Structural Dynamics For Engineers 2nd Edition

J. N. Reddy (engineer)

Timoshenko Medal, American Society of Mechanical Engineers, 2019. ASME Medal, American Society of Mechanical Engineers, 2016. Prager Medal, Society of Engineering

Junuthulla N. Reddy (born 12 August 1945) is a Distinguished Professor and the inaugural Oscar S. Wyatt Endowed Chair in Mechanical Engineering at Texas A&M University. He is known for his contributions to the finite element method, solid mechanics, plate theory, composite materials, and applied mathematics. Reddy has published over 620 journal articles, authored 20 books, and delivered more than 150 invited talks worldwide. He is listed among the ISI Highly Cited Researchers in Engineering, with over 54,000 citations, an h-index of 123, and an i10-index of 721on Google Scholar.

Ray William Clough

and co-authored, with Joseph Penzien, a text on structural dynamics. As of 2025, the second edition (revised) of this text is still in print and widely

Ray William Clough, (July 23, 1920 – October 8, 2016), was Byron L. and Elvira E. Nishkian Professor of structural engineering in the department of civil engineering at the University of California, Berkeley and one of the founders of the finite element method (FEM). His 1956 article was one of the first applications of this computational method. He coined the term "finite elements" in an article in 1960. He was born in Seattle and died on October 8, 2016, aged 96.

Mechanical engineering

dynamics, thermodynamics, materials science, design, structural analysis, and electricity. In addition to these core principles, mechanical engineers

Mechanical engineering is the study of physical machines and mechanisms that may involve force and movement. It is an engineering branch that combines engineering physics and mathematics principles with materials science, to design, analyze, manufacture, and maintain mechanical systems. It is one of the oldest and broadest of the engineering branches.

Mechanical engineering requires an understanding of core areas including mechanics, dynamics, thermodynamics, materials science, design, structural analysis, and electricity. In addition to these core principles, mechanical engineers use tools such as computer-aided design (CAD), computer-aided manufacturing (CAM), computer-aided engineering (CAE), and product lifecycle management to design and analyze manufacturing plants, industrial equipment...

Daniel Inman

(2000-04-30). Structural and Machine Design Using Piezoceramic Materials: A Guide for Structural Design Engineers. NASA. Engineering Mechanics: Dynamics Paperback

Daniel J. Inman is an American mechanical engineer, Kelly Johnson Collegiate Professor and former Chair of the Department of Aerospace Engineering at the University of Michigan.

Alphose Zingoni

Analysis (2nd Edition). ICE Publishing, 2017, London, 464 pp. ISBN 978-0-7277-6028-9. Zingoni A. (Author). Vibration Analysis and Structural Dynamics for Civil

Alphose Zingoni (born 1962) is a Zimbabwean–South African engineer and professor of structural engineering and mechanics in the Department of Civil Engineering at the University of Cape Town, and founder of the Structural Engineering, Mechanics & Computation (SEMC) series of international conferences.

Glossary of structural engineering

glossary of structural engineering terms pertains specifically to structural engineering and its sub-disciplines. Please see Glossary of engineering for a broad

This glossary of structural engineering terms pertains specifically to structural engineering and its sub-disciplines. Please see Glossary of engineering for a broad overview of the major concepts of engineering.

Most of the terms listed in glossaries are already defined and explained within itself. However, glossaries like this one are useful for looking up, comparing and reviewing large numbers of terms together. You can help enhance this page by adding new terms or writing definitions for existing ones.

Damp (structural)

Structural dampness is the presence of unwanted moisture in the structure of a building, either the result of intrusion from outside or condensation from

Structural dampness is the presence of unwanted moisture in the structure of a building, either the result of intrusion from outside or condensation from within the structure.

A high proportion of damp problems in buildings are caused by ambient climate dependent factors of condensation and rain penetration. Capillary penetration of fluid from the ground up through concrete or masonry is known as "rising damp" and is governed by the shape and porosity of the construction materials through which this evaporation-limited capillary penetration takes place. Structural damp, regardless of the mechanisms through which it takes place, is exacerbated by higher levels of humidity.

Dampness control is fundamental to the proper functioning of any building. Controlling moisture is important to protect...

G. Guruswamy

Chamarajpet". Finite Element Structural Analysis, Prentice Hall 1986 ISBN 0133171167 Standard Handbook for Aerospace Engineers, 2nd Edition Edited by Brij N. Agrawal

Guru Guruswamy is an American engineer working as principal scientist at Ames Research Center since 1988.

He pioneered research in the area of computational aeroelasticity that involves Unsteady Aerodynamics, Finite Element Methods, Computational Fluid Dynamics, Parallel Computing and Problem-Solving Environment. His innovative research was utilized in the first commercial 3-D computational aeroelasticity software developed by a major aerospace industry. The aeroelasticity legend Holt Ashley extensively referred to Guruswamy's research in his classical review paper. In 1988 he demonstrated the unique use of Transonic Small Perturbation based CFD for designing active controls to increase the safety of aircraft. It was followed by a break through development of Euler flow equations based...

Stephen Timoshenko

was elected dean of the Division of Structural Engineering in 1909. In 1911 he signed a protest against Minister for Education Kasso and was fired from

Stepan Prokopovich Timoshenko (Ukrainian: Степан Прокопович Тимошенко, romanized: Stepan Prokopovych Tymoshenko, Ukrainian pronunciation: [ste'pan pro'kɔpoʊe͡ʧ tɪmo'ʃɛnko]; Russian: Степан Прокофьевич Тимошенко, romanized: Stepan Prokofyevich Timoshenko, [sʲtʲɪ'pan prɐ'kofʲjɪvʲɪtɕ tʲɪmɐ'ʂɛnkə]; December 22 [O.S. December 10] 1878 – May 29, 1972), later known as Stephen Timoshenko, was a Ukrainian and later an American engineer and academician.

He is considered to be the father of modern engineering mechanics. An inventor and one of the pioneering mechanical engineers at the St. Petersburg Polytechnic University. A founding member of the Ukrainian Academy of Sciences, Timoshenko wrote seminal works in the areas of engineering mechanics, elasticity and strength of materials, many of which are...

Rebecca Sparling

was a materials engineer and staff consultant for Northrop Grumman and General Dynamics, respectively. She retired from General Dynamics. The Society of

Rebecca "Becky" Hall Sparling, P.E. (née Hall; June 7, 1910 – 1996) was an American materials engineer and registered mechanical engineer in the manufacturing, automotive, and aerospace industries from the 1930s to the late 1960s, who had "established a nation-wide reputation as a metallurgist". Often working on classified projects, Sparling advanced the field of metallurgy in severe environments and developed non-destructive engineering test methods, especially in brittle, high-strength, or specialized materials.

Sparling developed a new, non-destructive liquid penetrant method for defect inspection, and she also co-invented a non-destructive ultrasonic immersion technique called “immersed scanning”. She was a key contributor in drafting the early industry standards for non-destructive test...