Dr. LIVIU LIBRESCU

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U. S. CITIZEN

PRESENT POSITION:

- Professor of Engineering Science and Mechanics, Virginia Polytechnic Institute and State University, Blacksburg, VA 24061-0219, USA.
- Affiliate Professor of Aerospace and Ocean Engineering

EDUCATION:

B.S.,	1952	Polytechnic Institute of Bucharest, Romania, Aeronautical Engineer
M.A.Sc	., 1953	Polytechnic Institute, Faculty of Aeronautical Engineering, Bucharest
Ph.D	1969	Institute of Fluid Mechanics, Academy of Sciences of Romania

RESEARCH INTERESTS:

- Aeroelasticity;
- Unsteady aerodynamics;
- Unsteady aerodynamics of ionized and chemically reacting flows;
- Aeroelastic stability of panels and lifting surfaces in supersonic ionized and chemically-reacting gas flows;
- Aeroelastic optimization;
- Aeroelastic tailoring and aeroelastic feedback control;
- Aeronautical structures;
- Theory and behavior of shells/plates type anisotropic composite structures;
- Foundation of refined theories of laminated composite and sandwich shells and plates;
- Dynamic instability of elastic and viscoelastic structures;
- Postbuckling and imperfection sensitivity of composite structures;
- Smart material structures;
- Multifunctional material structures featuring electro-magneto-elastic properties;
- Functionally graded material structures of thin/thick walled-beam type;

EXPERIENCE:

- 1953-1965 Research Worker, Institute of Applied Mechanics of the Academy of Science of Romania Bucharest, Romania
- 1965-1970 Principal Research Worker, Institute of Fluid Mechanics of the Academy of Science of Romania, Aeromechanics Division, Bucharest, Romania
- 1970-1975 Principal Research Worker, Institute of Fluid Mechanics and Aerospace Constructions, Bucharest, Romania
- 1979-1986 Professor of Aeronautical and Mechanical Engineering, Tel-Aviv University, Tel-Aviv, Israel
- 1985-1986 Visiting Professor, Virginia Polytechnic Institute and State University, Engineering Science and Mechanics Department, Blacksburg, Virginia
- June 1986- Professor, Virginia Polytechnic Institute and State University, Engineering Science and Mechanics Department, Blacksburg, Virginia

HONORS & AWARDS:

- Laureate of the prize ``Traian Vuia" of the Romanian Academy of Science for the year 1972
- The 1999 Dean's Award for Excellence in Research, VPI&SU.
- Selected as a Foreign Fellow of the Academy of Engineering of Armenia, 1999.
- Honorary Doctorate Recipient of the Title of Doctor Honors Causa of the Polytechnic of Bucharest, Romania, 2000.
- Academician of the Academy of Sciences of the Shipbuilding of Ukraine, 2000.
- Selected as a member of the Board of Experts of the Italian Ministry of Education, University and Scientific Research.
- Awarded a diploma by the International Congress on Thermal Stresses, Vienna, Austria, May-June, 2005, "In recognition for the achievements in the field of Thermal Stresses, for organizing the Fifth International Congress of Thermal Stresses, and for the contributions to the Journal of Thermal Stresses, as an author and as a member of the Editorial Board."
- Awarded a diploma by the ASME, 20th Biennal Conference on Mechanical Vibration and Noise, Long Beach, CA, September 24-28, 2005 expressing the deep appreciation for the valuable services in advancing the engineering profession."
- Frank J. Maher Award for Excellence in Engineering Education, 2005
- Awarded a diploma by the 17th International Conference on Adaptive Structures and Technology for the paper "Robust Aeroelastic Control of Composite Aircraft Wings in Incompressible Flow" by Yoon, G. C., Na, S. S., Librescu, L., and Baek, S. C., Taiwan, ICAST 2006, October 13-17.

LISTING IN WHO'S WHO:

- Who's Who in America
- Who's Who in Engineering
- Who's Who in the World
- Who's Who in Science and Engineering,

ORGANIZER AND CONFERENCE CHAIR

5th International Congress on Thermal Stresses and related Topics, Blacksburg, VA, June 8-11, 2003.

VISITING APPOINTMENTS:

- 1. Institute for Computer Applications, Stuttgart University, W. Germany, April 1989.
- 2. Institut for Static and Dynamic der Luft-und Raumfahrt Konstruktionen, Universitat Stuttgart, June 1996, (Germany)
- 3. Politecnico di Torino, Dipartimento di Ingegneria Aeronautica e Spaziale, Torino, June 1996, (Italy)
- 4. Terza Universita Degli Studi Di Roma, Dipartimento di Scienti dell' Ingegeneria Civile, July 1996 (Italy).
- 5. Institut fúr Luft und Raumfahrt, Stuttgart, August 1997, (Germany).
- 6. Politecnico di Torino, Dipartimento di Ingegneria Aeronautica e Spaziale, July, 1997. (Italy)
- 7. Johannes Kepler, University of Mechatronics, Linz, August 1997 (Austria).
- 8. Politecnico di Torino, Department of Aeronautics and Aerospace, Torino, June 1998, Italy.
- 9. Universita-degli Studi di Roma ``La Sapienza," Aerospace Department, June 2000, Roma, Italy.
- 10. Korea Advanced Institute of Science and Technology, Aerospace Engineering Department, and Chungnam University Daejon, Korea, June 2001.
- 11. Distinguished Visiting Professor, Universita degli Studi di Roma "La Sapienza," Aerospace Department, Italy, June 2006.

PUBLICATIONS

Dr. Librescu's papers have been cited over 1000 times in the technical literature.

• Published Monographs

- 1. Librescu, L., *Statics and Kinetics of Anisotropic Shells and Plate-Type Structures*, Publishing House of the Romanian Academy of Science, 290 pp., 1969 (in Romanian).
- 2. Librescu, L., *Elastostatics and Kinetics of Anisotropic and Heterogeneous Shell-Type Structures*, Noordhoff International Publishing, Leyden, Netherlands, 598, pp., 1975.
- 3. G. Cederbaum, I. Elishakoff, J. Aboudi and Librescu, L., *Random Vibrations and Reliability of Composite Structures*, Technomic Publishing Company, Inc., Lancaster-Basel, USA, 1992, 191 pp.
- 4. Librescu, L. and Song, O., *Composite Thin-Walled Beams: Theory and Application*, Springer, 615 pp., 2005.

• Published Monographic Works

 Librescu, L., "Recent Contributions Concerning the Flutter Problem of Elastic Thin Bodies in an Electrically Conducting Gas Flow, a Magnetic Field Being Present," *Solid Mechanics Archives*, 2, 1, pp. 1-108, 1977 (Canada-The Netherlands).

• Published Chapters in Books

- 1. Librescu, L., 'On the Thermoelastic Problem of Shells Treated by Eliminating the Love-Kirchhoff Hypothesis," in *Non-Classical Shell Problems*, (Ed. W. Nowacki), pp. 337-349, North Holland Publ. Co., Amsterdam, 1964.
- Librescu, L., ``On the Non-Linear Theory of Anisotropic Multilayered Shells," (in Russian) published in the volume *Selected Topics in Applied Mechanics*, Moscow, pp. 453-466, 1974, (Ed. L. I. Sedov).
- Librescu, L., ``On the Effect of Physical Non-Linearities in the Aeroelastic Stability Problem of Supersonic Panels," *Physical Non-linearities in Structural Analysis*, (Eds. J. Hult and J. Lemaitre), pp. 156-159, Springer-Verlag, Berlin, Heidelberg, New York, 1981.
- Librescu, L., "Unsteady Aerodynamics of Chemically Reacting Flows Past Oscillating Thin Bodies," Dynamics of Flows and Reactive Systems (Eds. R. Bowen, N. Manson, A.K. Oppenheim and R. I. Soloukhin) Progress in Astronautics and Aeronautics, Vol. 95, pp. 593-609, 1985.
- Librescu, L., ``Unsteady Magnetoaerodynamic Supersonic Flows Past Oscillating Thin Bodies and Lifting Surfaces, in Single- and Multi-Phase Flows in an Electromagnetic Field Energy, Metallurgical and Solar Applications," (Eds. H. Branover, P.S. Lykoudis and M. Mond), *Progress in Astronautics and Aeronautics*, Vol. 100, AIAA, Inc., 1985.
- Librescu, L., ``An Exact Formulation of the Unsteady Aerodynamic Theory of Lifting Surfaces Undergoing Arbitrary Small Motions in a Supersonic Flow Field," (Ed. W. Breitbach) Second International Symposium on Aeroelasticity and Structural Dynamics, Aachen, Germany, 1-3 April, pp. 163-168, DGLR-Bericht 85-02, 1985.
- Librescu, L. and Beiner, L., "Recent Results on the Weight Minimization of Panels with a Flutter Speed Constraint," (Ed. W. Breitbach) Second International Symposium on Aeroelasticity and Structural Dynamics, Aachen, Germany, 1-3 April, pp. 441-450, 1985.
- Librescu, L., "Unsteady Supersonic Aerodynamics of Planar Lifting Surfaces Accounting for Arbitrary Time-Dependent Motion," R. L. Bisplinghoff Memorial Symposium on Recent Trends in Aeroelasticity, Structures and Structural Dynamics, Gainesville, Florida, 6-7 February, 1986 (Ed.P. Hajela)
- Librescu, L. and Schmidt, R., "Higher-Order Moderate Rotation Theories of Elastic Anisotropic Plates," (Ed. W. Pietraszkiewicz) *Finite Rotations in Structural Mechanics*, Lecture Notes in Engineering Springer-Verlag, pp. 158-174, 1986.

- Librescu, L., and Reddy, J.N., "A Critical Evaluation and Generalization of the Theory of Anisotropic Laminated Composite Plates," *American Society for Composites*, Dayton, Ohio, October, Technomic Publishing Company, Lancaster-Basel, pp. 472-489, 1986.
- 11. Librescu, L., "Unsteady Supersonic Aerodynamic of Planar Lifting Surfaces Accounting for Arbitrary Time-Dependent Motion," *Recent Trends in Aeroelasticity, Structures and Structural Dynamics*, (Ed. Hajela, P.), University of Florida Press, Gainesville, pp. 173-186, 1987.
- Librescu, L. and Schmidt, R., "Geometrically Nonlinear Theories for Laminated Composite Plates Treated in the Framework of the Small Strain and Moderate Rotation Concept," *Refined Dynamical Theories of Beams, Plates and Shells and Their Applications*, (Eds. I. Elishakoff and H. Irretier) Lecture Notes in Engineering, pp. 140-150, Springer-Verlag, 1987.
- Librescu, L. and Reddy, J.N., ``A General Transverse Shear Deformation Theory of Anisotropic Plates," *Refined Dynamical Theories of Beam, Plates and Shells and Their Applications*, (Eds. I. Elishakoff and H. Irretier) Lecture Notes in Engineering, pp. 32-43, Springer-Verlag, 1987.
- Chandiramani, N.K., Librescu, L. and Aboudi, J., "Dynamic Stability of Viscoelastic Shear Deformable Plates," 25th Annual Technical Meeting, Society of Engineering Science, June 20-22, University of California, Berkeley, California, Preprint (Ed. S. L. Koh), 1988.
- Librescu, L., Khdeir, A.A. and Frederick, D., "Free Vibration and Buckling of Cross-Ply Laminated Shear Deformable Shallow Shell-Type Panels," *Proceedings of the Third International Conference on Recent Advances in Structural Dynamics*, 18-22 July, University of Southampton, England, pp. 229-239, (Eds. M. Petit, H. F. Wolfe, and C. Mei), 1988.
- Cederbaum, G., Librescu, L. and Elishakoff, I., "Response of Laminated Composite Plates to Non-Stationary Random Excitation," *Proceedings of the Third International Conference on Recent Advances in Structural Dynamics*, 18-22 July, University of Southampton, England, pp. 199-209, (Eds. M. Petit, H. F. Wolfe, and C. Mei), 1988.
- Cederbaum, G., Elishakoff, I. and Librescu, L., "Reliability of Laminated Plates," Vibration and Behavior of Composite Structures, AD-Vol. 14, (Eds. C. Mei, H. F. Wolfe and I. Elishakoff), ASME, pp. 11-13, 1989.
- Chang, M.-Y. and Librescu, L., "Active Vibration Control of Composite Laminated Beams Subjected to a Traveling Oscillating Load," 26th Annual Meeting, Society of Engineering Science, September 18-20, The University of Michigan, Ann Arbor, preprint (Ed. S. L. Koh), 1989.
- 19. Librescu, L. and Song, O., "Static Aeroelastic Tailoring of Composite Aircraft Wings Modelled as Thin-Walled Beam Structures," Fifth Japan-U.S. Conference on Composite Materials, Tokyo, Japan, June 24-27, 1990. "Achievement in Composites in Japan and the USA" (Ed. A. Kobayashi).
- Librescu, L. and Chandiramani, N.K., "Aeroelastic Tailoring of Laminated Composite Shear Deformable Flat Panels Exposed to a Supersonic Coplanar Gas Flow of Arbitrary Direction," Fifth Japan-U.S. Conference on Composite Materials, Tokyo, Japan, June 24-27, 1990. . "Achievement in Composites in Japan and the USA" (Ed. A. Kobayashi.)
- Chandiramani, N.K. and Librescu, L., "Instability of Fiber-Reinforced Viscoelastic Composite Plates to In-Plane Compressive Loads," in *Developments in Theoretical and Applied Mechanics*, Vol. XV, pp. 813-820, (Eds. S.V. Hanagud, M.P. Kamat and C.E. Weng,) Georgia Institute of Technology, 1990.
- Librescu, L. and Schmidt, R., "New Developments Concerning the Geometrically Nonlinear Theory of Shear Deformable Anisotropic Laminated Composite Flat Panels Accounting for Interlamina Continuity Conditions," In *Developments in Theoretical and Applied Mechanics*, Vol. XV, pp. 287-296, (Eds. S.V. Hanagud, M.P. Kamat and C.E. Weng), Georgia Institute of Technology, 1990.
- Stein, M., Sydow, P.D. and Librescu, L., "Postbuckling of Long Thick Plates in Compression Including Higher Order Transverse Shearing Effects," in *Advances in the Theory of Plates and Shells*, (Eds. G.Z. Voyiadjis and S. Karamanlides), Elsevier Science Publ., B.V. Amsterdam, pp. 63-86, 1990.
- Librescu, L. and Chang, M.-Y., ``Imperfection Sensitivity and Postbuckling Behavior of Laminated Composite Curved Panels," Impact and Buckling of Structures, AD-Vol. 40, AMD-Vol. 114, 1990, pp. 29-39. ASME (Eds. D. Hui and I. Elishakof), 1990.

- Librescu, L. and Souza, M.A., "Thermal Postbuckling of Shear-Deformable Laminated Composite Flat Panels," Thermal Effects on Structure and Materials, PVP Vol. 203, AMD-Vol. 110, ASME (Eds V. Birman and D. Hui), pp. 21-28, 1990.
- Librescu, L. and Song, O., "Static Aeroelastic Tailoring of Composite Aircraft Wings Modelled as Thin-Walled Beam Structures," in *Achievements in Composites in Japan and the United States*, (Ed. A. Kobayashi) Fifth Japan-U.S. Conference on Composite Materials, Publ. Kokon Shoin Co., Ltd., Tokyo, Japan, pp. 141-149, 1990.
- Nosier, A., Librescu, L. and Frederick, D., "The Effects of Time-Dependent Excitation on the Oscillatory Motion of Viscously Damped Laminated Composite Flat Panels," *Advances in the Theory of Plates and Shells*, (Eds. G. Z. Voyiadjis and D. Karamanlidis), Elsevier Science Publishers, pp. 249-268, 1990.
- Librescu, L., "Analytical Modeling of the Unsteady Theory of Lifting Surfaces Undergoing Arbitrary Small Motions in a Supersonic Flow Field," *High Speed Aerodynamics*, pp. 27-41, II, (Ed. A. Nastase), RWTH-Aachen, Mainz, Printing House, Aachen, 1990.
- 29. Librescu, L. and Chang, M.Y., "New Results on Imperfection Sensitivity and Postbuckling Behavior of Laminated Composite Curved Panels," The Second Pan American Congress of Applied Mechanics (PACAM II), Chile, January 2-4, 1991. (Ed. Kittl, Pablo A. and Mook, Dean T.)
- Karpouzian, G. and Librescu, L., "Modeling and Aeroelastic Formulation of Composite Anisotropic Wing Structures Including the Transverse Shear Flexibility and Warping Restraint Effects," The Second Pan American Congress of Applied Mechanics (PACAM II), Chile, January 2-4, 1991. (Ed. Kittl, Pablo A. and Mook, Dean T.)
- Librescu, L. and Song, O., "Behavior of Thin-Walled Beams Made of Advanced Composite Materials and Incorporating Non-Classical Effects," The Second Pan American Congress of Applied Mechanics (PACAM II), Chile, January 2-4, 1991. (Ed. Kittl, Pablo A. and Mook, Dean T.)
- Librescu, L. and Souza, M., "Thermal Post-Buckling Behavior of Geometrically Imperfect Shear-Deformable Laminated Composite Flat Panels," In *Mechanics of Composites at Elevated and Cryogenic Temperatures*, (Eds. S.N. Singhal, W.F. Jones and C.T. Herakovich), AMD-Vol. 118, ASME, pp. 305-321, 1991.
- 33. Song, O. and Librescu, L., "Refined Theory and Behavior of Thin-Walled Beams Made of Advanced Composite Materials and Incorporating Non-Classical Effects", in *Recent Advances in StructuralMechanics-1991*, (Eds. H. H. Chung and Y. W. Kwon), PVP Vol. 225 NE Vol. 7, ASME, pp. 111-119, 1991.
- 34. Librescu, L. and Chang, M.Y., "Frequency-Compressive Load Interaction in the Pre- and Postbuckling Ranges of Geometrically Imperfect Doubly Curved Composite Shallow Shells," *Proceedings of the American Society for Composites Sixth Technical Conference*, October, Albany, New York, pp. 693-702, and in *Recent Advances in Structural Mechanics-1991*, (Eds. H.H. Chung and Y.W. Kwon), PVP Vol. 225/NE Vol. 7, ASME, pp. 1-4, 1991.
- Song, O., Librescu, L. and Rogers, C.A., "Vibrational Behavior of Adaptive Aircraft Wing Structures Modelled as Composite Thin-Walled Beams," in *Smart Structures and Materials*, (Eds. G. K. Haritos and A.V. Srinivasan), AD-Vol. 24 AMD- Vol. 123, ASME, pp. 157-166, 1992.
- Chang, M.Y. and Librescu, ``Further Results on Postbuckling Behavior of Laminated Composite Shear-Deformable Flat and Curved Panels," *Recent Advances in Structural Mechanics -1992*, (Eds. Y. W. Kwon and H. H. Chung), PVP Vol.248, NE-Vol. 10, ASME, pp. 49-55, 1992.
- Librescu, L., Rogers, C. and Song, O., "Static Aeroelasticity and Free Vibration Behavior of Adaptive Structures Modelled as Thin-Walled Beams," *Second Joint Japan U.S. Conference on Adaptive Structures*, (Eds. Y. Matsuzaki and B. K. Wada), November 1, Nagoya, Japan, Technomic Publ. Co., Inc., Lancaster-Basel, pp. 461-478, 1992.
- Song, O. and Librescu, L., "Free-Vibration of Composite Rotating Helicopter Blades Modelled as Thin-Walled Beams," *Proceedings of the American Society for Composites, Seventh Technical Conference*, October 13-15, Technomic Publ. Co. Inc., Lancaster-Basel, pp. 636-649, 1992.
- Karpouzian, G. and Librescu, L., "A Refined Structural Model of Advanced Composite Aircraft Wings and Its Use in Aeroelastic Analyses," in *Non-Classical Problems of the Theory and Behavior of Structures Exposed to Complex Environmental Conditions*, AMD-Vol. 164, ASME, (Ed. L. Librescu), pp. 83-94, 1993.

- Librescu, L., Lin, W., Nemeth, M.P. and Starnes, J.H., Jr., 'Classical Versus Non-Classical Postbuckling Behavior of Laminated Composite Panels Under Complex Loading Conditions," in Non-Classical Problems of the Theory and Behavior of Structures Exposed to Complex Environmental Conditions, AMD-Vol. 164, ASME, (Ed. L. Librescu,) pp. 169-182, 1993.
- Song, O. and Librescu, L., "Dynamic Refined Theory of Thin-Walled Beams of Open Cross-Sections," in AD-Vol. 37/AMD-Vol. 179, *American Society of Mechanical Engineers*, (Eds. C.W. Bert, V. Birman and D. Hui.), pp. 223-240, 1993.
- Song, O. and Librescu, L., "A Refined Dynamic Structural Model of Rotating Helicopter Blades: Theory and Behavior," in PVP. Vol. 269/NE-Vol. 13, (Eds. H. H. Chung and Y.W. Kwon), *Recent Advances in Structural Mechanics*, American Society of Mechanical Engineers, pp. 15-20, 1993.
- Song, O. and Librescu, L., "Vibrational Behavior of Rotating Helicopter Blades Incorporating Adaptive Capabilities," in *Smart Structures and Intelligent Systems*, (Ed. N.W. Hagood and G.J. Knowles), The International Society for Optical Engineering, Vol. 1917, pp. 354-367, 1993.
- Librescu, L. and Chang, M.Y., "Postbuckling Response of Doubly-Curved Panels Under Complex Loading Conditions," Space 94: Fourth International Conference on Engineering, Construction and Operations in Space, Vol. 1, American Society of Civil Engineers (ASCE), New York, (Eds. R.G. Galloway and S. Lokaj), pp. 116-125, Albuquerque, New Mexico, February 26-March 3, 1994.
- Song, O. and Librescu, L., "Adaptive Vibrational Control of Rotating Helicopter Blades Carrying a Tip Mass," *Smart Structures and Intelligent Structures*, SPIE - The International Society for Optical Engineering, (Ed. N. W. Hagood,) SPIE Vol. 2190, pp. 52-63., 1994.
- Karpouzian, G. and Librescu, L., "Flutter Solutions for Cantilevered Wing Structures Made of Advanced Composite Materials," *First Industry/Academy Symposium on Research for Future Supersonic and Hypersonic Vehicles*, Greensboro, NC, December 1994, Vol. 1 (Eds. A. Homaifar and J.S. Kelley, Jr.), pp. 189-294, TSI Press Series, Albuquerque, New Mexico, 1994.
- 47. Librescu, L., Lin, W., Nemeth, M.P. and Starnes, Jr., J.H., "Postbuckling of Shear-Deformable Laminated Curved Shallow Panels Subjected to Combined and Mechanical Loads," *First Industry/Academy Symposium on Research for Future Supersonic and Hypersonic Vehicles*, Greensboro, NC, December 1994, Vol. 1 (Eds. A. Homaifar and J.S. Kelley, Jr.), pp. 372-377, TSI Press Series, Albuquerque, New Mexico, 1994.
- Librescu, L., Lin, W., Nemeth, M.P. and Starnes, Jr., J.H., "Effects of Tangential Edge Constraints on the Thermal Postbuckling of Flat and Curved Panels Subjected to Thermal and Mechanical Loads," *Buckling and Postbuckling of Composite Structures*, AD-Vol. 41, PVP-Vol. 293,(Ed. A.K. Noor), ASME, pp. 55-69, 1994.
- Librescu, L., Meirovitch, L. and Na, S.S., "Control of Oscillatory Motions of Cantilevers via Structural Tailoring and Adaptive Materials Technology" Tenth VPI & SU Symposium "Structural Dynamics and Control" Held in Blacksburg, VA, May 8-10, (Ed. L. Meirovitch) pp. 251-261, 1995.
- Bhaskar, K. and Librescu, L., 'Flexural Buckling of Extension-Twist Coupled Thin-Walled Beams," *Recent Advances in Solids and Structures-1995*, PVP-Vol. 321, NE-Vol. 18, (Eds. H.H. Chung and Y.W. Kwon), ASME, New York, pp. 185-192, 1995.
- Librescu, L. and Lin, W., "Vibration of Laminated Shear Deformable Curved Panels Loaded in the Pre/Postbuckling Ranges and Resting on a Nonlinear Elastic Foundation," *Recent Advances in Solids and Structures-1995*, PVP-Vol. 321, NE-Vol. 18, (Eds. H .H. Chung and Y. W. Kwon), ASME, New York, pp. 173-184, 1995.
- Karpouzian, L. and Librescu, L., "Non-Classical Effects on the Flutter Instability of Swept Aircraft Wings in Various Flight speed Regimes," in *Dynamic Response and Behavior of Composites*, AD-Vol. 46, (Eds. C. T. Sun, B.V. Sankar and Y.D.S. Rajapakse), ASME, New York, pp. 65-75, 1996.
- Librescu, L., Meirovitch, L. and Na, S., "Vibration Control of Cantilevers via Smart Materials Technology," Mathematics and Control in Intelligent Structures, Proceeding, SPIE, *The International Society for Optical Engineers*, (Eds. V. V. Varadan and J. Chandra), Vol. 2715, pp. 378-386, 1996.
- 54. Song, O. and Librescu, L., "Implications of Anisotropy and Structural Couplings on Dynamics and Instability of Spinning Thin-Walled Beams" in *Recent Advances in Solids/Structures and*

Application of Metallic Materials, (Eds. Y.W. Kwon, D.C. Davis and H.H. Chung), P.V.P.-Vol. 342 M.D. - Vol. 72 ASME, New York 10017, pp. 81-88, 1996.

- 55. Hause, T., Librescu, L. and Camarda, C.J., "Postbuckling of Anisotropic Flat and Doubly-Curved Sandwich Panels Under Complex Loading Conditions," *11th DOD/NASA/FAA Conference on Fibrous Composites in Structural Design*, Flight Dynamics Directorate, Wright Laboratory, Air Force Material Command and Wright-Patterson-AFB Ohio 45433-7562, Vol. 1, WL-TR-97-3008 IV-41-IV-60, 1996.
- Karpouzian, G. and Librescu, L., "Flutter Control of Straight/Swept Aircraft Wings Using Combined Feedback Control Laws" *ASME Aerospace Division* ASME International Mechanical Engineering Congress and Exposition, AD-Vol. 2 (Eds. J.C.I. Chang, J. Coulter, D. Brei, D. Martinez, W. Ng and P.P. Friedmann), pp. 145-152, 1996.
- Librescu, L. and Lin, W., "Thermomechanical Postbuckling of Plates and Shells Incorporating Non-Classical Effects," *Thermal Stresses IV*, (Ed. R.B. Hetnarski), Elsevier, Amsterdam, pp. 379-452, 1996.
- Na, S.S. and Librescu, L., "Integrated Passive and Adaptive Technologies to Composite Cantilevered Aircraft Wing Structure Control," Proceedings of the Third Asian-Pacific Conference on Computational Mechanics, 16-18, Sept. 1996, Seoul Korea *Computational Mechanics*, (Ed. C-K Choi, C-B Yun and D-G Lee), Vol. 2, pp. 1621-1626, 1996.
- Chang, M.Y. and Librescu, L., "Further Results on Postbuckling Behavior of Shear Deformable Plates and Shallow Shells Accounting for Initial Geometric Imperfections," *Proceedings of the First World Congress of Nonlinear Analysis*, (Ed. E. V. Lakshmitkanthan), Walter de Gruyter, Berlin, New York, pp. 723-734, 1996.
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- 62. Souza, M.A. and Librescu, L., "New Results on Statics Dynamics of Orthogonally Reinforced Panels Under Thermomechanical Loading." in "Analysis and Design Issues for Modern Aerospace Vehicles - 1997" AD-Vol. 55 (Ed. G.J. Simitses) pp. 107-118, 1997 International Mechanical Engineering Congress & Exposition, ASME International, November 16-21, 1997, Dallas, TX.
- 63. Icardi, U., Librescu, L. and Di Sciuva, M., ``Thermomechanical Response of Laminated Flat Panels Featuring Interlaminar Bonding Imperfections" in ``Analysis and Design Issues for Modern Aerospace Vehicles - 1997" AD-Vol. 55 (Ed. G.J. Simitses) pp. 197-214, 1997 International Mechanical Engineering Congress & Exposition, ASME International, November 16-21, 1997, Dallas, TX.
- 64. Gern, H.F. and Librescu, L., "Modeling and Aeroelasticity of Advanced Aircraft Wings Carrying External Stores." 4th International Symposium on Fluid- Structure Interaction, Aeroelasticity, Flow-Induced Vibration and Noise, AD-Vol. 53-3, (Eds. P. Friedmann and M.P. Paidoussis), pp. 185-195, 1997 International Mechanical Engineering Congress & Exposition, ASME International, November 16-21, 1997, Dallas, TX.
- 65. Carrera, E. and Librescu, L., ``FEM Approach of the Thermomechanical Postbuckling of Reinforced Flat Panels Including Transverse Shear Effect." in ``Recent Advances in Solids/Structures and Application of Metallic Materials - 1997" P.V.P. Vol. 369 (Ed. Y.W. Kwon), pp. 185-201, 1997 International Mechanical Engineering Congress & Exposition, ASME International, November 16- 21, 1997, Dallas, TX.
- 66. Song, O. and Librescu, L., "New Results on Vibration and Stability of Spinning Thin-Walled Beams." in "Recent Advances in Solids/Structures and Application of Metallic Materials 1997" P.V.P. Vol. 369 (Ed. Y.W. Kwon), pp. 141-154, 1997 International Mechanical Engineering Congress & Exposition, ASME International, November 16-21, 1997, Dallas, TX.
- 67. Na, S.S. and Librescu, L., "Oscillation Control via Smart Materials Technology of Cantilevered Thin-Walled Beams Under Dynamic Excitation: Actuator Location and Power Consumption

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• Published Discussions

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• The Referenced Literature where the Research Work was Published

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- 19. Quarterly Journal of Mechanics and Applied Mathematics;
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- 22. Acta Mechanics;
- 23. Zeitschrigt fur Angenandte Mathematik und Mechanik;
- 24. Composite Structures;
- 25. Int. Journal of Engr. Science;
- 26. Journal of the Acoustical Society of America; Journal of Structural Safety;
- 27. Journal of Aircraft; Thin-Walled Structures;
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- 29. International Journal of Fracture; Dynamics and Stability of Systems;
- 30. Journal of Intelligent Material Systems and Structures;
- 31. Composites Engineering;
- 32. Journal of Engineering Mathematics;
- 33. International Journal of Mech. Sci.;
- 34. Journal of Thermoplastic Composite Materials;
- 35. Journal of Spacecraft and Rockets;
- 36. Journal of Reliability Engineering & System Safety;
- 37. American Journal of Helicopter Society;
- 38. Sadhana, the Indian Acad. of Sciences;
- 39. Journal of Shock and Vibration;
- 40. International Journal of Impact Engineering;
- 41. Journal of Thermal Stresses;
- 42. La Recherche Aerospatiale;
- 43. Journal of Vibration and Control;
- 44. European Journal of Mechanics/Solids;
- 45. Aerospace Science and Technology;
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- 47. Journal of the Chinese Society of Mechanical Engineering;
- 48. Journal of Sandwich Structures and Materials;
- 49. Accademia delle Scienze di Torino (Italy);
- 50. Journal of Aerospace Engineering;
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CONFERENCES

• Invited Keynote/Plenary Lectures

- 1. Plenary Key Note Lecture to the Second International Conference on Composite Science and Technology, June 9-11, 1998 Durban, South Africa, "Recent Developments in the Modelling and Behavior of Advanced Sandwich Constructions" (L. Librescu).
- 2. Invited Plenary Lecture at the Session dedicated to the great Italian Scientist Professor Placido Cicala, Torino, June 25, 1998, Italia ``Aeroelastic Tailoring of Advanced Aircraft Wings Carrying External Stores," (L. Librescu and F. H. Gern).

- 3. Plenary Key Note Lecture to the Third European Conference on Structural Control, July 12-15, 2004, Vienna Austria. "Advances in the Linear/nonlinear Control of Aeroelastic Structural Systems," (L. Librescu and P. Marzocca)
- 4. Invited Plenary Lecture of the 6th International Congress of Thermal Stresses '05 May 26-29, 2005, Vienna, Austria. ``Thin-Walled Beams Used in Turbomachinery and Space Applications Made-Up of Functionally Graded Materials and Operating in a High Temperature Environment: Vibration and Instability," (L. Librescu, S-Y. Oh, and O. Song).
- 5. Invited Key Note Lecture at the 17th International Congress on Thermal Stresses, June 4-7, 2007, Taipei, Taiwan, "Joule Heating and its Implications on Crack Detection/Arrest in Electrically Conductive Circular Cylindrical Shells".(Z. Qin, L. Librescu and D. Hasanyan).

Invited Lectures and Seminars

- 1. ``The Constitutive Equations of the Physically Nonlinear Theory of Shells and Plates by Discarding Love-Kirchhoff Assumptions," National Conference of Applied Mechanics, Bucharest, June 1969.
- 2. "Supersonic Flutter of Orthotropic Heterogeneous Conical Thin Shells," The Session of the Commission of Astronautics of the Romanian Academy of Sciences, Bucharest, December 1973.
- 3. New Results on the Dynamic Problem of Anisotropic Sandwich Type Structures," The Session of the Academy of Sciences of Romania-Actual Problems of Mechanics, December 1972.
- 4. Aeromagnetoelasticity, A New Area of Scientific Interest," Technion-Israel Institute of Technology, Aeronautical Dept., Haifa, Israel, November 1978.
- 5. New Advances in the Theory of Anisotropic Laminated Shells and Plates," Tel-Aviv University, Israel, February 1979.
- 6. New Prospects for the Flutter Control of Lifting Surfaces Emerging in the Conditions of an Ionized Gas Flow," AFWAL/FIBR at Wright-Patterson AFB, OH, 16 Sept. 1985.
- 7. ``Magnetoaerodynamic Effects in the Supersonic Aeroelasticity of Lifting Surfaces and Thin Elastic Bodies," Virginia Polytechnic Institute & State University, May 29, 1986.
- Some Implications of the Ionization of the Gas Flow and of the Presence of an Ambient Magnetic Field on the Supersonic Flutter of 2-D Lifting Surfaces," NASA Langley, Research Center, Hampton, VA, July 17, 1986.
- 9. ``Some New Results Concerning the Unsteady Aerodynamic Theory of Supersonic L.S. Undergoing Arbitrary Small Motions," NASA Langley, Research Center, Hampton, VA, July 18, 1986.
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- 15. ``Imperfection Sensitivity and Postbuckling Behavior of Laminated Composite Flat and Curved Panels," University of California-San Diego, La Jolla, California, April 6, 1990.
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- 18. ``Thermal Postbuckling of Geometrically Imperfect Doubly-Curved Laminated Composite Panels," NASA Langley Research Center, Hampton, Virginia, May 1992. (Informal Seminar)
- 19. "New Results on Postbuckling Response of Composite Flat and Curved Panels Under the Complex Action of Thermal and Mechanical Loadings," United States Air Force Academy, Colorado Springs, Colorado, August 1992.

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- 23. "Postbuckling and Vibrational Behavior of Flat and Curved Panels Under Combined Thermal and Mechanical Loading Conditions," NASA Langley Research Center, Hampton VA, October 8, 1993 (Informal Seminar).
- 24. ``Statics and Dynamics of Buckled Shear Deformable Flat and Curved Panels Under Complex Mechanical and Thermal Loading Conditions," NASA Langley Research Center, Hampton VA, January 12, 1994 (Informal Seminar).
- 25. ``An Exact Approach of the Flutter Response of Swept Aircraft Wings Incorporating Non-Classical Effects," The Catholic University of America, December 9, 1994.
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- 32. ``Sandwich Structures and Their Importance in the High Technology of Today and Tomorrow," Terza Universita Degli Study Di Roma, Dipartimento di Scienti dell'Ingegneria Civile, July 17, ``Modeling and Vibration of Rotating Blades Incorporating Adaptive Capabilities," Institut fúr Luft und Raumfahrt, Stuttgart, August 13, 1997, (Germany).
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- 39. ``Linear/Nonlinear Response of Flat/Curved Advanced Sandwich Structures Under Thermomechanical Loading,":

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- 41. Terza Universita Degli Studi Di Roma, Dept. of Civil Engineering, June 27, 2000, Roma, Italy.
- 42. ``Vibration and Dynamic Response Control of Wing-Type Structures via Piezoelectric Actuation,":
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- 46. ``The Flutter and Post Flutter of Advanced Aircraft Wings made of Functionally Graded Materials and Exposed to High Temperatures: Modeling and Preliminary Results," Korea Advanced Institute of Science and Technology, Aerospace Engineering Department, Taejon, Korea, June 15, 2001.
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- 48. "On the Enhancement of Load Carrying Capacity of Advanced Sandwich Constructions," Tel-Aviv University, Tel-Aviv, Israel, December 2, 2002.
- 49. "Recent Results on the Modeling and Vibration of Turbomachinery Rotating Blades Made of Functionally Graded Materials," Technion, Aeronautical/Aerospace Department, Haifa, Israel, December 1, 2002.
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- 64. Chang, M.Y. and Librescu, L., "Active Vibration Control of Composite Laminated Beams Subjected to a Traveling Oscillating Load," SES Annual Meeting, University of Michigan, Ann Arbor, Michigan, September 18-20, 1989.
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- Librescu, L. and Chang, M.Y., "Imperfection Sensitivity and Postbuckling Behavior of Laminated Composite Curved Panels," 111th ASME Winter Annual Meeting, Dallas, Texas, November 25-30, 1990 (invited paper).
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- 96. Librescu, L. and Chang, M.Y., 'Further Results Concerning the Post-buckling Behavior of Composite Laminated Shallow Structures Taking Into Account Initial Geometric Imperfections," First World Congress of Nonlinear Analysts, Tampa, Florida, August 1992.
- 97. Song, O. and Librescu, L., "Free-Vibration of Composite Rotating Helicopter Blades Modelled as Thin-Walled Beams," American Society for Composites Seventh Technical Conference on Composite Materials, October 13-15, 1992, The Pennsylvania State University.
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- 101.Karpouzian, G. and Librescu, L., "A Refined Structural Model of Advanced Composite Aircraft Wings and Its Use in Aeroelastic Analyses, The 1st Joint Mechanics Meeting of ASME/ASCE/SES *Meet'N'93*, Charlottesville, VA, June 1993.
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- 103.Librescu, L., ``A Refined Structural Model of Rotating Helicopter Blades Composed of Advanced Anisotropic Composite Materials," Fifth International Workshop on Dynamics and Aeroelastic Stability Modeling of Rotorcraft Systems, Rensselaer Polytechnic Institute, Troy, New York, October 18-20, 1993 (invited presentation).
- 104.Song, O. and Librescu, L., "Exact Computational Method for Determination of Vibration Characteristics of Rotating Helicopter Composite Blades," Second U.S. National Congress on Computational Mechanics, August 16-18, 1993, Washington, D.C.
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- 109.Song, O. and Librescu, L., "Mathematical Modeling and Dynamical Behavior of Rotating Blades Carrying a Tip Mass," Twelfth U.S. National Congress of Applied Mechanics, University of Washington, Seattle, Washington, July 27-July 1, 1994.
- 110.Librescu, L., Lin, W., Nemeth, M.P. and Starnes, Jr., J.H., ``Effects of Tangential Edge Constraints on the Postbuckling Behavior of Flat and Curved Panels Subjected to Thermal and Mechanical Loads," 1994 International Mechanical Engineering Congress and Exposition, Chicago, Illinois, November 6-11, 1994.
- 111.Librescu, L., Meirovitch, L. and Na, S., "Passive and Adaptive Control of Cantilevered Wing Structures," Tenth Symposium on Structural Dynamics and Control, May 8-10, 1995, Blacksburg, VA.
- 112.Librescu, L. and Schmidt, R., "Geometrically Nonlinear Theory of Laminated Anisotropic Composite Plates Featuring Interlayer Slips Symposium Applied Mathematics: Methods and Applications," Dedicated to G. Handelman, Rensselaer Polytechnic Institute, 24-26 March, 1995.
- 113.Librescu, L., "New Trends and Results on the Postbuckling Response of Shells Under Complex Loading Conditions," The 15th Canadian Congress of Applied Mechanics, CANCAM'95, Victoria, British Columbia, Canada, May 28-June 01, 1995.
- 114.Librescu, L. and Schmidt, R., "A Refined Theory of Anisotropic Laminated Composite Plates Featuring Nonrigidly Bonded Interfaces," The 15th Canadian Congress of Applied Mechanics, CANCAM'95, Victoria, British Columbia, Canada, May 28-June 01, 1995.
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- 116.Bhaskar, K. and Librescu, L., ``Flexural Buckling of Extension-Twist Coupled Thin-Walled Beams," The 1995 ASME International Mechanical Engineering Congress and Exposition, San Francisco, CA, November 12-17, 1995.
- 117.Karpouzian, G. and Librescu, L., "Non-Classical Effects on the Flutter Instability of Swept Aircraft Wings in Various Speed Regimes," The 1995 ASME International Mechanical Engineering Congress and Exposition, San Francisco, CA, November 12-17, 1995.
- 118.Karpouzian, G and Librescu, L., ``Control of Aeroelastic Instabilities of Aircraft Wings via Incorporation of Adaptive Materials Technology," 37th AIAA/ASME/ASCE/AHS/ASC Structures, Structural Dynamics and Materials Conference and Exhibit, April 15-17, 1996, Salt Lake City, UT.
- 119.Librescu, L., Meirovitch, L. and Na, S.S., ``Control of Cantilevers Using the Smart Structures Concept," SPIE's 1996 Symposium on Smart Structures and Materials, February 26-29 1996, San Diego, CA.
- 120.Hause, T., Librescu, L. and Camarda, J.C., "Postbuckling Response of Anisotropic Circular Cylindrical and Flat Sandwich Panels Under Complex Loading Conditions" 11th DOD/NASA/FAA Conference on Fibrous Composites in Structural Designs, Forth Worth, TX, August 26-29, 1996.
- 121.Song, O. and Librescu, L., "Modeling and Dynamic Behavior of Rotating Blades Carrying a Tip Mass and Incorporating Adaptive Capabilities," *Smart Structures and Materials*, March 2-6 1997, San Diego, California.
- 122.Librescu, L. and Na, S. S., "Vibration and Dynamic Response Control of Adaptive Cantilevers Carrying Externally Mounted Stores," *Smart Structures and Materials*, March 2-6 1997, San Diego, California.

- 123.Gern, F. H. and Librescu, L., "Dynamic Modeling of Advanced Aircraft Wings Carrying External Stores and Incorporating Free Body Motions in Pitching, Plunging and Rolling," Eleventh VPI & SU Symposium on Structural Dynamics and Control, May 12-14, Blacksburg, VA.
- 124.Librescu, L. and Gern, F. H., "Modeling and Aeroelasticity of Advanced Aircraft Wing/Fuselage Systems Carrying External Stores and Exhibiting Free Body Motions," Virginia Consortium of Engineering and Science Universities,
- 125. Spring Conference, Old Dominion University, Peninsula Center, Hampton, VA, June 11-12, 1997.
- 126.Na, S. S. and Librescu, L., ``Effects of Implementation of Smart Materials Technology and Optimal Control on Dynamic Response of Cantilevers Exposed to Blast Loadings," Third ARO Workshop on Smart Materials and Structures, Blacksburg, VA, August 27-29, 1997.
- 127.Librescu, L., Lin, W., Nemeth, P.M. and Starnes, H.J., Jr., 'Nonlinear Response of Geometrically Imperfect Flat and Curved Panels Under Thermomechanical Load Systems," 1997 International Mechanical Engineering Congress & Exposition, ASME International, November 16-21, 1997, Dallas, TX.
- 128.Song, O. and Librescu, L., "Modeling and Dynamic Behavior of Rotating Blades Carrying a Tip Mass and Incorporating Adaptive Capabilities," International colloquium." Recent Advances in Mechanics of Solids and Fluids," (invited paper), Technische Universiät, Vienna, (Austria), November, 1997.
- 129.Di Sciuva, M. and Librescu, L., "Contribution to the Nonlinear Theory of Multilayered Composite Shells Featuring Damaged Interfaces," ASME Mechanics and Materials Conference, June 27-30, 1999, Blacksburg, VA, USA.
- 130.Song, O., Kwon, H. D. and Librescu, L., "Vibration and Stability of Wing-Rotor System for Tiltrotor Aircraft Application: Implications of Gyroscopic Effects," ASME Mechanics and Materials Conference, June 27-30, 1999, Blacksburg, VA, USA.
- 131.Song, O., Kang, H. S., and Librescu, L., "Optimal Control of Rotors in Anisotropic Magnetic Bearings," ASME Mechanics and Materials Conference, June 27-30, 1999, Blacksburg, VA, USA.
- 132.Na, S., Librescu, L. and Park, S., "Optimal Vibration Control of Aircraft Wings Modeled as Non-Uniform Anisotropic Composite Thin-Walled Beams," ASME Mechanics and Materials Conference, June 27-30, 1999, Blacksburg, VA, USA.
- 133.Librescu, L. and Hause, T., `'Implications of Material Anisotropy of Face-Sheets on Thermomechanical Load Carrying Capacity of Sandwich Curved Panels," ASME Mechanics and Materials Conference, June 27-30, 1999, Blacksburg, VA, USA.
- 134.Gern, F. H. and Librescu, L., "Active Flutter Control of Aeroelastically Tailored Aircraft Wings Carrying External Stores," ASME Mechanics and Materials Conference, June 27-30, 1999, Blacksburg, VA, USA.
- 135.Chang, M-Y. and Librescu, L., "Vibration Control of Shear Deformable Laminated Plates Modelling Implications," ASME Mechanics and Materials Conference, June 27-30, 1999, Blacksburg, VA, USA.
- 136.Nemeth, M. P., Starnes, J. H. Jr., and Lin, W., "Nonlinear Response of Flat and Curved Panels Exposed to Thermomechanical Loadings," ASME Mechanics and Materials Conference, June 27-30, 1999, Blacksburg, VA, USA.
- 137.Librescu, L. and Schmidt, R., "Geometrically Nonlinear Theory of Laminated Composite Shells Featuring Global and Interlaminar Bonding Imperfections," 1999 International Mechanical Engineering Congress and Exposition ASME, November 14-19, 1999, Nashville, TN.
- 138.Ha, T. W., Song, O., and Librescu, L., `Dynamics of Anisotropic Beams Weakened by Transverse Open Cracks," 1999 International Mechanical Engineering Congress and Exposition, ASME, November 14-19, 1999, Nashville, TN.
- 139.Marzocca, P. and Librescu, L., "Aeroelastic Formulation of Lifting Surfaces in Various Flight Speed Regimes for Flutter and Response Analyses: Indicial Function Approach," Virginia Academy of Science 78th Annual Meeting, Radford University, May 23-26, 2000, Radford, VA.
- 140.Marzocca, P., Librescu, L. and Silva, W. A., "Nonlinear Stability and Response of Lifting Surfaces via Volterra Series," 20th International Congress of Theoretical and Applied Mechanics, August 27 - September 2, 2000, Chicago, Illinois.
- 141.Schmidt, R. and Librescu, L., "Geometrically Nonlinear Theory of Laminated Shells Weakened by Interlaminar Bonding Imperfections," 20th International Congress of Theoretical and Applied Mechanics, August 27 – September 2, 2000, Chicago, Illinois.

- 142.Baid, C., Chandiramani, N. K., Awasthi, A. P. and Librescu, L., "Vibration of Rotating Thick-Walled Shear-Deformable Composite Beams," *VETOMAC-I-First International Conference on Vibration Engineering, and Technology of Machinery*, Oct. 25-27, 2000, Bangalore, India.
- 143.Marzocca, P., Librescu, L. and Silva, W. A. "Aeroelastic Response of Swept Aircraft Wings in a Compressible Flow Field" AIAA-2001-0714, 39th AIAA Aerospace Sciences, Meeting and Exhibit, Reno, Nevada, January 8-11, 2001.
- 144.Silva, W. A., Librescu, L, and Marzocca, P.,, "Reducing-Order Modeling: Cooperative Research and Development at the NASA Research Center," *International Forum on Aeroelasticity and Structural Dynamics*, IFASD-2001-008, Madrid, Spain, June 5-7, 2001.
- 145. Chandiramani, N. K. and Librescu, L., "Free-Vibration of Rotating Composite Beams Incorporating Higher-Order Transverse Shear Effects," 2001 ASME International Mechanical Engineering Congress & Exposition, New York, NY, November 11-16, 2001.
- 146.Marzocca, P. and Librescu, L., ``Hopf-Bifurcation of Sectional Wing with Cubic Aerodynamic and Physical Nonlinearities," *Lecture at Virginia Academy of Science 79th Meeting*, May 23-26, 2001, James Madison University, Harrisonburg, VA.
- 147.Librescu, L., Na, S. S., Marzocca, P., "Flutter Instability and Aeroelastic Response of Aircraft Wing Section with a Flap in an Incompressible Flow, 2002 ASME International Mechanical Engineering Congress and Exposition, November 17-22, 2002, New Orleans, Louisiana.
- 148.Librescu, L., Chandiramani, N. K., Shete, N., 'Optimal Vibration Control of Pretwisted Shearable Rotating Adaptive Composite Beams," 2002 ASME International Mechanical Engineering Congress and Exposition, November 17-22, 2002, New Orleans, Louisiana.
- 149.Hohe, J., Librescu, L., "Effects of Core and Face Sheet Anisotropy on Local/Global Buckling Interaction of Sandwich Panels with Compressive Core," *2002 ASME International Mechanical Engineering Congress and Exposition*, November 17-22, 2002, New Orleans, Louisiana.
- 150.Hasanyan, D., Librescu, L., "Buckling and Postbuckling of Electroconducting Elastic Plates in a Magnetic Field," 2002 ASME International Mechanical Engineering Congress and Exposition, November 17-22, 2002, New Orleans, Louisiana.
- 151.Librescu, L., Marzocca, P., ``Time Delay Feedback Aeroelastic Feedback Control of 2-D Lifting Surfaces, 2002 ASME International Mechanical Engineering Congress and Exposition, November 17-22, 2002, New Orleans, Louisiana.
- 152.Hohe, J. and Librescu, L., "A General Nonlinear Theory for Sandwich Shells with Transversely Compressible Core," *14th U. S. National Congress of Theoretical and Applied Mechanics*, June 25-28, 2002, Blacksburg, Virginia.
- 153.Librescu, L. and Na, S., 'Vibrations of Advanced Turbomachinery Rotating Blades Modeled as Thin-Walled Composite Beams," *14th U. S. National Congress of Theoretical and Applied Mechanics*, June 25-28, 2002, Blacksburg, Virginia.
- 154.Hasanyan, D. J., Librescu, L. and Ambur, D. R., "Nonlinear Magnetoelasticity of Flat Structures Carrying an Electric Current: Foundation of the Theory and Behavior," *14th U. S. National Congress of Theoretical and Applied Mechanics*, June 25-28, 2002, Blacksburg, Virginia.
- 155. Marzocca, P., Librescu, L. and Silva, W. A., "Considerations of a Flutter Prediction Methodology Using a Combined Analytical-Experimental Procedure," *14th U. S. National Congress of Theoretical and Applied Mechanics*, June 25-28, 2002, Blacksburg, Virginia.
- 156.Oh, S.-Y., Librescu, L. and Song, O., "Vibration of Rotating Turbine Blades Made of Functionally Graded Materials," 14th U. S. National Congress of Theoretical and Applied Mechanics, June 25-28, 2002, Blacksburg, Virginia.
- 157.Librescu, L., Qin, Z., and Ambur, D. R., "Static and Dynamic Response of Torsionally Restrained Anisotropic Composite Thin-Walled Beams," *14th U. S. National Congress of Theoretical and Applied Mechanics*, June 25-28, 2002, Blacksburg, Virginia.
- 158.Librescu, L., Hasanyan, D., Qin, Z., and Ambur, D., "Nonlinear Response and Postbuckling of Electroconductive Circular Cylindrical Shells Immersed in a Complex Field Environment," 2003 ASME International Mechanical Engineering Congress and RD & D Expo, November 16-21, 2003, Washington, DC., IMECE2003-43693.
- 159.Librescu, L., Oh, S. Y., and Song, O., 'Modeling, Vibration and Instability of Spinning Thin-Walled Beams Made of Functionally Graded Materials," 2003 ASME International Mechanical Engineering Congress and RD & D Expo, November 16-21, 2003, Washington, DC., IMECE2003-43345.

- 160.Librescu, L., Na, S., Marzocca, P., Chung, C-H and Jeong, I-J., "Active Aeroelastic Control of 2-D Wing-Flap Systems in a Compressible/Incompressible Flow Field and Exposed to Blast Pulses," IMECE 2003-43392, 2003 ASME International Mechanical Engineering Congress & Exposition, November 15-21, 2003, Washington, DC.
- 161.Librescu, L., Oh, S-Y and Hohe, J., ``Effects of Anisotropy of Face Sheets on Dynamic Behavior of Sandwich Panels Subjected to Explosive Loads," 2003 ASME International Mechanical Engineering Congress, Nov. 15-21, 2003, Washington, DC.
- 162.Na, S. S., Librescu, L. and Shim, K., "Modeling and Bending Vibration Control of Nonuniform Thin-Walled Rotating Beams Incorporating Adaptive Capabilities," 2003 ASME International Mechanical Engineering Congress, Nov. 15-21, 2003, Washington, DC. IMECE2003-43482.
- 163. Ambur, D., Librescu, L., Qin, Z. and Hasanyan, D., "Nonlinear Response and Postbuckling of Electroconductive Circular Cylindrical Shells Immersed in a Complex Field Environment," 2003 ASME International Mechanical Engineering Congress, Nov. 15-21, 2003, Washington, DC.
- 164.Librescu, L., Oh, S. Y. and Hohe, J., "Dynamic Response of Anisotropic Sandwich Panels to Explosive Blast Loading," *Paper 123; 18th Annual Technical Conference American Society for Composites*, October 19-22, Gainesville, FL, 2003.
- 165.Na, S. S., Librescu, L. and Rim, S., "Free Vibration and Dynamic Response Control of Composite Non-Uniform Thin-Walled Rotating Beams Featuring Bending-Bending Elastic Coupling," IMECE2004-61380, 2004 ASME International Mechanical Engineering Congress and RD & D Expo, November 15-19, 2004, Anaheim, California.
- 166.Librescu, L., Oh, S-Y and Hohe, J., "Global and Wrinkling Dynamic Response of Flat Sandwich Panels Exposed to Underwater and In-Air Explosions," IMECE2004-61043, 2004 ASME International Mechanical Engineering Congress and RD&D Expo, November 13-19, 2004, Anaheim, California.
- 167.Librescu, L. and Marzocca, P., "Flutter and Post-Flutter Piezoelectric Control of Geometrically Nonlinear Panels Operating in a Supersonic/Hypersonic Flow Field," IMECE2004-61373, 2004 ASME International Mechanical Engineering Congress and RD&D Expo, November 13-19, 2004, Anaheim, California.
- 168.Qin, Z., Librescu, L. and Hasanyan, D., "Instability of Magnetoelastic Circular Cylindrical Shells Carrying an Electrical Current," IMECE2004-61689, 2004 ASME International Mechanical Engineering Congress and RD&D Expo, November 13-19, 2004, Anaheim, California.
- 169.Hasanyan, D., Librescu, L. and Qin, Z., "Dynamics of Magnetoelastic Circular Cylindrical Shells Carrying an Electrical Current Wave Progation and Vibration," IMECE2004-61741, 2004 ASME International Mechanical Engineering Congress and RD&D Expo, November 13-19, 2004, Anaheim, California.
- 170.Librescu, L. and Hohe, J., "Recent Results on Non-Linear Dynamic Response of Advanced Sandwich Panels Under In-Air/Underwater Explosion," (DETC 2005-85784), ASME International Design Engineering Technical Conferences & Computers Information in Engineered Conference, September 24-28, 2005, Long Beach, CA.
- 171.Librescu, L., Oh, S Y., and Song, O., "Instability of Spinning Thin-Walled Beams Made-up of Functionally Graded Materials and Operating in a High Temperature Environment," (IMECE 2005-80522), ASME International Design Engineering Technical Conferences & Computers Information in Engineered Conference, November 5-11, 2005, Orlando, FL.
- 172.Marzocca, P., Librescu, L., and Pereira, M., "Aeroelasticity of Supersonic Panels in High Temperature Environment: Flutter, Post-Flutter and Their Control," (IMECE 2005-80e573), ASME International Design Engineering Technical Conferences & Computers Information in Engineered Conference, November 5-11, 2005, Orlando, FL.
- 173. Jeong, In-Joo, Na, S. S., Librescu, L. and Marzocca, P., 'Robust Aeroelastic Response Control of Flapped Wing Systems," (IMECE 2005-80650) ASME International Design Engineering Technical Conferences & Computers Information in Engineered Conference, November 5-11, 2005, Orlando, FL.
- 174. Yoon, G. C., Na, S. S. Librescu, L., Qin, Z., and Baek, S. C., "Robust Aeroelastic Control of Composite Aircraft Wings in Incompressible Flow," *The International Conference on Adaptive Structures and Technologies*, (ICAST 2006), Taiwan, October 13-17, 2006.
- 175.Librescu, L., Na, S. S., and Qin, Z., "Aeroelastic Feedback Control of Advanced Aircraft Wings Modeled as Composite Thin-Walled Beams, AMD-3 D Nonlinear Dynamics, Control and

Stochastic Mechanics, ASME, Conference, IMECE2006-16316, November 5-10, 2006, Chicago, IL.

176.Librescu, L. and Qin, Z., "New Developments on Hydroelastic Modeling and Behavior of Slender Composite Hulls," *AMD-3 D Nonlinear Dynamics, Control and Stochastic Mechanics, International ASME Conference, IMECE2006-16371,* November 5-10, 2006, Chicago, IL.

PROFESSIONAL ACTIVITIES

- 1. Elaboration of ``Regulations for Flight Admissibility of Civil Airplanes in Romania." C.F.R. Publishing House, 1968 (in Romanian), 315 pp. (in cooperation)
- 2. Participation in the design of several types of airplanes in Romania.

• Professional Society Membership

Appointed (1974) by the Presidium of the American Romanian Academy of Sciences as member of National Commission of Astronautics of the Academy of Science National Commission of Astronautics of the Academy of Science

International Society for the Interaction of Mechanics and Mathematics (ISIMM)

New York Academy of Sciences

American Academy of Mechanics

• Conference acitivities

✤ General Chair of

5th International Congress on Thermal Stresses and related Topics, Blacksburg, VA, June 8-11, 2003.

Chair of the International Organizing Committee of 6th International Congress on Thermal Stresses '05, May 26-29, 2005, Vienna, Austria.

* Co-Chair of the International Organizing Committee of

- 1. Mechanical Engineering and Mechanics, October 26-28, 2005, Nanjing, China.
- 2. 7th International Congress on Thermal Stresses, June 4-7, 2007, Taipei, Taiwan.

Member of the Executive Committee of

International Congress of Thermal Stresses, (1999-2003) and reappointed for (2003-2007).

* Member of the International Advisory Board of

- 1. First International Conference, Composite Science and Technology, 18-20 June, 1996, Durham, South Africa.
- 2. Second International Conference on Composite Science and Technology, Durban, South Africa, June 9-11, 1998.
- 3. 2nd International Conference on Applied Mechanics and Materials (ICAMM 2003), January 21-23, 2003, Durban, South Africa.
- 4. 2nd International Conference on Structural Engineering, Mechanics and Computation, July 5-7, 2004, Cape Town, South Africa.
- 5. First International Congress on Computational Mechanics and Simulation, IIT Kanpur, December 9-12, 2004, India.
- 6. First International Symposium on Design Modelling and Experiments of Adaptive Structures and Smart Systems, DeMEASS I, July 10-12, 2006, Bardonecchia (Turin), Italy.
- 7. 2nd International Congress on Computational Mechanics and Simulation (ICCM-06), December 8-10, 2006, Indian Institute of Technology, Guwahati, Guwahati-781039, India.
- 8. Organizing Committee of the 70th Birthday of Jozef Ignaczak Symposium at the 7th International Congress on Thermal Stresses, June 4-7, 2007, Taipei, Taiwan.

9. Second International Symposium on Design Modelling and Experiments of Adaptive Structures and Smart Systems, DEMEASS II, October 14-17, 2007, Bad Herrenalb, Germany.

* Member of the International Organizing Committee of

- 1. Israel National Conference on Aviation and Astronautics, 1982; 1983; 1984; 1985
- 2. Third International Congress on Thermal Stresses, June 13-17, 1999. Cracow, Poland
- 3. Fourth International Congress on Thermal Stresses, June 8-11, 2001, Osaka, Japan.
- 4. 6th International Congress on Thermal Stresses, Wien, Austria, June 2005.

* Chairman, Paper Committee of

- 1. Israel Conference on Mechanical Engineering, Tel-Aviv, 1983
- 2. Israel Conference on Mechanical Engineering, 1982; 1984; 1985

* Member of the reviewing committee of

1. 11th International Conference on Composite Materials, Gold Coast, Australia, July 14-18, 1997.

* Member of the Program Committee of

- 1. Second International Symposium on Thermal Stresses and Related Topics, Rochester, New York, June 8-11, 1997.
- 2. 6th Annual International Symposium on Smart Structures and Materials, March 1-5, 1999, Newport Beach, CA.
- 3. 7th Annual International Symposium on Smart Materials and Structures, Newport Beach, CA, March 6-9, 2000.
- 4. SPIE's 8th Annual International Symposium on Smart Structure and Materials, Newport Beach, CA, March 4-8, 2001.
- 5. SPIE's 9th Annual International Symposium on Smart Structures and Materials, San Diego, CA, March 17-21, 2002.
- 6. SPIE 11th Annual International Symposium, March 14-18, 2004, San Diego, CA.
- 7. 12th SPIE International Symposium, Smart Structures and Materials, March 6-10, 2005, San-Diego, CA.
- SPIE, Smart Structures and Materials and NDE for Health Monitoring and Diagnosics, February 26 - March 2, 2006, and of SPIE "Smart Structures and Materials and Nondestructive Evaluation and Health Monitoring, March 18-22, 2007, San Diego, CA

* Member of the International Scientific Committee of

- 1. 3rd International Conference on Thin-Walled Structures, Cracow, Poland, June 5-7, 2001.
- 2. 4th International Conference on Thin-Walled Structures to be held at Loughborough University, 25-27, May 2004.

* Organizer of Symposia

- 1. "Non-Classical Problems of the Theory and Behavior of Structures Exposed to Complex Environmental Conditions," at the 1st Joint Mechanics Meeting of ASME, ASCE, SES *Meet'N'93*, Charlottesville, Virginia, June, 1993.
- 1999 ASME Mechanics and Materials Conference, June 27-30, 1999, Blacksburg, VA of the Symposia: i) Modern Trends in the Foundation of the Theory of Shells and Plates, ii) New Advances in Smart Material Structures, Control and Damage Detection (with M. Di Sciuva), iii) Dynamics and Aeroelasticity of Flight Vehicle and Rotorcraft Structures, iv) New Advances in the Modeling of Composite Material Structures and Their Behavior (with M. Di Sciuva). These symposia have encompassed a number of 11 sessions.
- 3. VIB-18-1 and VIB-18-2, "Dynamics Oscillations and Stability," for the 20th Biennial Conference on Mechanical Vibration and Noise, September 24-28, 2005, Long-Beach, CA
- 4. 2005 ASME International Mechanical Engineering Congress and Exposition, Orlando, FL, November 5-11, 2005, of the Symposium AMD-4A "Instability of Structures Under Complex Loading Conditions"..

✤ Organizer and Member in the Technical Committee of

1. 28th Annual Technical Meeting of The Society of Engineering Science, November 6-8, 1991, University of Florida, Gainesville, Florida.

✤ Organized/Co-Organizer Session at

- 1. ASCE Engineering Mechanics Division Specialty Conference, May 22-25, 1988, VPI&SU, College of Engineering, Blacksburg, Virginia
- 2. Program Review/Workshop, Center for Composite Materials and Structures, Virginia Polytechnic Institute and State University, Blacksburg, Virginia, September 23-26, 1990.
- 3. Twelfth U.S. National Congress of Applied Mechanics, June 27-July 1, 1994, Seattle, Washington. (2 sessions)
- 4. 1997 International Mechanical Engineering Congress & Exposition, ASME International, November 16-21, 1997, Dallas, TX. (2 sessions)
- 5. SPIE's 5th Annual International Symposium on Smart Structures and Materials, March 1-5 1998, San Diego, CA, 1998. (4 sessions).
- 6. ``Instabilities in Structures," at the 2003 ASME/IMECE 2003 ASME International Mechanical Engineering Congress and RD&D Expo., November 15-21, 2003, Washington, DC.

✤ Organized and chaired a Session at

- 1. Fourth Annual Review Conference, Virginia Tech Center for Composite Materials and Structures, May 11-14, 1987, VPI&SU, Blacksburg, Virginia
- 2. Two-parts mini symposium, "Non-Classical Problems of the Theory and Behavior of Structures Exposed to Complex Environmental Conditions"), International Conference on Industrial and Applied Mathematics, Washington, DC, July 1991.

✤ Session Chairman at

- 1. Israel National Conference on Aviation and Astronautics, 1985
- 2. Israel Conference on Mechanical Engineering, 1982; 1984; 1985
- 3. Euromech Colloquium, 219, Refined Dynamical Theories of Beams, Plates and Shells, September 23-25, Kassel, West Germany
- 4. 16th International Council of Aeronautical Science Congress (ICAS), Jerusalem, August 28-September 2, 1988, Israel
- 5. Fifth Japan-U.S. Conference on Composite Materials, June 24-27, 1990, Tama-City, Tokyo, Japan
- 6. Winter Annual Meeting of the ASME, Atlanta, Georgia, December, 1991.
- 7. Winter Annual Meeting of the ASME, Anaheim, California, November, 1992.
- 8. 1st Joint Mechanics Meeting of ASME, ASCE, SES *Meet'N'93*, Charlottesville, Virginia, June, 1993.
- 9. 2nd U.S. National Congress on Computational Mechanics, August 16-18, 1993, Washington, D.C.
- 10. 114th Winter Annual Meeting, New Orleans, LA, November 28-December 3, 1993, Seattle, Washington.
- 11. International Symposium on Thermal Stresses and Related Topics, Rochester, New York, June 8-11, 1997. (2 sessions)
- 12. 1997 International Mechanical Engineering Congress & Exposition, ASME International, November 16-21, 1997, Dallas, TX. (3 sessions)
- 13. Twelfth U.S. National Congress of Applied Mechanics, June 27-July 1, 1994.
- 14. ASME International, The Winter Annual Meeting of ASME, November 6-11, 1994, Chicago, Illinois.
- 15. First Industry/Academy Symposium on Research for Future Supersonic and Hypersonic Vehicles, December 6, 1994, Greensboro, NC.
- 16. Tenth Symposium on Structural Dynamics and Control, May 8-10, 1995, Blacksburg, VA.
- 17. *CANCAM* '95, the 15th Canadian Congress of Applied Mechanics, May 28-June 01, 1995, Victoria, British Columbia, Canada.

- 18. 1995 ASME International Mechanical Engineering Congress and Exposition, November 12-17, 1995, San Francisco, CA.
- 19. 1996 ASME International Mechanical Engineering Congress and Exposition, Atlanta, GA, November 17-22, 1996.
- 20. SPIE's 4th Annual Symposium on Smart Structures and Materials, 2-6 March 1997, San Diego, CA.
- 38th AIAA/ASME/ASCE/AHS/ASC Structures, Structural Dynamics and Materials Conference and AIAA/ASME/ASH Adaptive Structures Forum, Kissimmee, Florida, April, 1977.
- 22. SPIE's 5th Annual International Symposium on Smart Structures and Materials, March 1-5, 1998 San Diego, CA, 1998
- 23. NATO Advanced Research Workshop Smart Structures Smart-98, June 16-19, 1998. Pultusk, Poland
- 24. 1999 ASME Mechanics and Materials Conference, June 27-30, 1999, Blacksburg, VA.
- 25. 1999 International Mechanical Engineering Congress and Exposition, ASME, November 14-19, 1999, Nashville, TN.
- 26. 7th Annual International Symposium on Smart Materials and Structures, Newport Beach, CA, March 6-9, 2000. (2 sessions)
- 27. SPIE's 8th Annual International Symposium on Smart Structure and Materials, Newport Beach, CA, March 4-8, 2001.
- 28. Fourth International Congress on Thermal Stresses, June 8-11, 2001, Osaka, Japan.
- 29. 2001 ASME International Mechanical Engineering Congress & Exposition, New York, NY, November 11-16, 2001. (2 sessions)
- 30. SPIE's 9th Annual International Symposium on Smart Structures and Materials, San Diego, CA, March 17-21, 2002.
- 31. 2003 ASME/IMECE 2003, ASME International Mechanical Engineering Congress and RD&D Expo., November 15-21, 2003, Washington, DC. (2 sessions)
- 32. ASME International Mechanical Engineering Congress and RD &D Expo. November 13-19, 2004, Anaheim, CA.
- 33. ASME International Design Engineering Technical Conference & Computers and Information in Engineering Conference, September 24 28, 2005, Long Beach, CA.
- 34. 12th SPIE International Symposium, Smart Structures and Materials, March 6-10, 2005, San-Diego, CA. (2 sessions)

✤ Session Co-Chairman at

- 1. Fourth Technical Conference of the American Society of Composites, October 1989, Virginia Polytechnic Institute and State University, Blacksburg, Virginia.
- 2. Symposium on Computational Technology for Flight Vehicles, November 5-7, 1990, Washington, D.C.
- 3. 111th ASME Winter Annual Meeting, November 25-30, 1990, Dallas, Texas
- 4. The Second Pan American Congress of Applied Mechanics, Chile, January 2-4, 1991.
- 5. Applied Mechanics and Biomechanics Summer Conference, ASME, The Ohio State University, Columbus, Ohio, June 1991.
- 6. 39th the AIAA/ASME/ASCE/AHS/ASC Structures, Dynamics and Materials, Conference and Exhibit; April 20-23, 1998, Long Beach, CA.
- 7. 14th U. S. National Congress of Theoretical and Applied Mechanics, June 25-28, 2002, Blacksburg, VA. (2 sessions)

Journal Activities

***** Editorial Board and Responsibilities

- 1. Member of the Advisory Board of Editors of *Solid Mechanics Archives*, 1975 until its extinction, 1990
- 2. Responsible for the Aeronautical Specialization at Tel-Aviv University, Israel
- 3. Member of the Editorial Advisory Board of the International Journal of Non-Linear Mechanics, 1997-present

- 4. Member of the Editorial Board of the Journal of Thermal Stresses, 1998-present
- 5. Member of the Editorial Board of the Journal Thin-Walled Structures, 1999-present
- 6. Member of the International Editorial Board of the Journal Mathematical Methods and Physico-Mechanical Fields, 2003-present
- 7. Member of the Editorial Board of the International Journal of Advanced Materials and Structures, 2004-present
- 8. Member of the Editorial Board of the Journal of Sound and Vibration, 2007-

& Guest Editor for the Special Issues of the Journals:

- 1. Composite Structures, Vol. 52, 1, 2001
- 2. Thin-Walled Structures, Special Issue New Advances in the Modelling and Application of Smart Thin-Walled Structures, Vol. 39, 1, 2001.
- 3. Composites Engineering, Part B, Vol. 32, 3, 2000
- 4. Int. J. of Mechanics of Advanced Materials and Structures, Vol. 11, Nos. 4-5, Part I & II (2004)
- 5. *Journal of Mathematical Engineering* (issues devoted to Thermomechanical Problems), (in preparation).

* Reviewer

- 1. International Journal of Mechanical Sciences;
- 2. International Journal of Nonlinear Mechanics;
- 3. Journal of Vibration, Acoustics, Stress and Reliability in Design (Trans. of the ASME);
- 4. Journal of Engineering Materials and Technology (Trans. of the ASME);
- 5. Journal of Engineering Mechanics of ASCE; Journal of Vibration and Acoustics (Trans. of the ASME);
- 6. Journal of Pressure Vessel Technology (Trans. of the ASME);
- 7. International Journal of Solids and Structures;
- 8. Journal de Mecanique Appliquee;
- 9. Applied Mechanics Reviews;
- 10. Journal of Applied Mechanics (Trans. of the ASME);
- 11. Society of Experimental Mechanics;
- 12. Israel Journal of Technology;
- 13. AIAA Journal;
- 14. Journal of Aircraft;
- 15. Journal of Guidance, Control and Dynamics;
- 16. Journal of Sound and Vibration;
- 17. Journal of Engineering Mechanics, ASME;
- 18. Composites Engineering;
- 19. Nonlinear Dynamics;
- 20. Journal of Intelligent Material Systems and Structures;
- 21. Journal of Composite Materials;
- 22. Quarterly Journal of Mechanics and Applied Mathematics;
- 23. Acta Mechanica;
- 24. Journal of Vibration and Control;
- 25. Reliability Engineering and System Safety;
- 26. Mechanics of Composite Materials and Structures;
- 27. Finite Element in Analysis and Design;
- 28. Mechanics Research Communications;
- 29. Smart Materials & Structures;
- 30. Journal of the Franklin Institute;
- 31. Journal of Spacecraft and Rockets;
- 32. Journal of Thermal Stresses;
- 33. International Journal of Fatigue;
- 34. International Journal for Numerical Methods in Engineering;
- 35. Journal of the Acoustical Society of America;
- 36. International Journal of Engineering Science;

- 37. Mechanics of Composite Materials and Structures;
- 38. Journal of Shock and Vibration;
- 39. Numerical Methods for Partial Differential Equations;
- 40. Thin-Walled Structures;
- 41. Journal of Sandwich Structures and Materials;
- 42. Structural Engineering and Mechanics;
- 43. Mathematics & Mechanics of Solids;
- 44. International Journal of Fracture; Proceedings of the Royal Society:
- 45. Mathematical, Physical and Engineering Sciences;
- 46. Composites Science and Technology;
- 47. European Journal of Mechanics A/Solids;
- 48. Computer Modeling in Engineering & Sciences (CMES);
- 49. International Journal of Numerical Methods for Heat & Fluid Flow;
- 50. Finite Elements in Analysis and Design;
- 51. Journal of Engineering Mechanics;
- 52. Journal of Aerospace Engineering;
- 53. International Journal of Mechanics Based Design of Structures and Machines;
- 54. Mathematical and Computer Modelling;
- 55. IEEE Transactions on Ultrasonics, Ferroelectric and Frequency Control,
- 56. Aerospace Science and Technology;
- 57. Applied Mathematical Modelling;
- 58. The Aeronautical Journal; Journal of Dynamics of Continuous, Discrete and Impulsive Systems (DCDIS);
- 59. IEE Control Theory & Applications;
- 60. ASME Journal of Computational and Nonlinear Dynamics;
- 61. Journal of Materials Science;
- 62. Engineering Structures.
- Proposal Rewieving Activities

Peer review Panel member

- 1. Chairman of the Faculty Early Career Development Panel, Div. of Civil and Mechanical Systems, National Science Foundation, November 6, 1998, Washington, DC.
- 2. Chairman of one session of the Member of a NSF Review Panel, Division of Civil and Mechanical Systems, National Science Foundation, Arlington, VA, Jan. 12, 2001
- 3. AFOSR Review Panel, Sept. 11-13, 2006

• Appointed to evaluate scientific works for national/international societies and conferences

- 1. The National Academies, AIAA/SDM Conference, Palm Spring, CA 2004; AIAA/SDM, Austin, Texas, 2005.
- 2. International Society for the Interactions of Mechanics and Mathematics ASME Winter Annual Meeting 1990, 1991,1993.
- 3. ASME/JSME Joint Conference on PVP, 1995.
- 4. ASME International Mechanical Engineering Congress, 1995.
- 5. The American Society of Mechanical Engineers, 1996, 1999.
- 6. Sixth International Conference on Recent Advances in Structural Dynamics, July 1997, Southampton, England.
- 7. 10th AIAA/ASME/ ASCE/AHS/ASC Structures, Structural Dynamics and Materials, 1999;
- 8. AIAA/SDM Conference, Haway, April 2007; ASME Turbo Expo 2007, Power for Land, Sea and Air, May 14-17, 2007, Montreal, Canada 2007.
- Appointed by national and foreign institutions to evaluate scientific works:
 - 1. Technion, Haifa;
 - 2. Tel-Aviv University, Tel-Aviv,
 - 3. Ben-Gurion University, Beer-Scheva, (Israel);
 - 4. Indian Institute of Science, Bangalore, (India);

- 5. Indian Institute of Technology, Madras, (India);
- 6. Aristotle University of Thessaloniki, (Greece);
- 7. Kuwait University, Safat, (Kuwait);
- 8. Institute of Mechanics of the Ukrainian Academy of Sciences, Kiev, (Ukraine);
- 9. Royal Melbourne Institute of Technology, Melbourne (Australia),
- 10. Foundation for Research and Development, Pretoria (South Africa);
- 11. Ministry of Education and Culture, Jakarta (Indonesia);
- 12. Ministry of High Education, King Fahd University of Petroleum and Minerals, (Saudi Arabia),
- 13. University of Kentucky; Old Dominion University;
- 14. Montana State University;
- 15. Los Alamos National Laboratory;
- 16. Indian Institute of Technology, Delhi, New Delhi, (India);
- 17. Indian Institute of Technology, Kharagpur (India);
- 18. Thapar Institute of Engineering and Technology, India,
- 19. University of Toronto, Institute for Aerospace Studies, Canada.
- 20. Appointed by the Council of the Graduate School of the Politecnico di Torino, Italy, to evaluate the Ph.D. Program in Aerospace Engineering (2000).

Evaluated scientific works submitted for grants from:

- 1. NATO Scientific Affairs Division;
- 2. The Israel Academy of Sciences and Humanities;
- 3. International Science Foundation;
- 4. Engineering Foundation;
- The Israel Science Foundation;
 Natural Sciences and Engineering,
- 7. Research Council of Canada;
- 8. Montana University:
- 9. Alexander von Humboldt Foundation;
- 10. National Research Council;
- 11. U. S. Civilian Research & Development Foundation;

Evaluated scientific works submitted to publishing houses:

- 1. Addison-Wesley Publishing Company;
- 2. John Wiley & Sons;
- 3. Cambridge University Press;
- 4. Elsevier Science Ltd.,
- 5. ASME Press,
- 6. CRC Press,
- 7. Birkhauser Press;
- Springer US. 8.

Topics Developed during the Scientific activity

- I. Developments of the modern theory of shells incorporating non-classical effects;
- Foundation and applications of the theory of plates and shell-type structures composed of II. advanced composite materials;
- Foundation of the theory and applications of sandwich type structures; III.
- Aeroelastic stability of flight vehicles structures; IV.
- V. Nonlinear aeroelastic stability of structures in supersonic and hypersonic flow fields;
- VI. Stability of space vehicles structures in an unsteady ionized gas flow;
- Aeroelastic and structural tailoring; VII.
- Dynamic response and instability of elastic and viscoelastic laminated composite structures VIII. subjected to deterministic and random loading systems;
- Mechanical and thermal postbuckling of flat and curved shear-deformable elastic panels; IX.
- X. Static, dynamic and aeroelastic control of adaptive aeronautical structures;
- XI. Unsteady aerodynamics and magnetoaerodynamics of supersonic flows with applications;

- XII. Unsteady aerodynamics of ionized and chemically reacting gas flows;
- XIII. Optimization problems of aeroelastic structural systems;
- XIV. Foundation of the theory of composite thin-walled beams and its application in aeronautical and mechanical constructions;
- XV. Active feedback control of adaptive structures;
- XVI. Study of the behavior and reliability of structures featuring uncertain properties;
- XVII. Modeling and behavior of multifunctional structures.
- XVIII. Rotating and spinning structures: Dynamics and instability
- XIX. Functionally graded material systems applied to helicopter and aeronautical structural systems.
- XX. Multifunctional material structures.

Courses Delivered

- At Tel-Aviv University:
 - Theory of Shells and Plates Aeroelasticity Special Topics in Aeroelasticity Strength of Airplanes I Strength of Airplanes II Structural Dynamics Elastic Stability The Aeroelasticity of Lifting Surfaces and Panels The Analytical Mechanics
- At Virginia Tech
 - ESM 2204 Mechanics of Deformable Bodies
 - ESM 2304 Dynamics

ESM 5034 Theory of Shells ESM 5074 Mechanics of Laminated Composite Structures ESM 5014 Theory of Continuum Mechanics ESM 5044 Theory of Plates ESM 2000 Mechanics of Particles AOE 6024 Aeroelasticity ESM 6074 Theory of Plates and Shells (new course developed by L. Librescu)

- Lecture Series (at VPI&SU October 1985- February 1986)
 - The Foundations of the Theory of Plates and Shells

Graduate Students' Research Supervision:

Master of Science:

- Simovich, ``Static Aeroelasticity of Sweptforward Composite Wing Structures," 1986 (Tel-Aviv University).
- R. Ghilat, ``Buckling of Composite Anisotropic Flat Panels Subjected to Complex Systems of Edge Loads," 1987 (Tel-Aviv University).
- N. K. Chandiramani, ``Dynamic Stability of Shear Deformable Viscoelastic Composite Plates," 1987 (VPI&SU).
- U. Chung, Master without Thesis

Doctor Doctor of Philosophy:

- G. Cederbaum, ``Random Vibrations and Reliability of Composite Structures," 1988 (with I. Elishakoff, Tel-Aviv University).
- M.-Y. Chang, ``Active Vibration Control of Shear Deformable Laminated Beams and Plates," 1990 (VPI&SU).
- O. Song, "Modeling and Response Analysis of Thin-Walled Beam Structures Constructed of Advanced Composite Materials," 1990 (VPI&SU).
- Dong Oh, "Vibration Control and Design of Composite Cantilevers Taking Into Account Structural Uncertainties and Damage," 1993 (VPI&SU).

- N. K. Chandiramani, ``Nonlinear Flutter of Composite Shear-Deformable Panels in a High-Supersonic Flow," 1993 (VPI&SU)
- Weiqing Lin, "Buckling and Postbuckling of Flat and Curved Laminated Panels Under Thermomechanical Loadings," 1997, (VPI&SU).
- Sungsoo Na, ``Control of Dynamic Response of Thin-Walled Composite Beams Using Structural Tailoring and Piezoelectric Actuation," 1997 (VPI&SU) (Co-chairman)
- Hause, Terry, "Thermomechanical Postbuckling of Geometrically Imperfect Anisotropic Flat and Double Curved Sandwich Panels Under Complex Loading Conditions", 1998 (VPI&SU).
- Marzocca, Piergiovanni, ``Studies on Linear and Nonlinear Aeroelasticity of Lifting Surfaces Approached via New Techniques," 2000, Politecnico di Torino, Italy (Co-Chairman).
- Zhanming, Qin ``Vibration and Aeroelasticity of Advanced Aircraft Wings Modeled as Thin-Walled Beams," 2001, (VPI&SU).
- Hae Kyu Hur (Co-Chair)

Postdoctoral research Associates and Visiting Scholars

- Ruan, Shen-Ji, Assoc. Professor, Gansu University of Technology, Lonzhou, P.R. China, Time Period: 6/1/92 11/31/92.
- Bhaskar, K., Professor, Indian Institute of Technology, Dept. of Aerospace Engr., Madras, India,
- Time Period: 3/14/94 9/15-94, India.
- Song, O., Associate Professor, Chungnam National University, Mechanical Engr. Dept., South Korea, Time Period: 7/1/95 9/1/95.
- Carrera, E., Lecturer, Politecnico di Torino, Dept. of Aerospace Engineering, Italy, Time Period: 7/21/96 9/21/96.
- Icardi, U., Lecturer, Politecnico di Torino, Dept. of Aerospace Engineering Italy, Time Period: 3/1/97 5/1/97.
- Konstanzer, P., Ph.D. Student, Institute of Statics and Dynamic of Aerospace Structures, Univ. of Stuttgart, Germany, Time Period: Jan Feb. 1997.
- Schmidt, R., Professor Institut fuer Allgemeine Mechanik RWTH Aachen, Germany, Time Period: 9/8/97 9/22/97 and 5/1/98 5/14/98.
- Gern H.F., Research Scientist, Fellowship at Virginia Tech from DFG Research Scientist (German Research Society DFG) Institute of Structure and Design, Germany Aerospace Research Establishment, DLR, Stuttgart, Germany, Time Period: 8/1/96- 8/1/98.
- Poterasu, V. F., Professor, University of Iasi, Romania, Time Period: March April 1998.
- Marzocca, P. Ph.D. student from Polytechnico di Torino, Department of Aeronautical and Aerospace Eng., Italy, Time Period: 2/99 2/00, (Co-chairman for Ph.D. Dissertation).
- Filipescu, C., Professor, University of Iasi, Romania, Time Period: March-April, 2001.
- Hohe, J., Research Scientist and Lecturer at the University of Siegen, Inst. of Mechanics and Control, Siegen, Germany, Time Period: Jan. April, 2001.
- Hasanyan, D., Research Scientist, Institute of Mechanics, Academy of Armenia, Erevan, Armenia, Time Period: 10/1/02 Present.
- Zhanming, Qin, Research Scientist, Virginia Polytechnic Institute and State University, 2002 Present.
- Chelu, P., Professor, Polytechnical Institute of Timisoara, Romania, Time Period: 8/02 9/02.
- Polli, G. M., Ph.D. Student from the University of Rome, La Sapienzia, Italy, Time Period: May, 2003 May, 2004.
- Oh, S. Y., Research Scientist, Choong-Nam National University, Mechanical Engineering Department, Korea, Time Period: 7/1/00 4/05.
- Kwon, Hyuck-Dong, Research Scientist, Yonsei University, Seoul, South Korea, Time Period: January 2004 November 2005.
- Song, O., Professor, Chungnam University, Daejon, Korea, August 1, 2005 July 17, 2006.
- Hohe, J., Research Scientist and Lecturer at the University of Siegen, Germany, Time Period: November 26 December 3, 2005.
- Banerjee, J. R., Professor, London City University, July 12-19, 2006.

- Jeong, N. H., Research Scientist, Chungnam University, Daejeon, South Korea, Time Period: September 2006 September 2007.
- Maalawi, K., Professor, Cairo University, Egypt; October 2006 March 2007.

INTERNATIONAL SCIENTIFIC COOPERATIONS

- Responsible for the U.S.A. part of the Joint USA-Italia Research Collaboration for the project, "Non-Linear Modeling and Stability Analysis of Anisotropic Sandwich Flat and Curved Panels."
- Member of the VPI&SU team in the USA Italy (Rome University) Cultural Cooperation.
- Appointed by the Polytechnico di Torino, Dept. of Aeronautical and Aerospace Engineering, Italy as co-chairman to Ph.D dissertations.

• **RESEARCH GRANTS DIRECTED**

NASA Research Grant NAG-1-749. \$151,635

1987-1990: ``The Behavior of Elastic Anisotropic Laminated Composite Structures Subjected to Deterministic and Random Loads."

AFOSR-91-0351. \$274,545 with Dr. L. Meirovitch

1991-1994: ``A Comprehensive Program for the Performance Improvement of Composite Aircraft Wings Through Aeroelastic and Modern Control."

NASA Langley, NAG-1-1300-4. \$160,317

1991-1994: ``Static and Dynamic Postbuckling Behavior of Sandwich and Shear Deformable Laminated Anisotropic Composite Flat and Curved Panels."

NASA Langley, NAG-1-1689. \$113,583

1995-1998: ``Foundation of the Theory of Elastic Sandwich-Type Structures and Their Response Analysis Under Complex Loading Conditions."

NASA Langley, NAG-1-2281. \$26,000

2/00-9/00: ``Aeroelastic Modeling and Behavior of Lifting Surfaces Incorporating Aerodynamic and Structural Nonlinearities: Volterra Series and Indicial Function Approach."

NASA Langley, NAG-1-01007. \$180,715

10/00 - 9/03: ``Nonlinear Aeroelasticity of Lifting Surfaces by Functional Series Techniques: Subcritical Response and Character of the Flutter Boundary."

NASA Langley, NAG-1-02011. \$105,195

2001-2003: ``Open/Closed-Loop Nonlinear Aeroelasticity of Aircraft Wings."

NASA Langley, NAG-1-01101. \$208,910

2001 - 2004: ``Thin-Walled Structures Featuring Multiple Interactive Functions - Foundation of the Theory and Behavior."

Office of Naval Research (ONR), N00014-02-1-0594. \$115,000

2001 - 2004: ``Dynamic Response and Failure of Advanced Anisotropic Sandwich Structures Exposed to Blast Pulses."

NSF CMS-0307623: \$15,000

1/03 - 8/03: ``The Fifth Congress on Thermal Stresses & Related Topics."

Air Force Office AFOSR F49620-03-1-0140. \$10,000

4/03 - 10/03: "The Fifth Congress on Thermal Stresses & Related Topics."

NIA 15000 VT-03-01. \$15,000

10/02 - 08/03: ``The Fifth Congress on Thermal Stresses & Related Topics."

NATO Collaborative Research Grant, \$15,000

1996 -1998: ``Geometrically Nonlinear Laminated Anisotropic Shells Featuring Interlaminae Imperfections: Theory and Behavior."

National Research Council's, Office of International Affairs, Twinning Program CK 405709.

with Romania \$40,000. 1/99 - 12/02: ``Modeling and Control of Smart Structures Using Wavelet Transform Techniques."

NASA Langley. NNL04AA84G \$93,870, 2004-2005

``Multifunctional Structures Weakened by Cracks and Subjected to Complex Mechanical/Magnetic/Thermal Loadings."

Office of Naval Research (ONR) N000140610913 \$165,628, 2006-2008

"Hydroelasticity of Advanced Composite Marine Vehicles Responding to Waves"

• DEPARTMENTAL ACTIVITIES

- Member for several years of the seminar series and technical review of the CCMS.
- Member for several years of the Graduate Committee and now elected member for (1999-2000).
- Member for the Promotion and Tenure Committee (elected for the period 1996-1999).
- Appointed member of the CCMS Administrative Board for (1997-1998).
- Member of the Budget Committee (1999-2000).
- Member of the Graduate Committee, (2001-2004).
- Member of the Promotion and Tenure Committee, (2005)