



Professor Albert C. J. Luo

See:

<https://scholar.google.com/citations?user=vS8yNwkAAAAJ&hl=en>

https://en.wikipedia.org/wiki/Albert_C.J._Luo

<https://www.siue.edu/engineering/me/faculty-staff/luo-publications.shtml>

Mechanical Engineering, Southern Illinois University, Edwardsville, Illinois, USA

Summary from Wikipedia:

Luo is an international recognized scientist in the field of nonlinear dynamics and mechanics. His principal research interests lie in the field of Hamiltonian chaos, nonlinear mechanics, and discontinuous dynamical systems. Luo received his B.S. in mechanical engineering (1984), M.S. in engineering mechanics (1990) in China, and Ph.D. in applied mechanics (1996) in Canada. Since 1998, Luo has worked at Southern Illinois University Edwardsville as an assistant/associate/full/distinguished research professor. He has published over 350 peer-reviewed journal and conference papers. Luo has been an editor for the Journal Communications in Nonlinear Science and Numerical simulation, and the book series on Nonlinear Systems and Complexity (Springer), and Nonlinear Physical Science (Higher Education Press). Luo developed theories for nonlinear deformable-body dynamics, such as: an approximate plate theory, a theory for soft structures, a nonlinear theory for beams and rods, Fluid-induced nonlinear structural vibration and a large damage theory for anisotropic materials.

Selected Publications:

Books:

Albert C. J. Luo, Nonlinear Deformable-Body Dynamics, Springer, 2011, 430 pages

A. C. J. Luo and Y. Guo, Vibro-Impact Dynamics (Wiley, New Jersey, 2013).

Albert C. J. Luo, Bifurcation and Stability in Nonlinear Dynamical Systems, Vol. 28 in the Series: Nonlinear Systems and Complexity, Springer Ebook, January 30, 2020

Journal Articles, etc.:

- Luo, A. C. (2000). An approximate theory for geometrically nonlinear thin plates. *International Journal of Solids and Structures* 37(51): 7655–7670
- Luo, A.C.J., Wang, F.Y.: Chaotic motion in a micro-electro-mechanical system with non-linearity from capacitors. *Commun. Nonlinear Sci. Numer. Simul.* 7, 31–49 (2002).
- A. C. J. Luo and J. Mote, “Asymmetric responses of rotating, thin disks experiencing large deflections,” *Computers & Mathematics with Applications*, vol. 45, no. 1–3, pp. 217–228, 2003.
- A. C. J. Luo and H. R. Hamidzadeh, Equilibrium and buckling stability for axially traveling plates, *Commun. Nonlinear Sci. Numer. Simulat.* 9 (2004) 343–360.
- A. C. J. Luo, “Chaotic motions in resonant separatrix zones of periodically forced, axially travelling, thin plates,” *Proceedings of the Institution of Mechanical Engineers K: Journal of Multi-Body Dynamics*, vol. 219, no. 3, pp. 237–247, 2005.
- Luo, ACJ. (eds.) *Dynamical Systems*, pp. 95–104. Springer, New York (2010)
- A. C. J. Luo, “A theory for nonlinear soft webs,” *Communications in Nonlinear Science and Numerical Simulation*, vol. 16, no. 4, pp. 2184–2199, 2011.
- Yu, B. & Luo, A. C. J. [2017] “Bifurcation trees of period-1 motions to chaos of a nonlinear cable galloping,” *Discont. Nonlin. Compl.* 6, 329–391.