



Professor Tanchum Weller, Professor and Dean

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- http://www.ruppin.ac.il/pages_e/1822.aspx
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Biographical Data:

b. Israel 1940.

B.Sc., in Aeronautical Eng., Technion 1964.

M.Sc., in Aeronautical Eng., Technion, 1967.

D.Sc. in Aerospace Eng., Technion 1971.

Research Assoc. NASA Langley R.C., 1972-74.

Senior Research Assoc. NASA Langley, R.C., 1980-81 and 1986-87.

At Technion since 1964.

Professor and Dean, Faculty of Aerospace Engineering.

Main Interests:

Stress analysis, structural dynamics; static and dynamic instability of composite and metal structures – elastic and inelastic; design of advanced composite structures; stress, stability and dynamic response analyses of modern marine structures; nondestructive techniques (NDT) in structures; stress analysis, dynamic response and control of flexible large space structures (LSS); Smart intelligent structural systems; fuzzy logic control of adaptive structures.

Book:

Buckling Experiments: Experimental Methods in Buckling of Thin-Walled Structures, Vols. 1 and 2, John Wiley and Sons Ltd. (with Profs. Singer and Arbocz).

Selected Publications:

“Experimental and theoretical studies of columns under axial impact”, International J. Solids and Structures, 18, 7, July 1982, pp. 619-641 (with J. Ari-Gur and J. Singer).

“Durability of stiffened composite panels under repeated buckling”, Int. J. Solids & Structures (C.W. Babcock, Jr. Memorial Issue, Collapse and Failure of Structures), 26, 9/10, 1990, pp. 1037-1069 (with J. Singer).

“Buckling and postbuckling behavior of delaminated sandwich beams”, Composite Structures, 21, 4, 1992, pp. 211-232 (with M. Somers, and H. Abramovich).

“Dynamic global postbuckling behavior of beams by cell-to-cell mapping”, J. of Non- Linear Mechanics, 128, 6, 1993, pp. 651-662 (with Y. Levitas).

“Cubic B-spline collocation method for nonlinear static analysis of panels under mechanical and thermal loadings”, J. of Computers and Structures, 49, 1, 1993, pp. 89-96 (with I. Patlashenko).

“Poincare linear interpolated cell mapping: Method for global analysis of oscillating systems”, J. of Applied Mechanics, 62, 5, 1992, pp. 489-495 (with Y. Levitas).

“A simple model of a stiffened shell type structure for an investigation into the vibration buckling correlation”, J. of Applied Mechanics, 63, 2, 1996, pp. 517-522 (with V.M. Ryaboy).

“Active H infinity control of sound radiation from thin cylindrical panels”, AIAA J. Guidance, Control and Dynamics, 22, 6, Nov.-Dec., 1999, pp. 776-783 (with B. Pletner and M. Idan).

“Control of linear second-order systems by a fuzzy logic based algorithm”, *AIAA J. of Guidance, Control and Dynamics*, 24, 3, May-June 2001, pp. 494-501 (with K. Cohen and J. Ben-Asher).

“Vibration control using fuzzy logic-based active damping”, *AIAA J. of Aircraft*, March-April 2003, pp. 384-390 (with K. Cohen and J. Ben-Asher).

“Use of heat emitted by broken optic fibers: A new approach for damage detection in composites”, *Engineering Failure Analysis*, 12, 6, Dec. 2005, pp. 860-874 (with P. Pevzner and A. Berkovits).

“Impact damage resistance of buckled carbon/epoxy panels”, *Composite Materials*, 73, Iss. 2, May 2006, pp. 130-137 (with I. Herszberg).

“An analysis methodology for failure in postbuckling skin-stiffener interfaces”, *Composite Structures*, 86, March 2008, pp. 186-193 (with A.C. Orifici, R.S. Thomson, I. Herszberg, R. Degenhardt and J. Bayandor).

“On the feasibility of introducing auxetic behavior into thin walled structures”, *Acta Materialia*, 57, 2009, pp. 125-135 (with V. Salit).

“Repeated buckling and postbuckling behavior of laminated stringer-stiffened composite panels with and without damage”, *Int. J. Structure Stability and Dynamics*, 10, 4, 2010, pp. 807-825 (with H. Abramovich).