \$1.9 million in grants; and fully or partially funded 19 M.Eng. and M.S., and 2 Ph.D. students.**

- (b) **Started an Artificial Intelligence (AI) research and teaching specialization** in the department. To grow in this new area:
- (i) **I established a state-of-the-art Applied AI Lab** in the department with a \$275,000 industry grant from Sun Microsystems, Inc.;
- (ii) I taught the first course on: *'Expert Systems in Civil Engineering'* in the department;

- (iii) Co-edited an ASCE Monograph: *Expert Systems for Civil Engineers: Education*, which was used for teaching AI courses in several civil engineering departments in the USA;
 - (iv) Completed 4 graduate research projects on expert system applications. **One of the expert systems, PASCON, initially designed and developed in a graduate research, has now been expanded and is being used by the New York State Department of Transportation (NYS DOT) for designing snow fences in New York State,** and,
 - (v) Authored four expert systems related technical articles, and five book chapters on expert systems in civil engineering.
- (c) **Established Construction Safety and Health Research and Education** at the University at Buffalo, in July 1991. Prior to our effort, very few US universities had done some work on this very critical construction industry problem; Stanford University, University of Washington, Seattle, the University of West Virginia, Morgantown, and the University of Florida were some of those universities. To grow in this area, and to transfer the research and education to the construction industry, I did the following:
- (i) **Established a Construction Safety and Health Institute** in the Department of Civil Engineering, State University of New York at Buffalo, with a \$546,885 federal grant. **Such an Institute was the first of its kind in the nation;**
 - (ii) **Received 4 federal government research grants for \$1.48 m. for research in the construction safety areas.** Two Ph.D., and 19 M.S./M.Eng. students were supported from these grants; most of them did their graduate research on construction safety related topics;
 - (iii) **Received 3 safety education and training grants for \$109,000** from New York State;
 - (iv) Also, I was invited by the US Navy for teaching a 2-day safety course: *Ergonomic Hazards and Work Injuries Prevention* to the US Navy construction trades, engineers, and managers, at their Honolulu Public Works Center (PWC), and a grant of \$24,000 was received. **This training significantly improved their safety in construction operations and management;**
 - (v) Delivered 18 invited lectures on various construction safety related topics;
 - (vi) **Co-founded the American Society of Civil Engineers (ASCE) Committee on Construction Safety;**
 - (vii) **Developed a new graduate course: CIE 597: Construction Safety and Health Management,** and taught this course to graduate students and industry professionals, every spring, from 1992 to 2005. Some of the students, who took this course, were employed as safety managers in the construction companies;
 - (viii) Published six (6) technical articles in Engineering Journals on construction safety related issues;
 - (ix) Authored a book: *Construction Ergonomics*, which was extensively used in class lectures, and professional training. This book was published by a local company, ViTech Systems, and is now being submitted to a national/international publisher;

- (x) Authored the Department of Civil, Structural and Environmental Engineering's **Safety Training Manual** used and implemented for all departmental laboratory teaching, testing and research activities. This manual was incorporated into the Structural Engineering and Earthquake Engineering Laboratory (SEESL) Safety Plan and UB-NEES (Network for Earthquake Engineering Simulation) website as mandatory reading and passing an exam for all students and researchers prior to their being allowed to work in the laboratory.
- (xi) Organized two OSHA-UB professional safety seminars at the university, for Western New York construction trades;
- (xii) Organized and participated in teaching construction safety, health, and ergonomics courses to the New York State small and medium companies' trades, engineers, and safety directors. **More than 2,000 New York State and other professionals were trained at 25 different locations, and;**
- (xiii) Developed and strengthened construction safety procedures within the Western New York Construction Users Council membership that included large companies owners and construction contractors. Besides peiodical presentations on the state-of-the-art construction safety topics, I did the following:
 - **Chaired a Safety Excellence Awards Committee** for several years. This committee invited safety performance reports and safety programs from the Western New York construction companies and evaluated them for safety excellence awards, and
 - Sponsored, and partly funded several one-day Annual Construction Safety Seminars at the University Campus from 1992 to 2004, which were attended by most Western New York business owners, and construction contractors.
- (d) Established an NAHB (Nationa Association of Home Builders) Housing Research Center at the University.
- (e) (i) **Developed and taught seven (7) new graduate courses in the areas of: construction project management, expert systems in civil engineering, construction safety, and green/sustainable construction, and**
- (ii) Also developed and taught all undergraduate courses in transportation engineering and so made ABET accreditation possible.
- (f) **Research / Industry grants received worth \$ 2.35 million** (1976 - 2005). Successfully completed 20 research and training projects, funded by the federal, state, or foreign governments, or by private agencies.
- (g) **Supervised 4 Ph.D. and 51 M.S./M.Eng. research as major professor** (1978-2010), and funded 21 graduate students, partially or fully, from grants.

1985-1986 **Post-Doctoral Scholar and Visitor**, Department of Civil Engineering, Stanford University. Attended and participated in all of their construction program courses, seminars and workshops, in the fields of computer applications, expert systems, and construction management.

- 1980-1985 **Associate Professor**, Department of Civil Engineering, King Saud University, Saudi Arabia. Taught in the areas of construction / project management and transportation engineering. Completed research worth \$292,000. **Authored five (5) Design and Training Manuals, and two (2) Technical/Research Reports on highway design, pavement management, traffic safety, and library development.**
- Also worked as consultant to the Saudi Government on:
- (i) Computerized Project Management System for the Ministry of Education projects, and
 - (ii) Final acceptance inspection of the \$2.0 billion King Saud University complex.
- 1978-1980 **Associate Professor**, Department of Civil Engineering and Environmental Sciences, University of Central Florida.
- Developed and taught 10 new undergraduate, and 3 new graduate courses** in the areas of transportation engineering, construction management, and urban systems. **Teaching performance was rated amongst the top 25% of the department faculty.** Completed two research projects, funded for \$20,000.
- 1975-1978 **Graduate Instructor**, School of Civil Engineering, Purdue University. Taught a course in transportation and assisted in teaching several other civil engineering courses. Completed my Ph.D. research project entitled: *Development of a System for the Evaluation of Pavements in the State of Indiana*, funded for \$80,000 by the State of Indiana.
- 1974-1975 **Graduate Teaching / Research Assistant**, Department of Civil Engineering, Kansas State University. Assisted in teaching a course in surveying and completed my M.S. thesis entitled: *Lab Exercises in Traffic Engineering*.

Professional Experience in Construction Engineering and Management, and in Transportation Engineering

- 1988-Date **General Contractor, and Professional Construction Manager (PCM)** (part-time), as PROGRESSIVE BUILDERS, DBA, Buffalo, NY.
- (i) Built several large homes as a General Contractor, or as a Professional Construction Manager (PCM) on cost plus fee basis, and in one case as CM at Risk; and
 - (ii) Consulted with local legal firms, and a property owner on construction and transportation related issues.
- 1980-1985 **Consultant, KINGDOM OF SAUDI ARABIA**
- (i) Set up a computerized project management system for the Ministry of Education projects;
 - (ii) Advised the administration on the final acceptance of the \$2.0 billion university buildings.
- 1970-1974 **Executive Engineer (Construction) and Resident Engineer, MINISTRY OF COMMUNICATIONS AND WORKS, UNITED REPUBLIC OF TANZANIA.**
- (i) Designed and supervised the construction of a 5-mile long arterial highway in Tanzania;
 - (ii) Designed and supervised the construction of transportation and drainage systems of a residential colony for the employees of an international airport in Tanzania. In that role, I had decision making authority on drainage designs, procurement of materials, and on hiring workers and supervisors;
 - (iii) Worked as the resident engineer and owner's representative on the last phase of construction, and on the maintenance of Kilimanjaro International Airport, 1973-1974. This project was funded by the World Bank, and built by an Italian construction company.

- 1964-1970 **Executive Engineer (Roads) and Divisional Engineer Consultant,**
MINISTRY OF TRANSPORT, GOVERNMENT OF INDIA.
- (i) Planned and designed a 400 mile long expressway, in India;
 - (ii) Supervised the construction of a 2,000 mile long road network in the desert areas of India; responsibilities included: supervising and approving the designs of all road and bridge works, examining detailed estimates, monitoring progress, and construction quality control;
 - (iii) Worked on the maintenance and upgrading of about 1,000 miles of national highways and bridges in the State of Rajasthan.

- 1959-1964 **Assistant Engineer,** PUBLIC WORKS DEPARTMENT, GOVERNMENT OF THE STATE OF UTTAR PRADESH, INDIA

- (i) Executed the construction of about 100 miles of hill roads, semi-tunnels and bridges, and
 - (ii) Worked on the construction and maintenance of roads, bridges and buildings.
- The above 15 years' full-time and several years' part-time professional experience in the field, in the planning, design and construction management of several buildings, roads, bridges, and airport projects, came in very handy in starting and managing the graduate construction engineering and management program and in developing and teaching several new courses at the University at Buffalo, and at the University of Central Florida. The Department chair wrote to the Dean, as below, while recommending my tenure application:

“A valuable attribute that Dr. Mohan brings to our department is his long professional experience. He has worked on large construction projects in Tanzania, India, and Saudi Arabia, and is active in consulting in this area. The successful development of graduate program in construction engineering is a result of his close feel for the real world. His professional experience has certainly been a factor in attracting students from the local construction industry, and in the development of 6 new courses, in a short period.”

- The draft ABET/EAC Program Criteria 9 for Construction and Similarly Named Engineering Programs include the following on the Faculty requirements:

“The faculty must include at least one member who has had full-time experience and decision making responsibilities in the construction industry.”

- An ASCE Construction Engineering Conference was held at Virginia Tech from September 30 to October 2, 2010. In a panel discussions on construction education, **several students expressed that the faculty with practical experience do a better job of teaching construction courses.**

Politics / Local Government

I was elected Supervisor (equivalent to the Mayor in a village or a city) **of the Town of Amherst**, for 4 years, 2006 – 2009, and worked full-time on leave from the university service. The Town of Amherst with a population of 117,000 is the largest town in Western New York; it employed 693 full time, and 450 part-time workers in its 19 departments, and had an annual budget of \$118 million. In the 10 years prior to my taking over, the property taxes had been rising at a rate of 4%-5% every year; and several neighborhoods suffered flooded basements after a minimal rain, causing millions of dollars worth of damage, I worked on solving these and many other problems.

As Town Supervisor, I was the CEO, and the CFO of the town government, and was the Chair of the 7-member Town Council; and in that role, I got a unique opportunity to apply the academic engineering knowledge, and my 15 + years' professional experience in improving the various town functions and services. A few of the accomplishments are listed below:

- (i) Formulated a short-term, and long-term Drainage Plan for the Town, which **reduced flooding,**
- (ii) Made the town contracting procedures more competitive, which **saved millions of dollars,**
- (iii) Downsized the full-time employees by 9%, and thus **guaranteed a saving of \$6.0 million per year** in the future years, and
- (iv) Reduced the Town's bond debt by \$20.0 million, from \$79.0 million to \$59.0 million, which **saved approximately \$2.0 million every year in the future.**

C. Awards and Honors

James M. Robbins Excellence in Teaching Award, 2013-2014, Chi Epsilon, National Civil Engineering Honorary Society.

Arthur N. L. Chiu Award for Excellence as Faculty Advisor for SUNY-Buffalo, 2014, Chi Epsilon, National Civil Engineering Honorary Society.

Honor and Commendation Award, in recognition of accomplishments as Supervisor (2006 – 2009), by the Town of Amherst, March 10, 2010.

Outstanding Support of Youth as Supervisor Award, by the Amherst Youth Board, Town of Amherst, March 10, 2010.

Best of New York 2008 Award, by the Buffalo Spree, Buffalo, 2008.

Global Citizen - Embracing the World Honor Award, by the International Institute of Buffalo, June 8, 2007.

2007 Abraham Lincoln Leadership Award, by the Erie County Republican Committee.

Leaf Award by the Friends of Nature View, January 3, 2006.

Special Recognition Award by the American Society of Engineers of Indian Origin (ASEI), 16th Annual National Convention, Buffalo, NY, September 4-5, 1999.

Nominated and enlisted in *Who's Who Among Rising Young Americans*.

Nominated and enlisted in the AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE

Elected to Honorary Societies: Sigma Xi, Phi Kappa Phi, and Chi Epsilon

Merit Scholarship Award (1955-1959), Indian Institute of Technology, Khargpur, Government of India.

D. Professional Memberships and Committees

Session Chair *Expert Systems in Earthquake and Seismic Analysis*, ASCE Annual Meeting, Sept. 1989

Session Chair	<i>Advancing Construction Practices with Effective Microcomputer Applications</i> , Construction Congress-I, Sponsored by ASCE Construction Division, San Francisco, March 4-7, 1989
Session Chair	<i>Microcomputers in Construction</i> , ASCE Technical Committee, ASCE Annual Meeting, 1988
Chairman	ASCE Subcommittee on Advanced Topics on Microcomputers, 1988-1990
Director	National Association of Home Builders/NRC, Housing Research Center, UB, 1988-1990
Chairman	Research Planning Committee, NAHB/NRC Consortium of Housing Research Centers, 1988-1989
Chair	Safety Excellence Awards Committee, Western New York Construction Users Council
Life Member	American Society of Civil Engineers (ASCE), 1974 – date
University Rep.	Transportation Research Board, National Research Council, 1986 – 2005
Member	Western New York Construction Users Council, 1989 – date
Member	American Society of Engineering Education
Member	National Society of Professional Engineers
Member	ASCE Committee on Construction Safety, 1993 – 2005
Member	Town of Amherst Traffic Safety Board, 2004 – 2005
Member	The Graduate Group for Applied Artificial Intelligence in Engineering, State University of New York at Buffalo, 1989 -1995
Member	ASCE Committee on Social and Environmental Concerns in Construction, 1992 – 2000
Member	ASCE Technical Committee on Microcomputers in Construction, 1986 - 1992
Member	ASCE TCCP Committee on Expert Systems, 1988 - 1992
Member	Transportation Research Board (TRB) Task Force on Expert Systems, 1986 – 1989
Member	Chi Epsilon, Sigma Xi, Phi Kappa Phi – honorary societies, and
Member	Indiana Society of Professional Engineers, Jan. 1978.

E. Research Supervision

Ph.D. Dissertations Supervised (As Major Professor)

1. Joseph W. Delaney

Ph.D. Dissertation: *Enhancing Bid Quality of Highway Construction Projects for Optimal Results*.
Expected: May 2018.

2. Chung-Chun Lin

Ph.D. Dissertation: *Critical Analysis and Effectiveness of Key Parameters in Residential Property Valuations*, December 2010.

3. Khalid S. Al-Gahtani

Ph.D. Dissertation: *A Comprehensive Construction Delay Analysis Technique – Enhanced with a Float Ownership Concept*, May 2006. Working as:

- **Assistant Professor**, since 2006, Construction Engineering and Management, Department of Civil Engineering, King Saud University, Saudi Arabia;

- **Co-ordinator** Joint Master Program in Engineering Management with Missouri University of Science and Technology; and
 - **Consultant**, Riyadh Techno Valley Project.
4. **Wesley Zech**
Ph.D. Dissertation: *Enhancing Work Zone Safety*, Feb. 2004. Working as:
Full Professor (Tenured), since 2009,
Department of Civil Engineering, Auburn University, Auburn, AL.
5. **John R. Schmidt**
Ph.D. Dissertation: *Quantifying the Impact of Construction Accidents Using Predictive Models*, February 1997. Working as:
Full Professor,
Department of Construction Technology and Management, Ferris State University, Big Rapids, MI.

Ph.D. Dissertations Supervised (As Committee Member)

Md Tawfiq Sarwar, '*Prioritizing Pavement Rehabilitation for Minimizing Traffic Safety Losses*, Department of Civil, Structural and Environmental Engineering, State University of New York at Buffalo, Expected 2016.

Hanjin Hu

Ph.D. Dissertation: *Development of Interoperable Data Protocols for Accelerated Bridge Construction and Design-Build*, August 2014.

Joseph A. Mannarino

Ph.D. Dissertation: *Evaluation of the Construction Management Delivery System and Establishing a Model for Selection – A Qualitative Approach*, May 2001;

Richard A. Stepniak

Ph.D. Dissertation: *Safety Studies Curriculum at the Collegiate Level*, Department of Educational Leadership and Policy, State University of New York at Buffalo, April 1998.

M.S. and M.Eng. Degrees Advisor (Total 55 as Major Professor)

Rajat Jain, '*Predictive Modeling of Worksite Injury Accidents*, M.S. Project, Department of Civil, Structural and Environmental Engineering, State University of New York at Buffalo, May 2014.

Justin D. Russell, '*Construction Economic Report: Assessing the Current State of the U.S. Construction Industry and Identify its Key Workforce Challenges, Report Findings and Provide Recommendations to Increase the Skilled Labor Shortage*, M.Eng. Project, Department of Civil, Structural and Environmental Engineering, State University of New York at Buffalo, February 2013.

Bastam N. Fard, '*A Comprehensive Study on 100 Bridge Failures all over the World to find the Suggested Strategies to Prevent Failures*' M.S. Project, Department of Civil, Structural and Environmental Engineering, State University of New York at Buffalo, May 2013.

Mihai Noaje, *Special treatment of the Microscopic Structure of Concrete Floors for Increasing Durability and Green Performance*, M.S. Project, Department of Civil, Structural and Environmental Engineering, State University of New York at Buffalo, May 2012

Shashank Sharma, *Bridge Failures in the U.S. and Abroad – Causes and Potential Prevention Measures*, M.S. Project, Department of Civil, Structural and Environmental Engineering, State University of New York at Buffalo, August 2010.

Zheng-Gui Ma, *Residential Property Assessment*, M.S. Thesis, Department of Civil, Structural and Environmental Engineering, State University of New York at Buffalo, May 2006.

Sudip Umagichi, *Highway Construction: Improved Procedures to Overcome Challenges & Limitations*, M.S. Thesis, Department of Civil, Structural and Environmental Engineering, State University of New York at Buffalo, May 2005.

Ashish Mathew Abraham, *Evolutions in Civil Engineering, and Challenges*, M.S. Thesis, Department of Civil, Structural and Environmental Engineering, State University of New York at Buffalo, May 2005.

Dwight Mateer, *Criteria for Using the Modern RoundABOUTS in New York State*, M.Eng. Project, Department of Civil, Structural and Environmental Engineering, State University of New York at Buffalo, February 2005.

Mona Mehta, *Topics in Construction Safety*, M.Eng. Project, Department of Civil, Structural and Environmental Engineering, State University of New York at Buffalo, March 2003.

Jaehwan Lim, *Biorhythm and Industrial Safety*, M.Eng. Project, Department of Civil, Structural and Environmental Engineering, State University of New York at Buffalo, February 2003.

Edmond M. Ciancone, *Total Project Management*, M.Eng. Project, Department of Civil, Structural and Environmental Engineering, State University of New York at Buffalo, May 2002.

Jigar Pandya, *Online Bidding System: A Collaborative Approach to Construction Projects*, M.Eng. Project, Department of Civil, Structural and Environmental Engineering, State University of New York at Buffalo, May 2002.

Joseph Tripi, *Jobsite Construction Management*, M.Eng. Project, Department of Civil Engineering, State University of New York at Buffalo, February 2002.

Bhavna Ghorpade, *Evaluation of Speed Controls for Highway Work Zone Safety*, M.Eng. Project, Department of Civil, Structural and Environmental Engineering, State University of New York at Buffalo, June 2001.

Hugo W. Justiniano, *Construction Accidents Cost Analysis*, M.S. Thesis, Department of Civil Engineering, State University of New York at Buffalo, December 2000.

Daniel J. Seider, *Development of a Safety and Health Program for Use by Owners on a Construction Site*, M. Eng. Project, Department of Civil Engineering, State University of New York at Buffalo, March 2000.

Chi-Yu Liu, *Injury Patterns in Construction Work*, M.Eng. Project, Department of Civil Engineering, State University of New York at Buffalo, September 1997.

Gabriel Reyes, *Risk Management of Pipeline Construction Projects*, M.Eng. Project, Department of Civil Engineering, State University of New York at Buffalo, April 1997.

Anna Brita Snyder, *Construction Worker Hazard Detection System*, M.Eng. Project, Department of Civil Engineering, State University of New York at Buffalo, September 1996.

Douglas W. Sodaro, *A Study of the Potential Health Hazards Associated with Employment in the Autobody Shop Industry*, M.S. Thesis, Department of Environmental Science, State University of New York at Buffalo, September 1995.

Bryan D. Niles, *Effectiveness of OSHRC Decisions in Worksite Accident Prevention*, M.Eng. Project, Department of Civil Engineering, State University of New York at Buffalo, May 1995.

Alan Zylinski, *The Effectiveness of Site Safety Plans*, M.Eng. Project, Department of Civil Engineering, State University of New York at Buffalo, September 1994.

Ashok B. Sen, *Management of Work Zones Safety*, M.Eng. Project, Department of Civil Engineering, State University of New York at Buffalo, August 1994.

Syed Rizvi, *Design of Temporary Structures with Safety Considerations*, M.Eng. Project, Department of Civil Engineering, State University of New York at Buffalo, August 1994.

Craig Allan Kozikowski, *Predicting the Effectiveness of Facilities Maintenance and Construction*, M.Eng. Project, Department of Civil Engineering, State University of New York at Buffalo, August 1994.

Robert C. Sauer, *Decision Problems in the Development of a GIS Infrastructure for a User Agency*, M.Eng. Project, Department of Civil Engineering, State University of New York at Buffalo, November 1993.

Yehya M. Asker, *Pavement Performance Prediction Model Using the Neural Networks*, M.S. Thesis, Department of Civil Engineering, State University of New York at Buffalo, October 1993.

Dana Imad, *An Expert System for Safety Plan Generation for the Construction Industry*, M.Eng. Project, Department of Civil Engineering, State University of New York at Buffalo, April 1993.

Anthony V. Scatenato, *Analysis of Court Cases Involving Construction Accidents*, M.Eng. Project, Department of Civil Engineering, State University of New York at Buffalo, December 1992.

Dana Lynn Rau, *Quality Assurance Within the Design Firm*, M.Eng. Project, Department of Civil Engineering, State University of New York at Buffalo, September 1992.

Nuri Celal Toroglu, *Development of Safety Risk Measure of Construction Accidents*, M.Eng. Project, Department of Civil Engineering, State University of New York at Buffalo, July 1992.

Michael W. Collins, *Work Accidents in the New York State Construction Industry*, M.Eng. Project, Department of Civil Engineering, State University of New York at Buffalo, April 1992.

Alec S. Weintraub, *Designing for Safety*, M.Eng. Project, Department of Civil Engineering, State University of New York at Buffalo, March 1992.

Robert G. McCarthy, *Project Management and the Abatement Process, Practical Focus on Asbestos*, M.Eng. Project, Department of Civil Engineering, State University of New York at Buffalo, December 1991.

Edgar P. Small, *Construction Safety Data Recording Systems*, M.Eng. Project, Department of Civil Engineering, State University of New York at Buffalo, September 1991.

Yelsangikar Vishwamber, *Project Management Information System*, M.Eng. Project, Department of Civil Engineering, State University of New York at Buffalo, September 1991.

Yi-Jen Hwang, *The Integration of AutoCad and Cost Estimating*, M.Eng. Project, Department of Civil Engineering, State University of New York at Buffalo, September 1991.

Patrick James Riley, *Computerized Planning, Scheduling and Monitoring of the Indec-Yerkes Cogeneration Project*, M.Eng. Project, Department of Civil Engineering, State University of New York at Buffalo, May 1991.

Sean Murphy, *Computerized Management System for the County of Monroe Department of Engineering*, M. Eng. Project, Department of Civil Engineering, State University of New York at Buffalo, July 1990.

Tuan T. Wong, *Construction Cost Control*, M.Eng. Project, Department of Civil Engineering, State University of New York at Buffalo, June 1990.

Darrell F. Kaminski, *An Expert System for Passive Snow Control in Western New York*, M.Eng. Project, Department of Civil Engineering, State University of New York at Buffalo, May 1990.

Hung-yi-Hwang, *Automation of Materials Procurement Schedule*, M.Eng. Project, Department of Civil Engineering, State University of New York at Buffalo, May 1990.

Sung Woo Moon, *Quantitative Analysis of Quality in the Construction Process*, M.Eng. Project, Department of Civil Engineering, State University of New York at Buffalo, January 1990.

Harish K. Grover, *Analysis of Claims due to Changed Sub-Surface Conditions*, M.Eng. Project, Department of Civil Engineering, State University of New York at Buffalo, January 1990.

Ketul I. Parikh, *Analysis of Delay Claims from Owner's Perspective*, M.Eng. Project, Department of Civil Engineering, State University of New York at Buffalo, December 1989.

Kanna Vancheswaran, *An Analytical Method to Develop Construction Site Layout*, M.Eng. Project, Department of Civil Engineering, State University of New York at Buffalo, December 1989.

Syed R. Khan, *Construction Accidents and Their Cost Impact*, M.Eng. Project, Department of Civil Engineering, State University of New York at Buffalo, August 1989.

LiYen Hsu, *A Simulation Program to Solve Pipe Interference Problems in Buildings*, M.Eng. Project, Department of Civil Engineering, State University of New York at Buffalo, May 1989.

Joseph W. Delaney, *Evaluation of State-of-the-Art Microcomputer Based Project Management Software*, M.Eng. Project, Department of Civil Engineering, State University of New York at Buffalo, May 1989.

Wenshen Pong, *Development of a Computerized Management Information System for Construction Management*, M. Eng. Project, Department of Civil Engineering, State University of New York at Buffalo, April 1989.

Lynda C. Germann, *An Expert System for the Design of Highway Intersections*, M.Eng. Project, Department of Civil Engineering, State University of New York at Buffalo, May 1987.

George S. Fan, *Ground Access to the Orlando International Airport – Design and Evaluation of Various Transportation Alternatives*, M.S. Thesis, Department of Civil Engineering and Environmental Sciences, University of Central Florida, May 1980.

M.R. Hajian, *Analysis of Traffic Accidents at Daytona Beach in Volusia County, in the State of Florida*, M.S. Research Report, Department of Civil Engineering and Environmental Sciences, University of Central Florida, May 1980.

Jamal Niroumand, *Evaluation of Various Mass Transportation Alternatives for the University of Central Florida Commuters*, M.S. Thesis, Department of Civil Engineering and Environmental Sciences, University of Central Florida, May 1980.

Students Supported (fully or partially) from Grants

Alec Weintraub	M.Eng.	Amlan Mukherjee	M.S.
Kathleen Pohrte	M.Eng.	Mona K. Choudhary	M.Eng.
Edgar Small	M.Eng.	Prachi J. Gawde	M.Eng.
John Schmidt	M.S. and Ph.D.	Jigar V. Pandya	M.Eng.
Kevin Dunlop	B.S.	Hemang V. Shah	M.Eng.
Venkat Ganesan	M.Eng.	Padma Lal Gautam	M.Eng.
Paul D. Ray	M.U.P.	Michael Collins	M.Eng.
Wesley C. Zech	M.S. and Ph.D.	Hugo Justiniano	M.S.
Bhavna S. Ghorpade	M.Eng.	Krishna V. Konakanchi	M.S.(Comp.Sc.)
Da-Chang Lee	M.Eng.	Vaishali Jain	M.Eng.
Chi-Yu Liu	M.S., and M.Eng.		

F. Grants

Sponsored Research (20 Grants funded for \$2.35 million)

Effectiveness of Active Speed Controls in Highway Work Zones, National Institute for Occupational Safety and Health (NIOSH), Department of Health and Human Services, US Government, \$193,865, September 1999 - September 2003, Principal Investigator.

An Electronic Device for Eliminating Electrocutions by Mobile Cranes, an R01 research grant, National Institute for Occupational Safety and Health (NIOSH), Department of Health and Human Services, US Government, \$637,997; Oct. 2000 – Sept. 2004, SBIR to ViTech Systems Inc., Principal Investigator.
Development of a Safety Training Manual, Department of Civil, Structural, and Environmental Engineering, University at Buffalo, \$15,000, June 2003 - August 2003, Project Director.

Development of a SafetyBelt for Construction Workers, National Institute for Occupational Safety and Health (NIOSH), Department of Health and Human Services, US Government, \$99,700, March 1998 – October 1998, SBIR Phase-I to ViTech Systems Inc., Principal Investigator.

Construction Ergonomic Hazards Prevention Training, New York State Department of Labor, 07/01/1997 - 06/30/1999, \$55,000, to ViTech Systems Inc., Project Director.

Lead-Based Paint Abatement for Construction Workers, New York State Training and Education Program on Occupational Safety and Health, Department of Labor, \$39,260, Project Director.

Ergonomic Hazards and Work Injuries Prevention to US Navy Construction Personnel, US Navy, US Government, \$24,000, January 1995 – July 1995, Project Director.

Graduate Scholarship Program, Research Foundation, City University of New York, \$23,047, May 1993, Project Director.

Development of a Model Construction Safety and Health Program for the State of New York, National Institute for Occupational Safety and Health (NIOSH), Department of Health and Human Services, US Government, \$546,885, July 1991 - June 1995, Principal Investigator.

Snow Barrier System Study, New York State Department of Transportation, \$5,000, August 1989 - May 1990, Principal Investigator. *Civil Engineering Automation Library for Instruction and Research*, CLM SYSTEMS, INC., \$27,650, October 1988, Principal Investigator.
Applied Artificial Intelligence Laboratory for Learning and Research, Sun Microsystems, Inc., \$275,000, April 1988, Principal Investigator.

Analysis and Management of University Parking Systems, State University of New York at Buffalo, \$20,330, November 1987 - July 1988, Principal Investigator.

Preparation of a Saudi Manual on Traffic Studies, Saudi Arabian National Center for Science and Technology, \$61,000, January 1985, Principal Investigator.

Urban Design for Safety - Phase 1, Saudi Arabian National Center for Science and Technology, \$65,000, March 1983 - July 1984, Principal Investigator.

Development of a Pavement Management System for Saudi Arabia, Saudi Arabian National Center for Science and Technology, \$60,000, July 1981 - June 1984, Principal Investigator.

Development of a Saudi Manual on Traffic Control Devices, Saudi Arabian National Center for Science and Technology, \$106,500, May 1982 - April 1983, Principal Investigator.

Saudi Arabian National Center for Science and Technology is the national organization of Saudi Arabia for scientific research, like the N.S.F. of U.S.A. The research awards are made on the basis of national and international competition.

Implementation and Evaluation of Pay & Ride Carpool Program for the University of Central Florida Commuters, University of Central Florida, \$6,700, January 1979 - January 1980, Program Director.
Development of a Device for Measuring Surface Characteristics of Pavements using Electro- Magnetic Wave Scattering, Engineering and Industrial Experiment Station, University of Central Florida, \$13,600, January 1978 - December 1979, Principal Investigator.

Development of a System for the Evaluation of Pavements in Indiana, Federal Highway Administration, \$80,000, Ph.D. research, July 1976 - September 1978, Graduate Researcher.

Other Research Grant

While working as the Supervisor of the Town of Amherst, **I applied and received a \$500,000 federal grant for Safe Sidewalks to Schools for the Town of Amherst**. The early work on this research by the University at Buffalo's Urban and Regional Planning students won the **Outstanding Student Project** Award by the American Planning Association (APA), on Sept. 23, 2010.

G. Publications

(i) Books and Monographs

Mohan, Satish, '*Construction Ergonomics*', This book was published by a local company, ViTech Systems, and was extensively used in class lectures, and professional training. It is now being submitted to a national/international publisher;

Mohan, Satish, and Mary Lou Maher, (Editors), *'Expert Systems for Civil Engineers: Education*, American Society of Civil Engineers (ASCE), 1989.

Several civil engineering departments have utilized this monograph for developing courses on expert system applications. More than 40 copies were sold in the first year. Department Chair, Dr. Meredith obtained a list of purchasers of this book from ASCE, and then commented in his letter to the Dean:

"ASCE does not give complimentary copies. Over 40 university faculty, that I recognized, had purchased the book. This will undoubtedly have an impact on many programs because only about a dozen of the 200 civil engineering programs in the US currently offer a course in expert systems."

(ii) Book Chapters

Mohan, Satish, *'Expert Systems Education in Civil Engineering: State-of-the-Art*, peer reviewed Chapter no. 1, in ASCE Monograph, *'Expert Systems for Civil Engineers: Education'*, American Society of Civil Engineers, pp. 1- 14, 1989.

Mohan, Satish, *Teaching a Graduate Course on Expert Systems to Civil Engineers*, peer reviewed Chapter no. 5, in ASCE Monograph, *'Expert Systems for Civil Engineers: Education'*, American Society of Civil Engineers, pp. 35-39, 1989.

Maher, Mary Lou, and Satish Mohan, *'Selected Homework Assignments*, peer reviewed Chapter no. 15, in ASCE Monograph, *'Expert Systems for Civil Engineers: Education'*, American Society of Civil Engineers, pp. 117-128, 1989.

Maher, Mary Lou, and Satish Mohan, *'Selected Project Assignments'*, peer reviewed Chapter no. 16 in ASCE Monograph, *'Expert Systems for Civil Engineers: Education'*, American Society of Civil Engineers, pp. 129-132, 1989.

Maher, Mary Lou, and Satish Mohan, *'Selected Examination Questions'*, peer reviewed Chapter no. 17, in ASCE Monograph, *'Expert Systems for Civil Engineers: Education'*, American Society of Civil Engineers, pp. 133-135, 1989.

(iii) Articles – Published in Refereed Technical Journals*

Satish B. Mohan, and Ian J. MacDonald, *'Carbon- Efficiency Ranking of Materials Used in Buildings'* Oxford University Press, January, 2017

Khalid S. Al-Gahtani, and **Satish B. Mohan**, *'Delay Analysis Techniques Comparison'*, Journal of Civil Engineering and Architecture, ISSN 1934-7359, USA, Volume 5, No. 8 (Serial No. 45) August 2011

Lin, Chung-Chun, and **Satish B. Mohan**, *'Effectiveness Comparison of the Residential Property Mass Appraisal Methodologies'*, *International Journal of Housing Markets and Analysis*, manuscript ID: IJHMA-Nov-2010-0064.R1. Conditionally accepted on January 3rd, 2011.

Zech, W.C., **Mohan S.**, and Dmochowski. J. *'Evaluation of Messages on Changeable Message Signs as Speed Control Measures in Highway Work Zones'*, American Society of Civil Engineers (ASCE), *Practice Periodical on Structural Design and Construction*, Vol. 13, No.1, pp 11-18, Feb. 2008.

Al-Gahtani, Khalid, and **Satish B. Mohan**, '*Total Float Management for Delay Analysis*', Cost Engineering, American Association of Cost Engineers (AACE), Vol. 49, No. 02, pp. 32-37, Feb. 2007.

Mohan, Satish B. and Al-Gahtani, Khalid S., '*Current Delay Analysis Techniques and Improvements*', Cost Engineering, American Association of Cost Engineers (AACE), Vol.48, No.09, pp. 12-21, Sep. 2006.

Mohan, S., and Zech, W.C., '*Characteristics of Traffic Accidents in Highway Work Zones*', ITE Journal on the Web, http://www.ite.org/ite_journal/index.asp, April 2006.

Zech, W.C., **Mohan, S.**, and Domochowski, J., '*Evaluation of Rumble Strips and Police Presence as Speed Control Measures in Highway Work Zones*', American Society of Civil Engineers (ASCE), Practice Periodical on Structural Design and Construction, Vol. 10, No. 4, pp. 267-275, Nov. 2005.

Mohan, S. and Zech, W.C., '*Characteristics of Worker Accidents on NYSDOT Construction Projects*', Journal of Safety Research, Vol. 36, pp.353-360, Sept. 2005.

Mohan, Satish, and Padma Gautam, '*Cost of Highway Work Zone Injuries*', American Society of Civil Engineers (ASCE), Journal of Practice Periodical on Structural Design and Construction, Volume 7, Number 2, pp. 68-73, May 2002.

Mohan, Satish, and Bryan D. Niles, '*Effectiveness of the Occupational Safety and Health Administration Citations*', American Society of Civil Engineers (ASCE), Journal of Practice Periodical on Structural Design and Construction, Volume 7, Number 2, pp. 85-89, May 2002.

Mohan, Satish, David W. Johnston, and W. Lee Shoemaker, '*Residential Construction: Research Agenda for the 1990s and Beyond*', International Journal for Housing Science and its Applications, Vol 17, pp. 187-198 Coral Gables, FL, Nov. 4, 1993.

Hsu, LiYen and **Satish Mohan**, '*Computer-Aided Configuration of Pipe Systems in Buildings*', Microcomputers in Civil Engineering, Vol. 6, 0885-9507/91, pp. 15-26, Elsevier Science Publishers Ltd, Essex, UK, 1991.

Kaminski, Darrell F., and **Satish Mohan**, '*PASCON-An Expert System for Passive Snow Control on Highways*', Transportation Research Record 1304, TRB, National Research Council, pp. 193- 201, Washington D.C, 1991.

Mohan, Satish, '*Status of Expert Systems Education in Civil Engineering*', The International Journal of Applied Engineering Education, Vol. 6, No. 2, pp. 131-143, Oxford, UK, 1990.

Mohan, Satish, '*Expert Systems Applications in Construction Management and Engineering*', ASCE Journal of Construction Engineering and Management, Vol. 116, No. 1, pp. 87-99, March 1990.

Baker, D.J., G.D. Manolis, and **Satish Mohan**, '*HIBIC: An Expert System for Highway Bridge Dynamics*', ASCE Journal of Computing in Civil Engineering, Vol. 3, No. 4, pp. 348-366, October 1989.

Jarallah, M.I., and **Satish Mohan**, '*Construction Management Practices in Saudi Arabia*', Transportation Research Record 1056, TRB, National Research Council, pp. 60-88, Washington, D.C., 1986.

Mohan, Satish, and AC Bushnak, '*Multi-Attribute Utility in Pavement Rehabilitation Decisions*', ASCE Journal of Transportation Engineering, Vol. 111, No. 4, pp. 426-440, July 1985.

Mohan, Satish, '*Statistical Sampling Techniques in Soil Surveys*', Journal of the Institute of Engineers (India), Vol. 65, part 3 & 4, pp. 117-123, November 1984.

Mohan, Satish, *Variation in Pavement Deflection Patterns*, Australian Road Research, Vol. 14, No. 2, pp. 63-70, June 1984.

* My publication activities were suspended from 2005 to 2010 when I was on leave for public service as the Amherst Town Supervisor.

Mohan, Satish, *Framework for the Development of a Pavement Evaluation Index (PEI)*, Technical Note, Australian Road Research, Vol. 12, No. 2, pp. I 10- 115, June 1982.

Mohan, Satish, and G.F. Schrader, *Pay and Ride Carpool - A New Concept in Commuter Ride- Sharing*, Transportation Research Record 778, pp. 1-7, TRB, National Research Council, Washington D.C., 1980.

(iv) Articles – To be Submitted (to be updated)

Shashank Sharma, and **Satish B. Mohan**, “*Status of Bridge Failures in the United States*”, Transportation Research Board, National Research Council, Transportation Research Board, Washington, D.C.

Chung Chun Lin, **Satish B. Mohan**, and Alan Hutson, “*A GIS-Based Methodology for Dividing the Housing Stock of a Municipality into Uniform Districts*”, Journal of Housing Studies,

Chung Chun Lin and **Satish B. Mohan**, “*The Impact of Macroeconomic Indicators on Regional Housing Prices*”, Journal of Applied Economics, Manuscript ID: APE-2010-0353, July 26, 2010.

Chung Chun Lin and **Satish B. Mohan**, “*An artificial Neural Network Model for Mass Appraisal of Residential Housing*”, Journal of Expert Systems with Applications, Ref. No.: ESWA-D-10-01506, July 23, 2010.

Chung Chun Lin, **Satish B. Mohan**, and Alan Hutson, “*An Additive Nonparametric Regression Model for Mass Appraisal of Residential Housing*”, Empirical Economics, Manuscript No. 2010230, July 20, 2010.

(v) Articles - Published in Refereed AACE Transactions

Al-Gahtani, Khalid, and Satish B. Mohan, ‘*Total Float Management for Delay Analysis*’, American Association of Cost Engineers (AACE), 2005 International Transactions, CDR.16.1-CDR.16.13.

Mohan, Satish B. and Al-Gahtani, Khalid S., ‘*Current Delay Analysis Techniques and Improvemests*’, American Association of Cost Engineers (AACE), 2004 International Transactions, PS.20.1- PS.20.

(vi) Articles – Presented and Published in Refereed Conference Proceedings

Shashank Sharma, and **Satish B. Mohan**, “*Status of Bridge Failures in the United States*”, Transportation Research Board, National Research Council, Transportation Research Board, Presented at the Annual Meeting, January 2011, Washington, D.C.

Al-Gahtani, Khalid S., and Mohan, Satish B., ‘*Delay Analysis Techniques Comparison*’, Fifth International Conference on Construction in the 21st Century (CITV-V), Istanbul, Turkey, May 20-22, 2009.

Al-Gahtani, Khalid, and Satish B. Mohan, '*Total Float Management for Delay Analysis*', AACE International, Morgantown, WV, Feb. 2007.

Mohan, Satish B. and Al-Gahtani, Khalid S., '*Current Delay Analysis Techniques and Improvement*', AACE International, Morgantown, WV, Sep. 2006.

Mohan, Satish B., and Sumati Iyer, '*Effectiveness of Lean Principles in Construction*', 13th Conference of the International Group for Lean Construction, Sydney, Australia, (not presented), July 16-18, 2005.

Al-Gahtani, Khalid, and Satish B. Mohan, '*Total Float Management for Delay Analysis*', 2005 American Association of Cost Engineers (AACE) Annual International Meeting, New Orleans, LA, June 26-29, 2005.

Al-Gahtani, Khalid, and Satish B. Mohan, '*Current Delay Analysis Techniques and Improvement*', 2005 American Association of Cost Engineers (AACE) Annual International Meeting, New Orleans, LA., June 26-29, 2005.

Zech, Wesley C., and Satish Mohan, '*Priority Scheduling of Urban Rehabilitation Streets to Minimize Congestion, Delays, and Accidents*', American Society of Civil Engineers (ASCE), Construction Research Congress, San Diego, CA, April 05-07, 2005.

Sivalenka, Amruth, Mohammed Safiuddin and Satish mohan, '*Simulation of Electric Fields Around Transmission Lines for Proximity Prediction*', Proceedings, The 2003 European Simulation and Modeling Conference, Naples, Italy, pp. 453-457, October 27-29, 2003.

Mohan, Satish, '*Twenty-five Years of Changes in OSHA*', ASCE Proceedings, Washington D.C., October 1996

Mohan, Satish, '*Changes in OSHA in the Last 25 Years*', Proceedings, ASCE Committee on Social and Environmental Concerns, Sept. 1996.

Mohan, Satish, '*Effectiveness of Microcomputers in Construction Execution*', Proceedings, Construction Congress I, San Francisco, March 4-8, 1989.

Mohan, Satish, '*Expert Systems Technology in the Domain of Construction*', Fourth International Symposium on Robotics & Artificial Intelligence in Building Construction, Proceedings, Building Research Station -Technion IIT, Haifa, Israel, pp. 76-93, June 1987, (not presented).

Satish Mohan, Kang W. Lee, and M. Bilal, "*A Computerized Data Bank for Pavement Management*", ASCE Third Conference in Computing in Civil Engineering, Proceedings, pp. 321-329, San Diego, CA, April 2-6, 1984.

(vii) Invited Presentations in Professional Conferences/Meetings

State-of-the-Art Research and Current Topics on Construction Safety, Annual UB Safety Seminars, 10 presentations, 1990-2004.

Work Zone Safety, Western New York Construction Users Council Meeting, Center for Tomorrow, University at Buffalo, Sept. 26, 2003.

Economic Consequences of Construction Accidents, Western New York Construction Users Council Meeting, Center for Tomorrow, University at Buffalo, Oct. 30, 2001.

Construction Safety Economics, Western New York Construction Users Council Meeting, Center for Tomorrow, University at Buffalo, Nov. 30, 1999.

Cost of Work Zone Injuries, ASCE Annual Meeting, Charlotte, VA, October 1999.

Construction Safety Overview, Western New York Construction Users Council Meeting, Center for Tomorrow, University at Buffalo, Sept. 15, 1998.

Safety Economics, Western New York Construction Users Council Meeting, Buffalo Club, March 25, 1997.
Twenty Five Years of Changes in OSHA, ASCE Ann. Convention, Poster Presentation, Washington DC, 1996

Economics of Construction Safety, Upstate New York Construction Users Council Meeting, Webster, NY, October 25, 1996.

Safety Risk Profile of a Construction Project, Western New York Construction Users Council Meeting, Center for Tomorrow, University at Buffalo, March 7, 1995.

Developing a Safety Risk Profile of a Construction Project, National Institute for Occupational Safety and Health (NIOSH) Symposium on Efforts to Prevent Injury and Disease among Construction Workers, Cincinnati, OH. July 21-22, 1994.

Workmen's Compensation Crisis, UpState and Western New York Construction Users Councils Joint Meeting at the State University of New York – Buffalo, Center for Tomorrow, June 24, 1993.

Project Management, MAE 459: Design Project Special Lectures (2), Department of Mechanical and Aerospace Engineering, State University of New York at Buffalo, 1992-1993.

Construction Safety Training and Education, National Safety Council Congress & Exposition, Orlando, FL, Nov. 2, 1992.

\$ Costs Associated with Construction Accidents, Transportation Research Board, Annual Meeting, Washington D.C., Jan. 1992.

Quantifying Worksite Safety, Transportation Research Board, Annual Meeting, Washington D.C., Jan. 1992.

Expert Systems and Applications in Construction, Research Seminar Series, Department of Civil Engineering, State University of New York at Buffalo, March 3, 1989.

Overview of Expert Systems, Workshop on Expert Systems Applications, Great Lakes Program, State University of New York at Buffalo, March 28, 1988.

Expert Systems: How Useful Are They in Construction?, Construction Management Symposium, Fourth Annual Engineering Dean's Lecture Series, State University of New York at Buffalo, Buffalo, April, 1987.

Development of a Pavement Management System for Saudi Arabia, Saudi Arabian-Swedish Workshop in Traffic Safety and Road Maintenance, Ministry of Communications, Riyadh, January 23, 1982.

Statistical Sampling Techniques in Soil Surveys, Symposium on Geotechnical Problems in Saudi Arabia, King Saud University, Riyadh, May 1981.

Transportation and Environment, Annual Youth Environmental Conference, University of Central Florida, Orlando, Florida, December 31, 1979.

Soil-Cement in Road Construction, American Association of Civil Engineering Technicians, Orlando, Florida, May 15, 1979.

A Pavement Evaluation System, Annual Symposium, Florida Institute of Consulting Engineers, Orlando, Florida, February 16, 1979.

Development of a Device for Measuring Surface Characteristics of Pavements using Electro- Magnetic Wave Scattering, Annual Meeting, Transportation Research Board, Washington D.C., January 17, 1979.

Transportation and Energy, Teacher Intern Program, Orlando Chamber of Commerce, Orlando, 1979.
Transportation and Environment, Annual Youth Environmental Conference, University of Central Florida, Orlando, 1979.

Transportation and Urban Growth, League of Women Voters, Orlando, 1979.

Carpool Alternatives for UCF Commuters, Regional Energy Action Committee Conference, Walt Disney World, Orlando, Florida, November 1978.

(viii) Design and Training Manuals

George C. Lee, Satish B. Mohan, Chao Huang, and Bastam N. Fard, '*A Study of U.S. Bridge Failures*', MCEER Technical Report, FHWA Contract Number DTFH61-08-C-00012, June 1, 2013.

Mohan, Satish, and Gaurav S. Shringarpure, '*Safety Training Manual*', Department of Civil, Structural, and Environmental Engineering, University at Buffalo, August 2003.

Al-Turki, Mansour and Satish Mohan, '*Saudi Manual of Traffic Studies*', Saudi Arabian National Center for Science and Technology, Riyadh, Saudi Arabia, January 1985.

Mohan, Satish, '*Saudi Manual for the Design of Parking Facilities*', Saudi Arabian National Center for Science and Technology, Riyadh, Saudi Arabia, July 1984.

Mohan, Satish, '*Saudi Manual for the Design of At-Grade Urban Intersections*', Saudi Arabian National Center for Science and Technology, Riyadh, Saudi Arabia, February 1984.

Mohan, Satish, '*Development of a Saudi Manual on Traffic Control Devices - Standardization of Arabic Lettering Style on Road Signs*', Saudi Arabian National Center for Science and Technology, Final Research Report, April 1983.

Mohan, Satish, '*Development of a Saudi Manual on Traffic Control Devices - Review of Ministry of Communications Draft Manual on Traffic Control Devices*' Saudi Arabian National Center for Science and Technology, Final Research Report, January 1983.

The above listed five manuals are comprehensive planning and design documents based on U.S. codes and practices. They have been translated in Arabic and recommended for adoption, nationwide.

(ix) Technical / Research Reports

Mohan, Satish, '*Analysis and Management of University Parking Systems - University at Buffalo (North Campus)*', State University of New York at Buffalo, July 1988.

Mohan, Satish, A.R.A. Kutami, M.I. Al-Jarallah, Galal A. Ali, and Adil Bushnak, '*Development of a Pavement Management System for Saudi Arabia*', Saudi Arabian National Center for Science and Technology, Final Research Report, June 1984.

Audi, Mahmoud, Sina Berkoz, Satish Mohan, and Abdullah Yahya, '*Library Facilities Development Program*' University of Riyadh, College of Engineering, Final Report, Riyadh, Saudi Arabia, January 1981.

Mohan, Satish, '*Development of a System for the Evaluation of Pavements in Indiana*'. Federal Highway Administration Report No. FHWA/ISHC/JHRP-78/21, 1978 (based on doctoral dissertation).

Mohan, Satish, '*Lab Exercises in Traffic Engineering*', Kansas State University, 1975 (based on Master's report).

H. Teaching

(i) At the State University of New York at Buffalo (1986-2010)

Developed and taught seven (7) new graduate courses (500 + level), marked below with an asterisk (*), and five (5) undergraduate courses:

			Course Evaluations
EAS 305	Applied Probability & Statistical Inference	Fall 1986, Summer 1987	Course Evaluations were generally very high, much above the average.
CIE 215	Civil Engineering Planning and Management	Spring 1987	
CIE 459/500	Construction Management*	Spring 1987	
CIE 592	Construction Planning & Scheduling*	Fall 1987 - 2004	
CIE 493/593	Project Management*	Spring 1987, 1991, 2011	
CIE 596	Expert Systems in Civil Engineering*	Spring 1988	
CIE 334	Introduction to Transportation Planning	Fall 1987, Fall 1988	
CIE 439	Transportation Systems Analysis	Fall 1990 – 2004	
CIE 597	Construction Safety and Health Management*	Spring 1992 – 2005	
CIE 491/591	Construction Estimating*	Fall 2010	
CIE 500G	Green/Sustainable Construction*	Fall 2010	
CIE 415	Professional Practice Issues	Spring 2011	

(ii) At King Saud University, Riyadh, Saudi Arabia (1980-1985)

CE 432	Transportation Engineering	Fall 1980 - Fall 1984	The university did not require student evaluations.
CE 417	Construction Management	Fall 1980 - 1984	
GE 402	Project Management	Spring 1981 - Spring 1985	

(iii) At the University of Central Florida (1978-1980)

Developed and taught ten (10) new undergraduate, and three (3) new graduate (5000+ level) courses in a period of two years

TTE 4004	Transportation Engineering	Fall 1978, Winter 1979, Spring 1980	Teaching performance was rated at the top 25% of the department faculty
TIE 5937	Planning & Design of Airports	Summer 1979	
TTE 5432	Mass Transportation Systems	Spring 1979	
T'M 4321	Traffic Engineering	Fall 1978	

ECI 4145	Construction Engineering	Winter 1979
ECI 5147	Construction Management	Winter 1980
STA 3032	Probability & Statistics for Engineers	Spring 1980
ECI 3210	Civil Engineering Design Project	Winter 1979
ECI 3404	Civil Engineering Materials	Fall 1979
ME 4504	Urban Planning	Fall 1978, 1979
ECI 4932	Civil Engineering Systems Design	Spring 1980
EGN 3613	Resources Geography	Spring 1979
EGN 4823	Topics in Urban Development	Winter 1979, 1980, Spring & Summer 1979

Other Educational/Teaching Activities

More than 2,000 New York State, and Florida State professionals were trained in the areas of: construction safety, construction ergonomics, project management, engineering economics, statistical quality control, and transportation design and safety, as listed below:

- Developed and taught short courses on: *Ergonomic Principles and Applications for Safe Construction*, to construction managers, and insurance company professionals. **More than 120 professionals were trained** in two years, 1999-2000.**
- *Back Injuries – Prevention, Control and Treatment*, a series of six 8-hr courses **taught to 104 New York State construction employers, supervisors and trades, at 6 locations within the State**, funded by the New York State Department of Labor, 1/1/99 - 6/30/99.**
- **Authored and published a monthly newsletter: *Construction Ergonomics*, and distributed to 500 construction employers, contractor associations, and labor unions** in the Western New York region, 05/22/98 – 07/22/99.**
- *Construction Ergonomics*, **two 8-hr courses taught to construction trades, engineers, and middle managers of the U.S. Navy**, Public Works Center, Pearl Harbor, Hawaii, 1995. **The safety statistics of the U.S. Navy Public Works Center, Honolulu Command, were very significantly improved due to this Construction Ergonomics training.**
- *Ergonomic Hazards in the Construction Industry*, a series of four 8-hr courses **taught to 60 New York State construction employers, supervisors and trades, at 4 locations within the State**, funded by the New York State Department of Labor, 5/1/97 - 6/30/98.**
- *Project Management*, two graduate level courses taught to the senior engineers and managers of the Niagara Mohawk Corporation (Spring 1994), and Delphi Harrison (Fall 1997) - two large local companies,
- Organized and participated in fifty two (52) Safety and Health Training Courses at 19 locations throughout the State of New York, 1991 – 1995. **A total of 1440 construction professionals were trained in this statewide training program.****

- Taught a short course entitled: *Engineering Economics* to the New York State Department of Transportation Engineers, Public Service Training Program, State University of New York at Buffalo, January 1988.**
- Taught a short course entitled: *Transportation Design and Safety* to practicing engineers, College of Engineering, King Saud University, Saudi Arabia, 1983.
- Taught a short course entitled: *Statistical Quality Control in Highway Construction* to the Florida Department of Transportation engineers and managers, Orlando, April 1980.
- Taught Professional Engineer's (PE) Examination Courses to the Florida State practicing engineers, John F. Kennedy Center, Cape Kennedy, Florida, 1979 & 1980.

** These Educational/Teaching activities have also been listed in the 'Professional Services' Section.

I. Service

Community/Public Service

I was elected Supervisor (equivalent to the Mayor in a village or a city) **of the Town of Amherst**, for 4 years, 2006 – 2009, and worked full-time on leave from the university service. **This provided an extra-ordinary and unique leadership role for an academic engineer in community service, and in local government administration.**

In a congratulatory letter, after my election victory, the Chairman of the Department of Civil, Structural, and Environmental Engineering wrote to the students, staff and faculty, and to the Dean, Provost and the University President, on November 09, 2005, as below:

'As many of you know, our colleague, Professor Satish Mohan, has been working tirelessly since the summer to bring a new message and attitude to the Town of Amherst's government. His hard work paid off yesterday with a dramatic and inspiring victory in the Town of Amherst's Supervisor election.

Through his message and hard work, Professor Mohan demonstrated with clarity and distinction how the engineering community truly can serve the greater good. As educators, we advocate engineers taking greater role in community leadership. Professor Mohan's decision to seek and ultimately win election is an outstanding example of what can be accomplished. I greatly admire the personal courage Professor Mohan demonstrated in pursuing his dream of improving Amherst...."

The Town of Amherst with a population of 117,000 is the largest town in Western New York; it employed 693 full time, and 450 part-time workers in its 19 departments, and had an annual budget of \$118 million. In the 10 years prior to my taking over, the property taxes had been rising at a rate of 4%-5% every year; and several neighborhoods suffered flooded basements after a minimal rain, causing millions of dollars worth of damage.

- (a) **As Town Supervisor, I was the CEO, and the CFO of the town government, and was the Chair of the 7-member Town Council; and in that role, I got a unique opportunity to apply the academic engineering knowledge, and my 15 + years' professional experience in improving the various town functions and services.** A few of the accomplishments are listed below:
 - (i) Formulated a short-term, and long-term Drainage Plan for the Town, which **reduced flooding**,

- (ii) Made the town contracting procedures more competitive, which **saved millions of dollars**,
- (iii) Downsized the full-time employees by 9%, and thus **guaranteed a saving of \$6.0 million per year** in the future years, and
- (iv) Reduced the Town's bond debt by \$20.0 million, from \$79.0 million to \$59.0 million, which **saved approximately \$2.0 million every year in the future.**

The above and other such actions made the delivery of town's services efficient, and made the following dollar savings for the tax payers:

- (i) Froze the tax hikes at 0%, for 4 years, **saving the tax payers at least \$5.0 million every year for 4 years, effecting a total saving of \$20 million,**
 - (ii) Downsizing the full-time employees by 9%, **guaranteed a saving of \$6.0 million per year,** in the future years, and
 - (iii) **Reduced the bond debt service by approximately \$2.0 million per year** in all future years, and
 - (iv) Developed a Drainage Plan for the town which minimized flooding in some of the neighborhoods. The various tasks recommended in the Drainage Plan, when completed, will control all flooding and the resulting damage in the future.
- (b) As the Town's Supervisor, I authored a monthly, ½ page news letter (total 48 articles in 4 years), which was published in the local weekly: *Amherst Bee*. These newsletters gave brief details of the emerging plans and policies for the town's future growth, and efficient management of the municipal services.
- (c) I also gave more than 100 lectures and presentations to neighborhood groups, schools, business groups, and citizen clubs on the potential solutions to the town's problems, future development plans and policies, and an express need to make town services more efficient and demand responsive.

Professional Service

Member, Western New York Construction Users' Council, 1989 – date. The various services include:

- (i) participating in monthly meetings, (ii) delivering lectures on topics of current interest to company owners and construction contractors, and (iii) sponsoring an annual safety seminar at the university.

Member, Town of Amherst Traffic Safety Board, 2004 – 2005. This community service functions included: site investigation of all citizen complaints on traffic related issues, listen to the citizens in monthly meetings, make recommendations to the Town Board, and initiate improvements to the town's transportation system.

Chaired a Safety Excellence Award Committee for 4 years. This committee evaluated safety programs of the Western New York Construction Owners and Contractors, and made safety excellence awards.

Developed and taught short courses on: *Ergonomic Principles and Applications for Safe Construction*, to construction managers, and insurance company professionals. **More than 120 professionals were trained** in two years, 1999-2000.

Co-Sponsored a Construction Safety Seminar at the University with OSHA on: *Eliminating Employees Exposure to Falls, Silica and Lead while Working on Bridges*, Center for Tomorrow, University at Buffalo, Jan. 31, 2000.

Authored and published a monthly newsletter: *Construction Ergonomics*, and distributed the news letter to 500 construction employers, contractor associations, and labor unions in the Western New York region, 05/22/98 – 07/22/99

Taught a series of six 8-hr courses on: *Back Injuries – Prevention, Control and Treatment*, to **104 New York State construction employers, supervisors and trades, at 6 locations within the State**, funded by the New York State Department of Labor, 1/1/99 - 6/30/99.

Taught a series of four 8-hr courses on: *Ergonomic Hazards in the Construction Industry*, to **60 New York State construction employers, supervisors and trades, at 4 locations within the State**, funded by the New York State Department of Labor, 5/1/97 - 6/30/98.

Taught two 8-hr courses on: *Construction Ergonomics*, to **construction trades, engineers, and middle managers of the U.S. Navy**, Public Works Center, Pearl Harbor, Hawaii, 1995. **The safety statistics of the U.S. Navy Public Works Center, Honolulu Command, were very significantly improved due to this Construction Ergonomics training.**

Organized, and participated in fifty two (52) Safety and Health Training Courses at 19 locations throughout the State of New York. **A total of 1440 construction professionals were trained** in this statewide training program, 1991-1995.

Completed a **Traffic Impact Study of Daeman College**, for the Town of Amherst, 1994.

Taught a short course entitled: *Engineering Economics* to the New York State Department of Transportation Engineers, Public Service Training Program, State University of New York at Buffalo, January 1988

University Service

Vice President (Academic), University United Professions (UUP), 1998-1999.

Member, Vice Presidential Advisory Committee on Parking and Transportation Advisory Committee, 1993-97.

Conducted a university-wide parking study for the State University of New York at Buffalo, utilizing undergraduate students, 1987-1988. **University wide recommendations were made to improve parking, and several of the recommendations were implemented by the university.**

Started a graduate Construction Engineering and Management program, which graduated 217 students – mostly self-paying domestic students. Dean Lee, in his letter to the Provost on my tenure application, commented as below:

"Dr. Mohan has successfully developed a program of high student and industrial demands. This, in my opinion, is a superior service contribution to our university".

Faculty Service

Member	Master of Engineering Committee, 1994-1997
Member	Faculty Senate Committee, 1998-2000.
Member	The Graduate Group for Applied Artificial Intelligence in Engineering (89-95).

Department Service

Chair	CSEE Department Safety Committee, 2003 - 2005
Member	Graduate Studies Committee, 1999 - 2004

Chair	Faculty Search Committee, 1996 - 97
Member	Undergraduate Studies Committee, 1996 - 97
Department Representative	SEFA Campaign, 1996 - 1998.
Coordinator	Graduate Construction Engineering and Management Program, 1987 - 2005
Faculty Advisor	Chi Epsilon Honorary Society, 1993 – 2005, and 2010 -- date
Member	Master of Engineering Committee, 1992 – 1995
Director	Construction Engineering and Management Program, 1993 – 1994

Authored the Department of Civil, Structural and Environmental Engineering's Safety Training Manual used and implemented for all departmental laboratory teaching, testing and research activities. This manual was incorporated into the Structural Engineering and Earthquake Engineering Laboratory (SEESL) Safety Plan and UB-NEES (Network for Earthquake Engineering Simulation) website as mandatory reading and passing an exam for all students and researchers prior to their being allowed to work in the laboratory. The SEESL Safety Plan and this corresponding Safety Training Manual were evaluated by a group of independent safety and risk consultants (Risk Consultants Inc., Atlanta, Georgia) as directed by the NEES Inc. management, and received the highest ranking of all of the 15-NEES sites, a score of 4.7 out of a possible 5.0. Seven (7) of the other sites received a score between 1.0 and 2.0 and the other 7, scored less than 1.0. With minor modifications and clarifications, UB-NEES received the first perfect score of 5.0. **The Safety Training manual remains as a key and critical element of the UB-NEES Safety Plan.**
