



***Victor Birman, PhD, PE  
EEC Director***

## **Professor Victor Birman**

See:

<http://mfge.mst.edu/faculty/birmanpg.html>

<http://journalogy.net/Author/12975316>

<http://onlinelibrary.wiley.com/doi/10.1002/9780470686652.eae141/abstract>

<http://journaltool.asme.org/content/AMRAEs.cfm>

Engineering Education Center

Missouri University of Science and Technology, St. Louis, Missouri

Professional Registration: Professional Engineer Registered in Missouri, Registration Number E-2000172742

### **Academic Degrees:**

1978-1983, Department of Aeronautical Engineering, Technion - Israel Institute of Technology, Haifa, Israel.  
Ph.D. in Aeronautical Engineering, Thesis: Static Displacements and Natural Frequencies of Axially Loaded Imperfect Cylindrical Panels.

1967-1973, Department of Naval Architecture, Shipbuilding Institute, Leningrad, Russia, B.S. in Naval Architecture, Thesis: Influence of Transverse Vibration on Stability of Rectangular Plates.

**Work Experience (academic and industrial):**

2000-present, Director, Missouri S&T Engineering Education Center in St. Louis, Responsible for nine graduate programs.

1996-present, Professor, Missouri University of Science and Technology, Department of Mechanical and Aerospace Engineering and Engineering Mechanics/Engineering Education Center. Research and teaching in the areas of composites, structures, and structural dynamics.

1997, AFOSR Summer Faculty Program, Wright-Patterson Air Force Base, Dayton, Ohio  
Research in the area of high-temperature damage and fatigue of ceramic matrix composites.

1989-1996, Associate Professor, University of Missouri-Rolla, Department of Mechanical and Aerospace Engineering and Engineering Mechanics/Engineering Education Center. Research and teaching in the areas of composites, structures, and structural dynamics.

1994 Visiting Scientist, NASA Lewis Research Center, Cleveland, Ohio, Research in the area of micromechanics of shape memory alloy composites.

1993, Visiting Scientist, Air Force Institute of Technology, Wright-Patterson Air Force Base, Dayton, Ohio, Research in the area of solid rocket motors.

1993, Visiting Scientist, NASA Lewis Research Center, Cleveland, Ohio, Research in the area of smart composite structures.

1992-1993, Visiting Scientist, University of Natal, Durban, South Africa, Research in the area of optimization of smart structures.

1992, AFOSR Summer Faculty Program, Wright-Patterson Air Force Base, Dayton, Ohio, Research in the area of fracture of composites.

1987-1988, Associate Professor, School of Naval Architecture and Marine Engineering, University of New Orleans, Louisiana, Research and teaching in the areas of structures, structural dynamics and composites.

1988 (summer), Acting Chairman, School of Naval Architecture and Marine Engineering, University of New Orleans, Louisiana

1984-1987, Assistant Professor, University of New Orleans, Louisiana, In charge of developing research and teaching graduate and undergraduate courses in structures and structural dynamics.

1984, Engineer, Israel Aircraft Industries, Lod, Israel, In charge of preparation of the strength manual.

1983-1984, Research Fellow, Department of Aeronautical Engineering, Technion, Haifa, Israel  
Work involved research in structures and structural dynamics and teaching undergraduate courses

1979-1983, Instructor, Department of Aeronautical Engineering, Technion, Haifa, Israel, Research and teaching undergraduate courses in the field of structures and structural dynamics, teaching structural laboratories.

1973-1978, Engineer, Structures Design Institute, Leningrad, Russia, Main activity: design of industrial steel structures.

**Professional Societies:**

American Institute of Aeronautics and Astronautics, Associate Fellow

American Society of Mechanical Engineers, Fellow. Service on the following committees:

Structures and Materials (Aerospace Division), 1990-present;

Composite Structures (Applied Mechanics Division), 1991-present;

Design and Analysis (Pressure Vessels and Piping Division), 1991-present.

American Society of Civil Engineers, 1995-96., Member of the Control Group of the Committee for Advanced Composites (Aerospace Division).

International Community for Composites Engineering (ICCE), 1994-present.

American Society for Composites (2002)

Society of Naval Architects and Marine Engineers.

**Teaching Experience:**

Technion, Haifa, Israel (1979-82)

Theory of Vibration

Stability of Structures

Probabilistic Methods in the Theory of Structures

Aeronautical Laboratories (Three different courses)

These courses were taught when V. Birman was an Instructor at the Department of Aeronautical Engineering and worked on his Ph.D. thesis. Dr. Birman taught Aeronautical Laboratories without any participation of senior faculty. Three other courses were arranged so that a senior faculty taught theoretical material (one meeting a week) and V. Birman taught practical exercises (one meeting a week). All courses listed above were undergraduate.

University of New Orleans (1984-88)

Theory of Vibration

Ship and Offshore Structures

Mechanics of Materials

Dynamics of Ship and Offshore Structures

Ship and Offshore Structures 2 (Actually Plasticity and Fracture) (\*)

Special Topics in Naval Architecture (Graduate Course)

Composite Structures (\*) (Graduate Course)

Advanced Vibrations (\*) (Graduate Course)

Theory of Stability (\*)

Advanced Mechanics of Materials

(\*) Courses introduced by V. Birman into curriculum

Dr. Birman was responsible for a development and teaching of structural courses at the new School of Naval Architecture and Marine Engineering at the University of New Orleans. He introduced both graduate and undergraduate courses into the curriculum.

Missouri University of Science and Technology (1989-present)

Graduate courses:

Vibrations I. This class was also developed and taught by Internet (2005)

Advanced Vibrations

Introduction to Continuum Mechanics

Introduction to Solid Mechanics

Mechanics of Composite Materials I

Mechanics of Composite Materials II

Mechanics of Laminated Composite Structures

Developed and taught by Internet in 2002

Theory of Stability I. This class was also developed and taught by Internet (2001)

Theory of Shells

Thermal Stresses I

Finite Element Approximation I - An Introduction

Theory of Plates. This class was also developed and taught by Internet (2002)

Fatigue Analysis

Fracture Mechanics

Undergraduate courses:

Linear Systems in Mechanical Engineering

Machine Dynamics

**Refereed Papers in Archival Journals and Book Chapters:**

Many, many papers, invited lectures, reports listed on the website:

[http://eec.mst.edu/about/facstaff\\_birman.html](http://eec.mst.edu/about/facstaff_birman.html)

**Associate Editor of Applied Mechanics Reviews, (2000-present).**

**Co-editor of the following books:**

Buckling of Structures, ASME, New York, 1989.

Thermal Effects on Structures and Materials, ASME, New York, 1990.

Topics in Composite Materials and Structures, ASME, New York, 1992.

Composite Materials and Structures, ASME, New York, 1993.

Analysis and Design Issues for Modern Aerospace Vehicles, ASME, New York, 1997.

Mechanics of Sandwich Structures, ASME, New York, 2000.

Contemporary Research in Engineering Mechanics, ASME New York, 2001.