



## **Professor I. Eugen Boros, Dipl. Ing., M.A.Sc., Ph.D., P.Eng**

See:

<http://www.rmc.ca/aca/me-gm/per/boros-pub-fra.asp>

<http://www.rmc.ca/aca/me-gm/per/boros-ie-eng.asp>

Professeur Agrégé  
Département de génie mécanique et génie aérospatial  
Collège Militaire Royal du Canada

### **Sommaire de la carrière:**

#### **Diplômes**

1975 - Ph.D.

1970 - M.A.Sc.

1967 - Dipl. Ing.

#### **Expérience industrielle**

1978-1984 - Engineering Consultant and Partner, Boros Bros. & Associates. Engineering and Architectural design. Investigation of structural and mechanical failures; fatigue testing of Composite Materials.

1974-1977 - Structural Engineer, Bechtel Canada Ltd., Toronto, Ontario. Structural design in the Mining and Metals Division and Test Engineer in the Pipeline Division.

1968-1969 - Civil Engineer, Buro Dr. V. Stehno, Vienna, Austria. Structural design of 10 to 20 stories reinforced concrete apartment buildings.

1967-1968 - Civil Engineer in Training, Construction Enterprise Pitesti, Romania. Construction site supervision of the polyethylene plant, a reinforced concrete structure.

## **Cours enseignés actuels et récents**

### **Cours enseignés - CMR:**

ME531 Stress Analysis of Composite Materials

ME533 Applied Elasticity

AEE431 Aerospace Structural Design and Stress Analysis

MEE431 / GMF431 Stress Analysis / Analyse des contraintes

MEE331 / GMF331 Strength of Materials / Résistance des matériaux

MEE301 / GMF301 Machine Design / Éléments des machines

MEE315 Fluid Mechanics

AMS / LFTSC Vehicle Mobility - Wheeled and Tracked Vehicles

AERE Stress Analysis and Composite Materials

### **Laboratoires à des fins de recherche et d'enseignement:**

Autoclave de matériau composite avancé

Essai balistique d'armure en céramique / composé

### **Distinctions et prix:**

CRAD Research Grants, 1980 - 1990

NRC Scholarships, 1971 - 1974

NRC Bursary, 1970 - 1971

NASA Fellowship, 1969 - 1970

Yearly Merit Bursaries, 1964 - 1967

### **Publications:**

#### **Articles publiés dans des revues avec arbitrage:**

H.S. Benabdallah and I.E. Boros, "FEM Analysis of Axisymmetric Indentation of Layer Bonded to a Rigid Foundation", Transactions of the Canadian Society for Mechanical Engineering, Vol. 22, No. 4A, pp. 379-396, 1998.

H.S. Benabdallah and I.E. Boros, "Finite Element Analysis of The Indentation of Thick Coatings by a Cylindrical Indenter", Transactions of the Canadian Society for Mechanical Engineering, Vol. 20, No. 3, pp. 217-232, 1996.

B. Budiansky, editor "Buckling of Structures", Springer-Verlag, 1976.

#### **Compte-rendus de conférences**

H.S. Benabdallah and I.E. Boros, "Finite Element Analysis of The Indentation of Thick Coatings by Spherical and Cylindrical Indenters", Proceedings of the First Canadian Conference on Nonlinear Solid Mechanics, Victoria, BC, June 1999.

A.B. Howard and I.E. Boros, "Survey of Machine Design Courses for Mechanical Engineers", Proceedings of the American Society for Engineering Education/Canadian Conference on Engineering Education, Edmonton, Alberta, June 1994.

I.E. Boros and R.H. Vaivads, "Design and Construction of a Research Autoclave", Proceedings of the Canadian Association for Composite Structures and Materials Conference, 2nd International Conference, Ottawa, Ontario, September 1993.

I.E. Boros, "Recent Developments in the Buckling of Short Stringer Stiffened Shells subject to Combined Loading: Failure Analysis: Techniques and Applications", Proceedings of the First International Conference on Failure Analysis (ICFA), sponsored by ASM International, Montréal, Quebec, July 1991.

I.E. Boros and R.H. Vaivads, "Further Results on the Buckling of an Imperfect Stringer Stiffened Shell subject to Combined Loading", Proceedings of the CSME Mechanical Engineering Forum, Toronto, Ontario, June 1990.

I.E. Boros and R.H. Vaivads, "Further Results on the Buckling of Short Stringer Stiffened Shells subject to Combined Loading", Proceedings of the 20th Midwestern Mechanics Conference, Purdue Univ., W. Lafayette, Indiana, August 1987.

I.E. Boros, "Nondestructive Buckling of a Short Imperfect Stringer Stiffened Shell Subject to Combined Loading", Proceedings of the 13th Southeastern Conference on Theoretical and Applied Mechanics (SECTAM XIII), Columbia, South Carolina, April 1986.

I.E. Boros, "Buckling of Short Stringer Stiffened Shells subject to Axial Compression and External Hydrostatic Pressure", Proceedings of the AIAA/ASME/ASCE/AHS 26th Structures, Structural Dynamics and Materials Conference, Orlando, Florida, April 1985.

I.E. Boros and J.P.D. Vachon, "Membrane Stress Distribution around a Cut Out in Cylindrical Shells subject to Torsion", Proceedings of the Twelfth Southeastern Conference on Theoretical and Applied Mechanics, (SECTAM XII), Auburn University, Alabama, May 1984.

I.E. Boros and R.C. Tennyson, "Some Design Considerations for Imperfect Stiffened Cylinders under Various Loading Conditions", Proceedings of the AIAA/ASME/SAE 17th Structures, Structural Dynamics and Materials Conference, Valley Forge, Pennsylvania, May 1976.

### **Comptes rendus de conférence et de symposium**

R.J. Ferguson and I.E. Boros, "Teaching Composite Materials with TK Solver", Proceedings of the Eighth Canadian Conference on Engineering Education, Québec, May 1992.

I.E. Boros and R.J. Ferguson, "Using Self-Correcting Assignments to Teach Stress Analysis", Proceedings of the Eighth Canadian Conference on Engineering Education, Québec, May 1992.

I.E. Boros and R.H. Vaivads, "Further Results on the Buckling of a Near-Perfect Stringer Stiffened Shell subject to Axial Compression and External Hydrostatic Pressure", Presented at the 12th Canadian Congress of Applied Mechanics, Ottawa, Ontario, May 1989.

Also Proceedings of the 15th International Congress of the American Romanian Academy (ARA), École Polytechnique, Montréal, Que., June 1990.

I.E. Boros, "Distribution of Membrane Stresses around a Cut Out in Cylindrical Shells under Axial Compression", Proceedings of the Ninth Canadian Congress of Applied Mechanics, Saskatoon, Sask., June 1983.

I.E. Boros, "Membrane Stress Distribution around a Hole in Cylinders under Axial Compression", Proceedings of the Eighth Canadian Congress of Applied Mechanics, Moncton, N.B., June 1981.

### **Diplômes:**

I.E. Boros, "Effect of Shape Imperfections on the Buckling of Stiffened Cylinders", PhD Thesis, University of Toronto, Institute for Aerospace Studies (UTIAS), May 1975.

Also UTIAS Report No. 200, May 1975.

I.E. Boros, "An Experimental Photoelastic Analysis of the Stress Distribution around Circular Cutouts in Cylindrical Shells under Axial Compression", MASc Thesis, University of Toronto, Institute for Aerospace Studies (UTIAS), June 1970.

I.E. Boros, "Design of an Airport Terminal: A Paraboloid Hyperbolic Structure", Diploma de Inginer Thesis, Polytechnic Inst., Univ. of Cluj, Romania, June 1967.