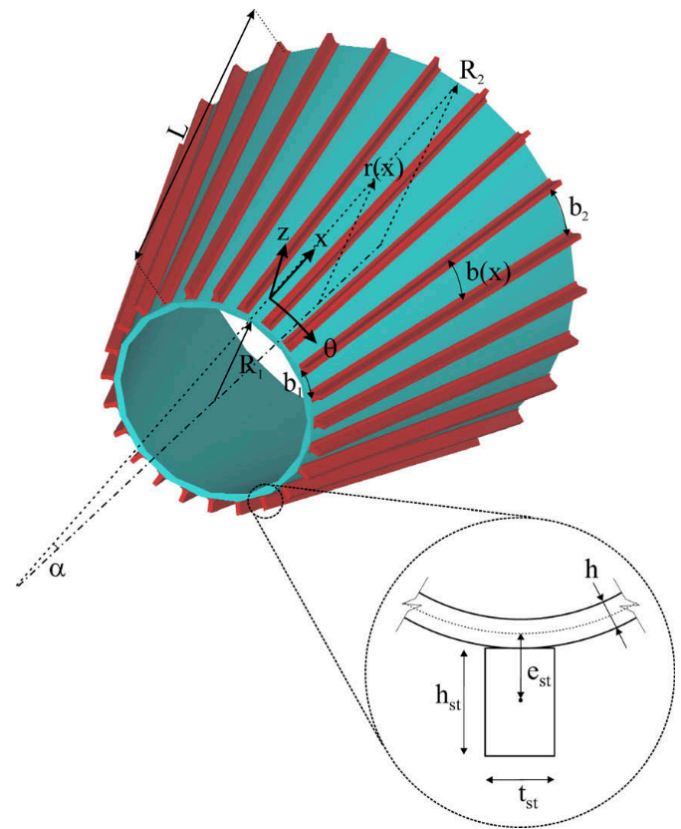




**Professor Emeritus Izhak Sheinman**



From: Mahmood Jabareen and Izhak Sheinman, "Stability of imperfect stiffened conical shells", International Journal of Solids and Structures, Volume 46, No.10, May 2009, pp. 2111-2125

See:  
<http://www.technion.ac.il/~civil/sheinman/index.html>  
<http://www.worldcat.org/identities/np-sheinman,%20izhak>  
<http://journalogy.net/Author/12976688/izhak-sheinman>  
<http://cee.technion.ac.il/eng/Templates/ShowPage.asp?DBID=1&TMID=139&LNGID=1&FID=166&PID=0&ID=365>

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**Education:**

1972 Ph.D, Thesis: "Buckling of Shells of Revolution Subjected to Non-Axisymmetric Loads"

**Research Interests:**

Buckling.  
Post-buckling.

Vibration and Dynamics.  
Composite laminated structures.  
Delamination.  
Shells.  
Vibration induced by people.  
Nonlinear Analysis.  
Identification.

### **Selected Publications (from January 1995 - 1997):**

1. Song Y., Sheinman I., and Simites G. J. "Thermo-elastoviscoplastic buckling behavior of cylindrical shells under axial compression" *ASCE Eng. Mec.*, Vol. 121 No 1. Jan. 1995
2. Firer M., and Sheinman I., "Nonlinear analysis of laminated non-circular cylindrical shells" *Int. J. of Solids and Structures*, Vol. 32, No. 10 pp. 1405-1416 1995
3. Levi H., Ishai O., Altus E., and Sheinman I., "Mechanical performance of thin-walled tubular composite elements under uniaxial loading part 1 tensile behavior *Composite Structures* 31 pp. 163-170 1995
4. Ishai O., Levi H., Altus E., and Sheinman I., "Mechanical performance of thin-walled tubular composite elements under uniaxial loading part 2 compressive behavior *Composite Structures* 31 pp. 171-175 1995
5. Sheinman I., "Damage detection and updating the stiffness and mass matrices using test data" *Computers & Structures* Vol. 59 No. 1 pp. 149-156 1996
6. Sheinman I., Eisenberger M., and Bernstein Y., "An improved high-order element for prebuckling and buckling of laminated plane frame" *Int. J. for Numerical Methods in Engineering* Vol. 39 No. 13 pp. 2155-2169 1996
7. Sheinman I., and Kardomateas G., "Energy release rate and stress intensity factors for delaminated composite laminates" *Solids & Structures* vol. 34 No 4 pp. 451-459 1997
8. Sheinman I., Kardomateas G., and Pelegri A., "Delamination growth during pre- and post -buckling phases of delaminated composite laminates" *Solids & Structures* Vol. 35 pp. 19-31 1997

### **Selected Earlier than 1995 Publications:**

9. Sheinman I and Simites GJ, "Buckling analysis of geometrically imperfect stiffened cylinders under axial compression", *Journal of American Institutes of Aeronautics and Astronautics* 1977;15(3):374-379.
10. Yair Tene and Izhak Sheinman, "Dynamics of shells of revolution under axisymmetric load involving shear deformation", *Computers & Structures*, Vol. 8, No. 5, May 1978, pp. 563-568, doi:10.1016/0045-7949(78)90093-7
11. Izhak Sheinman, "Application of DSISR program to recessed shells of revolution", *Computers & Structures*, Vol. 14, Nos. 5-6, 1981, pp. 361-368, doi:10.1016/0045-7949(81)90055-9
12. Sheinman, I., and Frostig, Y., "Post-Buckling Analysis of Stiffened Laminated Panel," *Journal of Applied Mechanics*, Vol. 55, No. 3, 1988, pp. 635-640. doi:10.1115/1.3125841
13. I. Sheinman and M. Firer. Buckling analysis of laminated cylindrical shell with arbitrary cross-section. *AIAA Journal*, 32(3):648-654, 1994.
14. G. J. Simites and I. Sheinman. Optimization of geometrically imperfect stiffened cylindrical shells under axial compression. *Computers and Structures*, 9(4):377-381, 1978.

15. Frostig, Y., Siton, G., Segal, A., Sheinman, I. And Weller, T., "Postbuckling Behavior of Laminated Composite Stiffeners and Stiffened Panels under Cyclic Loading," AIAA Journal of Aircraft, Vol.28, No.7, July 1991, pp.471-480.
16. Sheinman, I. and Simitzes, G.J., "Axially loaded stiffened and unstiffened cylindrical shells", Journal of Applied Mechanics. Vol. 49, pp. 666-669. Sept. 1982
17. George J. Simitzes and Izhak Sheinman, "Dynamic buckling of shell structures Concepts and applications", Acta Astronautica, Vol. 9, No. 3, March 1982, pp. 179-182, doi:10.1016/0094-5765(82)90087-X
18. I. Sheinman, D. Shaw and G.J. Simitzes, "Nonlinear analysis of axially-loaded laminated cylindrical shells", Computers & Structures, Vol. 16, Nos. 1-4, 1983, pp. 131-137, doi:10.1016/0045-7949(83)90155-4
19. D. Shaw (1), G.J. Simitzes (1) and I. Sheinman, "Imperfect, laminated, cylindrical shells in torsion and axial compression", Acta Astronautica, Vol. 10, Nos. 5-6, May-June 1983, pp. 395-400, doi:10.1016/0094-5765(83)90089-9
20. Izhak Sheinman and Shoshana Greif, "Dynamic Analysis of Laminated Shells of Revolution", Journal of Composite Materials, November 1984, vol. 18, no. 3, pp. 200-215, doi: 10.1177/002199838401800301
21. G.J. Simitzes, D. Shaw, I. Sheinman and J. Giri, "Imperfection sensitivity of fiber-reinforced, composite, thin cylinders", Composites Science and Technology, Vol. 22, No. 4, 1985, pp. 259-276, doi:10.1016/0266-3538(85)90064-8
22. G. J. Simitzes, I. Sheinman and D. Shaw, "The accuracy of Donnell's equations for axially-loaded, imperfect orthotropic cylinders", Computers & Structures, Vol. 20, No. 6, 1985, pp. 939-945, doi:10.1016/0045-7949(85)90013-6
23. Simitzes, G. J., Shaw, D. and Sheinman, I.I, "Stability of Cylindrical Shells, by Various Nonlinear Shell Theories", ZAMM - Journal of Applied Mathematics and Mechanics / Zeitschrift für Angewandte Mathematik und Mechanik, Vol. 65, No. 3, 1985, pp. 159-166. doi: 10.1002/zamm.19850650311
24. Izhak Sheinman, "Nonlinear equations of laminated panels with laminated stiffeners", Composite Structures, Vol.8, No. 4, 1987, pp. 287-292, doi:10.1016/0263-8223(87)90020-1
25. I. Sheinman and M. Adan, "The Effect of Shear Deformation on Post-Buckling Behavior of Laminated Beams", J. Appl. Mech., Vol. 54, No. 3, September 1987, pp. 558-562, doi:10.1115/1.3173069
26. Izhak Sheinman and Shmuel Weissman, "Coupling Between Symmetric and Antisymmetric Modes in Shells of Revolution", Journal of Composite Materials, November 1987, vol. 21, no. 11, 988-1007, doi: 10.1177/002199838702101101
27. Izhak Sheinman and Yeoshua Frostig, "Post-Buckling Analysis of Stiffened Laminated Panel", J. Appl. Mech., Vol. 55, No. 3, September, 1988, pp.635-640, doi:10.1115/1.3125841
28. Izhak Sheinman, Mordechai Bass and Ori Ishai, "Effect of delamination on stability of laminated composite strip", Composite Structures, Vol. 11, No. 3, 1989, pp. 227-242, doi:10.1016/0263-8223(89)90060-3
29. I. Sheinman and M. Soffer, "Effect of Delamination on the Nonlinear Behavior of Composite Laminated Beams", ASME J. Eng. Mater. Technol., Vol. 112, No. 4, October 1990, pp. 393-397, doi:10.1115/1.2903348
30. Izhak Sheinman and Yeoshua Frostig, "Postbuckling analysis of stiffened Laminated Curved Panels", ASCE J. Engrg. Mech. Vol. 116, 1990, pp. 2223-2237, doi:10.1061/(ASCE)0733-9399(1990)116:10(2223)
31. Izhak Sheinman, Yeoshua Frostig and Alex Segal, "Nonlinear Analysis of Stiffened Laminated Panels with Various Boundary Conditions", Journal of Composite Materials, June 1991, vol. 25, no. 6, pp. 634-649, doi: 10.1177/002199839102500601
32. Izhak Sheinman and Yosi Reichman, "A study of buckling and vibration of laminated shallow curved panels", International Journal of Solids and Structures, Vol. 29, No. 11, 1992, pp. 1329-1338, doi:10.1016/0020-7683(92)90081-4
33. Izhak Sheinman and Marina Firer, "Buckling and post-buckling of laminated non-circular cylindrical shells", in Proceedings of ICCM/9: Composites properties and applications, Volume VI, edited by Antonio

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#### **Selected Later than 1997 Publications:**

35. Sheinman, I. and Goldfeld, Y. 'On the Accuracy of Shell Theories with Regard to the Initial Post-buckling Behavior of Cylindrical Shells', *AIAA Journal*, Vol. 42, No. 2, pp. 429-432, February 2004

36. Goldfeld, Y., Sheinman, I. and Baruch, M. 'Imperfection Sensitivity of Conical Shells', *AIAA Journal*, Vol. 41, No. 3, pp. 517-524, March 2003.

37. Sheinman, I. and Goldfeld, Y. 'Imperfection Sensitivity of Laminated Cylindrical Shells in Terms of Different Shell Theories', *ASCE Journal of Engineering Mechanics*, Vol. 129, No. 9, pp. 1048-1053, September 2003.

38. Sheinman, I. and Goldfeld, Y. 'Buckling of Laminated Cylindrical Shells in Terms of Different Shell Theories and Formulations', *AIAA Journal*, Vol. 39, No. 9, pp. 1773-1781, September 2001.  
doi: 214, 35400009945776.0160

39. Goldfeld, Y. and Sheinman, I. 'Discontinuity in the Sensitivity Curves of Shells Structures', *ASME Journal of Applied Mechanics*, Vol. 71, No. 3, pp. 418-420, May 2004.

40. Jie Yin, Zexian Cao, Chaorong Li, Izhak Sheinman, Xi Chen, "Stress-driven buckling patterns in spheroidal core/shell structures", *Proceedings of the National Academy of Sciences of the U.S.A.*, October 20, 2008.

41. Jabareen, M. and Sheinman, I., "Effect of the Nonlinear Pre-buckling State on the Bifurcation Point of Conical Shells," *International Journal of Solids and Structures*, 43, 2146-2159, 2006.

42. Mahmood Jabareen and Izhak Sheinman, "Buckling and Sensitivity to Imperfection of Conical Shells Under Dynamic Step-Loading", *J. Appl. Mech.*, Vol. 74, No. 1, January 2007, pp. 74–80, doi:10.1115/1.2178836

43. Mahmood Jabareen and Izhak Sheinman, "Stability of imperfect stiffened conical shells", *International Journal of Solids and Structures*, Volume 46, No.10, May 2009, pp. 2111-2125, Special Issue in Honor of Professor Liviu Librescu doi:10.1016/j.ijsolstr.2008.07.029