

Professor Franz Ziegler (1937 – 2016)

See:

<http://euromech.org/news/obituary-prof.-franz-ziegler>

<https://www.linkedin.com/pulse/obituary-my-beloved-father-emounivprof-dipl-ing-drtechn-ziegler>

<http://solid-mechanics.org/english/index.php/message>

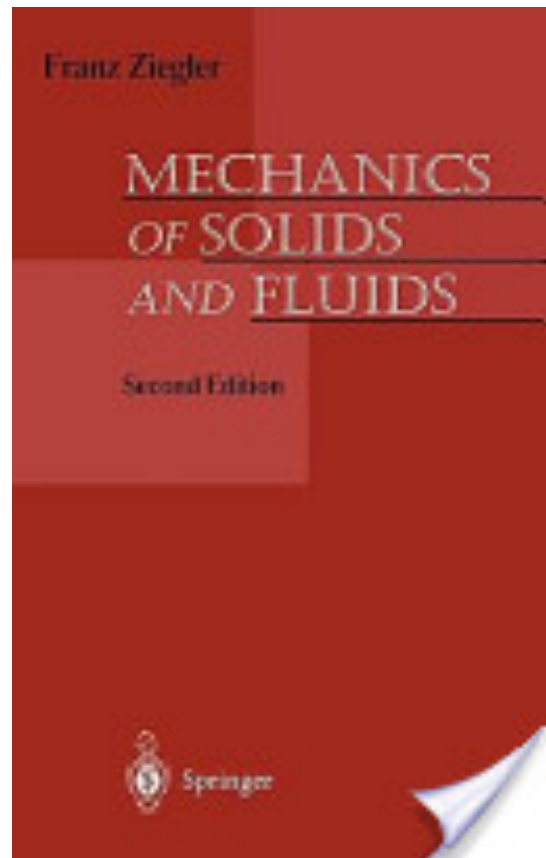
[https://de.wikipedia.org/wiki/Franz_Ziegler_\(Ingenieur\)](https://de.wikipedia.org/wiki/Franz_Ziegler_(Ingenieur))

Professor Emeritus of Rational Mechanics at the Technical University of Vienna

In Memoriam [by Christoph Adam (Innsbruck University); Hans Irschik (Linz University); Rudolf Heuer, Franz G. Rammerstorfer, Wilhelm Schneider (TU Vienna) in EUROMECH News 2016]:

Franz Ziegler joined the Faculty of Civil Engineering of the Vienna University of Technology (TU Vienna) in 1972, where he taught and conducted research for over 34 years, serving as the Head of the Institute of Rational Mechanics. While Franz “retired” to emeritus status in 2006, he remained active in research and editorial activities until his death.

Franz Ziegler was an internationally highly recognized and exceptionally innovative researcher in various fields of theoretical and applied mechanics, such as wave propagation, deterministic and random vibrations of elastic and inelastic structures, thermal stresses, fluid-structure interaction, dynamic plasticity, structural control, and numerical and experimental methods in structural dynamics. The results and findings of his research are recorded in about 300 papers published in peer reviewed journals, books, and conference proceedings. He was the author of the comprehensive textbook “Mechanics of Solids and Fluids”, published in several editions in



Franz Ziegler, Mechanics of Solids and Fluids, Springer, 1995, 845 pages

German, English, and Russian. As a Member of the Editorial Board of various prominent scientific journals, particularly as an Editor of *Acta Mechanica*, Franz dedicatedly served the scientific community. When EUROMECH established the EUROMECH Solid Mechanics and Fluid Mechanics Prizes, Franz Ziegler was the first one to be awarded the EUROMECH Solid Mechanics Prize. Our scientific community recognized Franz's contributions by many further awards, including the Peter Kapitza medal of the Russian Academy of Natural Sciences. He was awarded an Honorary Doctorate of the Polytechnical State University of St. Petersburg, Russia. He was elected Full Member of the Austrian Academy of Science, elected Member Abroad of the Russian Academy of Natural Sciences, and elected Member Abroad of the Russian Academy of Sciences. He served as Secretary General of the International Union of Theoretical and Applied Mechanics (IUTAM), President and Deputy President of the International Association of Applied Mathematics and Mechanics (GAMM), President of the International Institute of Acoustics and Vibrations (IIAV), and Chairman of the Board of the Austrian Association of Earthquake Engineering and Structural Dynamics (OGE).

Selected Publications:

Books:

Franz Ziegler, *Mechanics of Solids and Fluids*, Springer, 1995, 845 pages

K Watanabe and F. Ziegler, Editors, *Dynamics of Advanced Materials and Smart Structures*, Kluwer Academic Publishers, Dordrecht (2003)

Journal Articles:

Ziegler, F., 1982, "Arguments for and Against Engesser's Buckling Formulas," *Ingenieur-Archiv*, 52, pp. 105–113.

Ziegler, F. and Rammerstorfer, F.G., *Thermoelastic Stability. Thermal Stresses III*, ed. R.B. Hetnarski. North-Holland, Amsterdam, 1989. Ch. 2, pp. 108–189.

Heuer, R., Irschik, H. and Ziegler, F., Multi-modal approach for large natural flexural vibrations of thermally stressed plates *Nonlinear Dynamics*, **1** (1990) 449–58

Heuer, R., Irschik, H. and Ziegler, F., Large Amplitude Random Vibrations of Polygonal Plates. IUTAM-Symposium on Nonlinear Stochastic Mechanics, eds. N. Bellomo, F. Casciati. Springer-Verlag, Berlin, 1992, 285–96.

Heuer, R., Irschik, H. and Ziegler, F., Nonlinear Random Vibrations of Thermally Buckled Skew Plates *Probabilistic Engineering Mechanics* (1993), in press.

Heuer, R., Irschik, H. and Ziegler, F., Randomly Forced Nonlinear Vibrations of Layered Skew Plates and Shallow Shells. 34th AIAA/ASME/ASCE/AHS/ASC-Conference, Paper 93–1625-CP, La Jolla, CA, 1993

F. Ziegler, R. Heuer and H. Irschik, "Dynamic snap-through and snap-buckling of shear-deformable panels in a random environment", Chapter in *Probabilistic Structural Mechanics: Advances in Structural Reliability Methods*; Part of the series: International Union of Theoretical and Applied Mechanics, edited by P.D. Spanos and Y.-T. Wu, Springer 1994, pp 595-610

Heuer R., Ziegler F.: Thermoelastic stability of layered shallow shells. *Int. J. Solid Struct.* **41**, 2111–2120 (2004)