

ALLAN M. ZAREMBSKI Ph.D., P.E., F.A.S.M.E.

Vice President and General Manager

Summary of Qualifications:

Over thirty years of professional engineering responsibility. Extensive experience in all areas of rail operations to include freight operations, transit, commuter and inter-urban. Internationally recognized expertise in the area of railway track and structures, vehicle-track dynamics, failure and failure analysis, safety, railway operations, and maintenance. Consulting services provided to virtually all major rail operations in North America together with numerous operations worldwide.

PROFESSIONAL HISTORY:

- September 2007
to present **ZETA-TECH, an Independent Business Unit of Harsco Track Technologies**
Vice President and General Manager
Directed activities in track maintenance planning and planning software, vehicle-track dynamics and interaction, rail and track analyses, economic analyses of railroad operations, and railway costing. Special areas of activity include rail maintenance, rail grinding, railroad track structure, vehicle-track dynamics, fatigue and failure analysis, safety, and risk management.
- 1984
to 2007 **ZETA-TECH Associates, Inc., Cherry Hill, New Jersey**
President
Directed activities in track maintenance planning and planning software, vehicle-track dynamics and interaction, rail and track analyses, economic analyses of railroad operations, and railway costing. Special areas of activity include railroad track structure, vehicle-track dynamics, fatigue and failure analysis, safety, and risk management.
- 1981 -
1984 **Pandrol Inc./Speno Rail Services Co.**
Director Research & Development
Dual responsibility for both companies in directing all research and development activities for new products, new systems, and future corporate activities. Reported directly to the President. Responsible for all railroad technology activities including product application, advertising, and technical support.
- 1976 -
1981 **Association of American Railroads**
Manager - Track Research Division
December 1978 to September 1981
Directed Division Responsible for conducting major research programs on railroad track. Directed AAR Track Laboratory. Conducted extensive field and laboratory tests as well as analytical research programs.

Assistant Manager - Track Research Division

August 1978 to December 1978

Initiated major research programs in Track Strength, Rail Fatigue, Ballast Failure Mechanisms, etc.

Senior Research Engineer

August 1976 to August 1978

Responsible for research programs on freight car fatigue design, rail overturning, and track gage widening. Developed industry standard methodology for fatigue design of freight cars. Developed test plans and procedures for AAR Track Laboratory.

1975 -
1976

Princeton University

Research Associate - Dept. of Civil Engineering

Conducted research activities in the area of lateral (railroad) track deformation and track buckling. Conducted laboratory tests at civil engineering laboratory.

1971 -
1973

Grumman Aerospace Corp.

Engineer

Responsibility for design and analysis of military aircraft structural components. Also conducted dynamic analyses of aircraft structures.

EDUCATION:

Sept. 1975

Ph.D. Civil Engineering; Princeton University

June 1974

M. A. Civil Engineering; Princeton University

Jan. 1973

M. S. Engineering Mechanics; New York University

Jan. 1971

B. S. (Magna Cum Laude) Aeronautics and Astronautics; New York University

PROFESSIONAL AFFILIATIONS:

Registered Professional Engineer: NJ, NY, PA, IL, MD

MEMBER:

American Railway Engineering and Maintenance of Way Association

American Society of Mechanical Engineers (Fellow)

American Society of Civil Engineers

HONORS AND AWARDS:

Received Federal Railroad Administration's SPECIAL ACT AWARD, February 2001

Elected Fellow of the American Society of Mechanical Engineers in 2000

1992 Rail Transportation Award, American Society of Mechanical Engineers

Associate Editor, Railway Track and Structures Magazine, January 1985 to 1996. Author of monthly column; "Tracking R&D"

Adjunct Assistant Professor, Department of Civil Engineering, Illinois Institute of Technology 1980 - 1981

Instructor: Railroad Engineering Continuing Education Courses
Institute for Railroad Engineering; 1984 – 2004
George Washington University; 1980 - 1981
University of Wisconsin at Madison; 1978 -1981

Member: National Academy of Sciences, National Materials Advisory Board; Committee on Nondestructive Testing of Longitudinal Force in Rails

Member: Office for Research and Experiments of the International Union of Railway; Committee D150

Delegate: American Railway Engineering Association Railroad Delegation to the Peoples Republic of China, 1983

Deputy Director - International Government Industry Research Program on Track Train Dynamics

Patent (Pending): Automated Turnout Inspection

Author of over 150 papers on railroad track analysis and behavior, rail fatigue, and freight car design and analysis

Author of over 130 articles on railway operations and maintenance, published in all of the major U.S. and international (English speaking) industry publications

Author of the book Tracking R&D; Research and Development, Simmons Boardman, Omaha, NE, 1993

Author of the book The Art and Science of Rail Grinding, Simmons Boardman, Omaha, NE, 2005