



Professor Donald A. Danielson

Donald A. Danielson, *Vectors and Tensors in Engineering and Physics*,
The Perseus Books Group, 2003

See:

http://faculty.nps.edu/vitae/cgi-bin/vita.cgi?p=display_vita&id=1023567918

<http://faculty.nps.edu/dad/>

Department of Applied Mathematics
Naval Postgraduate School, Monterey, California

Education:

PhD - Harvard, 1968

MS - Harvard, 1965

BS - MIT, 1964

Career:

1985 - present: Associate and Full Professor of Mathematics, Naval Postgraduate School, Monterey, CA

1979 - 1985 - Visiting Professor, University of California, San Diego

1968 - 1979 - Assistant and Associate Professor, University of Virginia

Research Interests:

Use theory and software to model dynamics of fluids and structures. Improve analytical and numerical techniques for prediction of satellite orbits.

Selected Publications:

Books:

Danielson D (1997) *Vectors and tensors in engineering and physics*, 2nd edn. Addison-Wesley, Reading

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Journal Articles, etc:

D. A. Danielson, Buckling and Initial Post-buckling Behavior of Spheroidal Shells under Pressure, Report SM-22, Harvard, March 1968

D. A. Danielson and J. G. Simmonds, "Accurate buckling equations for arbitrary and cylindrical elastic shells", *International Journal of Engineering Science*, Vol. 7, No. 5, May 1969, pp. 459-468

Danielson, D.A., "Buckling and Initial Post-Buckling Behavior of Spherical Shells Under Pressure", *AIAA Journal*, Vol. 7, No.5, pp. 936-944, May 1969

Danielson, D. A., "Buckling and initial postbuckling behavior of spheroidal shells under pressure," *AIAA J.* 7, 936-944, 1969; *AMR* 23 (1970), Rev. 964.

Simmonds, J. G., and Danielson, D. A., "New results for the buckling loads of axially compressed cylindrical shells subject to relaxed boundary conditions," *J. Appl. Mech.* 37, 93-100, 1970.

J. G. Simmonds and D.A. Danielson, "Nonlinear shell theory with a finite rotation vector", *Proc. Kon. Nederl. Akad. Wetenschd.*, Vol. 73, 1970, pp. 460-478

D. A. Danielson (Department of Applied Mathematics, University of Virginia, Charlottesville, Va. 22901, U.S.A), "Simplified intrinsic equations for arbitrary elastic shells", *International Journal of Engineering Science*, Vol. 8, No. 3, March 1970, pp. 251-259

D.A. Danielson, "Stability of the thin elastic shell model of the red blood cell", *Journal of Biomechanics*, Vol. 4, No. 6, December 1971, pp. 611-617

J.G. Simmonds and D.A. Danielson, "Nonlinear shell theory with finite rotation and stress-function vectors", *J. Appl. Mech.*, Vol. 39, 1972, pp. 1085-1090

Danielson, D.A., Natarajan, S.: Tension field theory and the stress in stretched skin. *J. Biomech.* 135–142 (1975)

Danielson DA, Kihl DP, Hodges DH. Tripping of thin-walled plating stiffeners in axial compression. *Thin-Walled Structures* 1990;10:121–142.

Hodges DH, Atilgan AR, Danielson DA (1993) A geometrically nonlinear theory of elastic plates. *J Appl Mech* 60:109–116

D.A. Danielson, A.S. Cricelli, C.L. Frenzen and N. Vasudevan, "Buckling of stiffened plates under axial compression and lateral pressure", *International Journal of Solids and Structures*, Vol. 30, No. 4, 1993, pp. 545-551

Danielson DA. Analytical tripping loads for stiffened plates. *Int J Solids Struct* 1995;32(8– 9):1317–1328.

D.A. Danielson and A. Wilmer, "Buckling of stiffened plates with bulb flat flanges", *International Journal of Solids and Structures*, Vol. 41, Nos 22-23, pp 6407-6427, November 2004