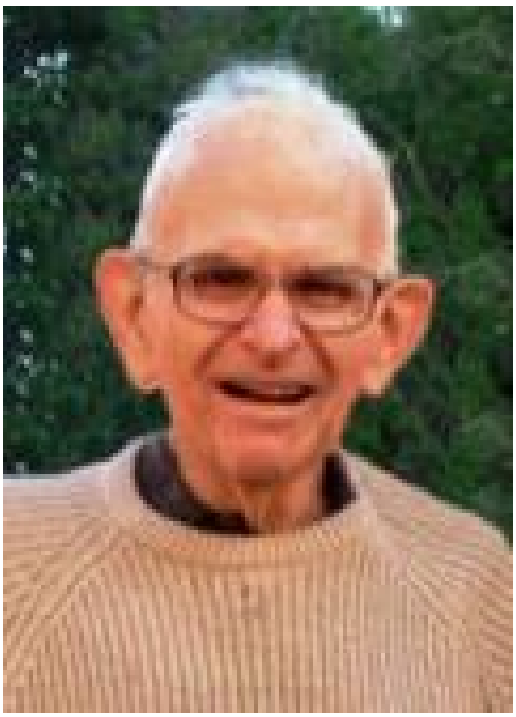

Professor Paul Seide (1926 – 2014)

Obituary:
Paul Seide, a kind and gentle man, passed away peacefully at home on February 7, 2014. He was preceded in death by his beloved wife, Joan, in 2009. Paul was born in 1926 in New York. He and Joan were married in 1951. They came to California in 1952 where Paul received his PhD from Stanford. They relocated to Southern California in 1953 when Paul began working at Ramo Wooldridge (later TRW). Paul and Joan moved to Palos Verdes Estates in 1959. In 1966 Paul became a Professor of Civil Engineering at USC where he worked until his retirement in 1991. Paul and Joan passionately enjoyed traveling. Favorite trips included China, Australia, New Zealand, Europe, Russia, Israel, Turkey, Egypt and Peru. They also loved the theater and were Mark Taper and Ahmanson season ticket holders for decades. We will miss Paul's intellect, his humor, his commentaries on politics, and Sunday dinners together. Paul is survived by his son, Rick (Pam) Seide, daughter Wendy (Barry) Kielsmeier, and grandsons, Chris and Jon Seide, and Matthew (Megan) and David Kielsmeier.

Selected Publications:

Budiansky, B. and Seide, P., “Compressive buckling of simply supported plates with transverse stiffeners”, NACA TN 1557, 1948

Seide, P. and Stein, M., “Compressive buckling of simply supported plates with longitudinal stiffeners”, NACA TN 1825, 1949

Paul Seide and Elbridge Z. Stowell, “Elastic and Plastic Buckling of Simply Supported Solid-Core Sandwich Plates in Compression”, 1950, proxy Url : http://handle.dtic.mil/100.2/ADA298717

ABSTRACT: A solution is presented for the problem of the compressive buckling of simply supported, flat, rectangular, solid-core sandwich plates stressed either in the elastic range or in the plastic range. Charts for the analysis of long sandwich plates are presented for plates having face materials of 24S- TS aluminum alloy, 75S-T6 Alclad aluminum alloy, and stainless steel. A comparison of computed and experimental buckling stresses of square solid-core sandwich plates indicates fair agreement between theory and experiment.

Gossard, M.L., Seide, P., Roberts, W.M., "Thermal Buckling of Plates", NACA TN 2771, 1952

Seide, P., "The effect of longitudinal stiffeners located on one side of a plate on the compressive buckling stress of the plate-stiffener combinations", NACA TN 2873, 1953

Seide P. Axisymmetrical Buckling of circular cones under axial compression. Trans. ASME (J Appl. Mech) 1956. p. 625-8.

P. Seide, "A Donnell type theory for asymmetrical bending and buckling of thin conical shells", J. Appl. Mech. 24, 547-552, (1957).

P. Seide, "On the buckling of truncated conical shells under uniform hydrostatic pressure", Proc. IUTAM Symposium on the Theory of Thin Elastic…, 1959

Paul Seide, "The Stability Under Axial Compression And Lateral Pressure Of A Circular-Cylindrical Shell With An Elastic Core", TRW Space Technology Labs, Los Angeles, California, 1 March 1960
ABSTRACT: The stability under axial compressionoion and lateral prpressure of a finite ciircular-cylindrical shell with an elastic core is treated by means of Donnell's equations. For lateral pressure it is found that a previous solution treating the cylinder as a ring or a long cylinder is adequate for a wide range of combinations of length-radius ratio, radius-thickness ratio, and ratio of moduli of core and cylinder. Results for axial compression are included for completeness and to correct a previous analysis of the same problem.

Seide, P.; Weingarten, V. I.; and Morgan, E. J.: The Development of Design Criteria for Elastic Stability of Thin Shell Structures. STL/TR-60-0000-19425, U.S. Air Force, Dec. 1960.
ABSTRACT: The results of an extensive experimental program on the stability of cylindrical and conical shells under various loading conditions are presented and discussed. Loading conditions for both cylinders and cones include axial compression, axial compression with internal or external pressure, bending with and without internal pressure, axial compression combined with both bending and internal pressure, and a limited amount of data on torsion of conical shells. Where feasible, values suitable for design are recommended and areas needing additional theoretical and experimental study are indicated.

Seide, P. and Weingarten, V.I., "On the buckling of circular cylindrical shells and other thin sections", J. Appl. Mech., Vol. 28, No. 1, 1961

Seide, P. and Weingarten, V. I., "On the Buckling of Cylindrical Shells under Pure Bending," Journal of Applied Mechanics, Vol. 28, 1961, pp. 112-116.

Paul Seide and Victor I. Weingarten, "On the stability of internally pressurized conical shells under compression", 1961

ABSTRACT: The results of an investigation to determine the influence of small deflections on the stability of internally pressurized conical shells under axial compression is presented. The critical axial load is found to depend on a geometry parameter for the small end of the cone, the internal pressure, and, unlike results for cylindrical shells, the end fixity of the shell. Experimentally obtained data are in qualitative agreement with theory but differ quantitatively, probably because of yielding of the low melting temperature alloy used to clamp the ends of the shells and yielding of the shell material.

Seide, P., "The stability under axial compression and lateral pressure of circular cyloindrical shells with a soft elastic core", J. Aero. Sci., Vol. 29, No. 7, 1962, pp. 851-862

Seide, P., "On the Buckling of Truncated Conical Shells under Torsion", Journal of Applied Mechanics-Transactions of the ASME, 321-328, 1962.

"Buckling of thin-walled circular cylinders", NASA Space Vehicle Design Criteria (Structures), NASA Technical Report SP-8007, 1968, also: NASA/SP-8007, Seide, P. Weingarten, V. I. and Peterson, J.P., Buckling of thin-walled circular cylinders, NASA SPACE VEHICLE DESIGN CRITERIA (Structures), NASA (Washington, DC, United States), September,1965

Weingarten, V.I., Morgan, E.J. and Seide, P., "Elastic stability of thin-walled cylindrical and conical shells under axial compression, AIAA J., Vol. 3, No. 3, March 1965

V.I. Weingarten, E.J. Morgan and P. Seide, Elastic stability of thin-walled cylindrical and conical shells under combined internal pressure and axial compression, AIAA J. 3 (1965) 1118-1125.

Seide, P., "A Reexamination of Koiter's Theory of Initial Post-buckling Behavior and Imperfections-Sensitivity of Structures," Thin-Shell Structures: Theory, Experiment, Design, edited by Y. C. Fung and E. E. Sechler, Prentice-Hall, Englewood Cliffs, N.J., 1974, pp. 59-80.

Seide, P.: **Small Elastic Deformations of Thin Shells**, Noordhoff International Publ, Leyden, The Netherlands 1975

Seide, P,. Weingarten, V. I., and Masri, S. F. "Buckling Criteria and Application of Criteria to Design of Steel Containment Shell," NUREG-CR0793, March 1979.

Reaz A. Chaudhuri (1) and Paul Seide (2)
(1) Department of Civil Engineering, University of Utah, Salt Lake City, UT 84112, U.S.A.
(2) Department of Civil Engineering, University of Southern California, Los Angeles, CA 90089-114, U.S.A.
"An approximate method for prediction of transverse shear stresses in a laminated shell", International Journal of Solids and Structures, Vol. 23, No. 8, 1987, pp. 1145-1161, doi:10.1016/0020-7683(87)90052-7
ABSTRACT: A method has been presented wherein the surface-parallel stresses in a laminated shell are first computed using standard finite element formulation and then approximate transverse shear stress variation through the shell thickness is obtained utilizing the first two (stress) equations of equilibrium and divergence theorem. Numerical results have been presented for both homogeneous isotropic and laminated anisotropic cylindrical shells using the Cartesian-like Riemann coordinate approximation and compared to the corresponding analytical solutions.