



Professor William A. Nash (1923 – 2008) Outline of Nash's famous "Strength of Materials" textbook (photograph from Illinois Institute of Technology "IIT Magazine", Spring 2009)

See:

<http://www.umass.edu/newsoffice/article/obituary-william-nash-professor-emeritus-civil-engineering>

Obituary (from the periodical "UMassAmherst": News & Media Relations, Dated June 19, 2015):

William A. Nash, 85, of South Hadley, died May 21 [2008], professor emeritus of Civil Engineering, [University of Massachusetts, Amherst.

Born in Chicago, Ill., he graduated valedictorian of Illinois Institute of Technology in civil and mechanical engineering in 1944. He received his Ph.D. in mechanical engineering in 1949 from the University of Michigan.

From 1949-54, he was a research engineer at the Naval Ship Research and Development Center in Washington, D.C. From 1953-57, he served as a structural researcher at Bethesda Naval Institute, where he participated in the deepest recorded, and still classified, naval dive and reverse engineering of recovered Soviet submarines off the coast of Norway.

He taught and served as head of mechanical engineering at the University of Florida from 1958-67. He joined Civil Engineering Department [University of Massachusetts, Amherst] in 1967 and retired in 1992.

Throughout his career, he served as a consultant for the U.S. Navy, U.S. Air Force, Lockheed International, General Electric and the Jet Propulsion Laboratory.

He was the author of "Strength of Materials," an engineering textbook that sold over 1 million copies in nine languages, and served as a founder and editor-in-chief of the *International Journal of Non-Linear Mechanics*. A prolific writer, he drafted all on his trusty manual 1920s Underwood typewriter, including his last book on construction of non-classified civilian submarines and other hydrostatically loaded structures.

He was a member of the American Society of Mechanical Engineers, International Association for Shell and Spatial Structures and the American Society of Engineering Education.

In 1961, he received the Curtis W. McGraw Research Award for engineering college research. He was elected a fellow of the American Society of Mechanical Engineers in 1972. In 1988, he received the Alexander von Humboldt award (senior U.S. scientist) for his work at the Technical University of Darmstadt, Germany. In 1997, he received a professional achievement award from Illinois

Institute of Technology Alumni Association. He served as an honorary professor of engineering at Shanghai University of Technology in China for his work on seismology.

Selected Publications:

Robert C. Slankard and William A. Nash, "Tests Of The Elastic Stability Of A Ring-Stiffened Cylindrical Shell, Model Br-5 ($\lambda = 1.705$), Subjected To Hydrostatic Pressure", David Taylor Model Basin, Washington DC, Report dated May 1953, proxy Url : <http://handle.dtic.mil/100.2/AD015517>

Nash, W. A., "Buckling of Thin Cylindrical Shells Subject to Hydrostatic Pressure," Journal of the Aeronautical Sciences, Vol. 21, 1954, pp. 354-355.

W.A. Nash, "Further considerations of the general instability of ring-stiffened cylindrical shells subject to hydrostatic...", Proceedings of the International Congress of..., 1954 (EP Noordhoff)

Nash, W. A., "Effect of Large Deflections and Initial Imperfections on the Buckling of Cylindrical Shells Subjected to Hydrostatic Pressure," J. Aero. Sci., 22, No. 4, (April,1955), 264.

W.A. Nash, "An experimental analysis of the buckling of thin initially imperfect cylindrical shells subject to torsion", Proc. Soc. Experimental Stress Analysis, 1959

Nash, W. A. and Modeer, J. R. (1959). Certain Approximation Analysis of the Nonlinear Behavior of Plates and Shallow Shells. Proceedings of the Symposium on the Theory of thin Elastic Shells, New York, pp. 331–353.

W. A. Nash, "Non-axially symmetric elastic buckling of a thin shallow cylindrical panel", Proc. of the International Congress of Theoretical and applied mechanics, 1960, Springer

W. A. Nash, "**Recent Advances in the Buckling of Thin Shells**", Applied Mechanics Reviews Vol. 13, No. 3, March 1960, pp. 161-164

W. A. Nash and J. R. Modeer, "Certain Approximate Analyses of the Nonlinear Behavior of Plates and Shallow Shells," Proceedings of IUTAM Symposium on Theory of Thin Elastic Shells, North Holland Publishing Company, Amsterdam (1960).

Anthony P. Coppa and W.A. Nash (General Electric Co. Missiles and Space Division, Philadelphia, PA), "Dynamic buckling of shell structures subject to longitudinal impact", Technical Documentary Report No. FDL-TDR-64-65. DTIC Accession Number: AD0610514, Handle / proxy Url : <http://handle.dtic.mil/100.2/AD610514>

Nash, W. A., Wilder, J. A., "Response of Thin Conical Shells to Dynamically Applied Axial Force," International Journal of Non-Linear Mechanics, Vol. 7, 1972, pp. 65-80.

Watawala, L. and Nash, W. A. (1983). Influence of Initial Geometric Imperfections on Vibrations of Thin Cylindrical Shells. Computers & Structures, 16:125–130.