Professor Santosh Kapuria

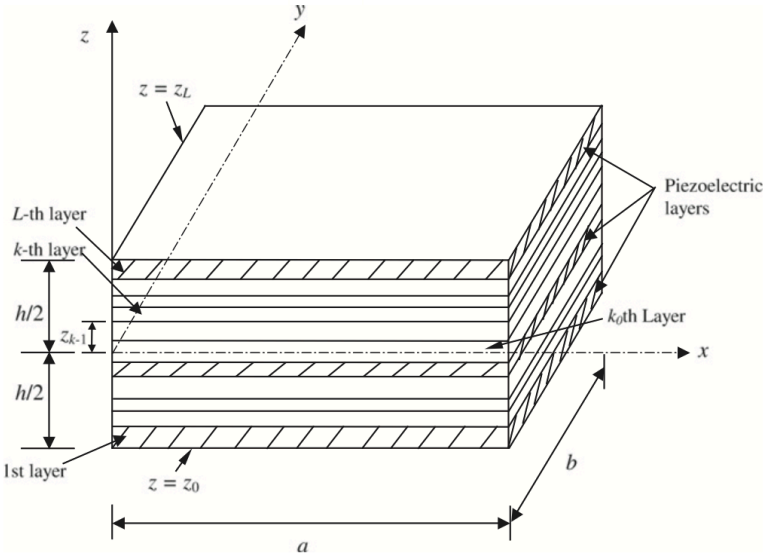

Fig. 1. Geometry of piezoelectric laminated plate.

From: S. Kapuria and J.K. Nath, "Coupled global-local and zigzag-local laminate theories for dynamic analysis of piezoelectric laminated plates

See:
http://serc.res.in/prof-santosh-kapuria-2/
http://web.iitd.ac.in/~kapuria/
https://inae.in/expert-search/index.php/santosh-kapuria
https://scholar.google.co.in/citations?user=fgSzc8gAAAAJ&hl=en
https://www.researchgate.net/profile/Santosh_Kapuria

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Education:
1994-1997: Ph.D. Applied Mechanics, Indian Institute of Technology Delhi, India
1989-1991: M.E. Structural Engineering, Indian Institute of Science, Bangalore, India
1985-1989: B.C.E. Civil Engineering, Jadavpur University, Kolkata, India

Research Interests:
Smart composite and sandwich structures; FGM structures; Damage detection and health monitoring; Active/semi-active control of structures; Finite element analysis; Computational structural mechanics; Offshore pipelines and structures; Biomechanics

Awards and Honors:
Fellow, Indian Academy of Sciences, 2017
Fellow, Indian National Science Academy (INSA), 2015
Fellow, National Academy of Sciences, India (NASI), 2015
Fellow, Indian National Academy of Engineering (FNAE), 2010

Selected Publications:

G. P. Dube, S. Kapuria, and P. C. Dumir. Exact piezothermoelastic solution of simply-supported orthotropic flat panel in cylindrical bending. International Journal of Mechanical Sciences, 38:1161–1177, 1996.

S. Kapuria and G. P. Dube. Exact piezothermoelastic solution for simply sup- ported laminated flat panel in cylindrical bending. ZAMM · Z. Angew. Math. Mech., 77:281–293, 1997.

S. Kapuria. An efficient coupled theory for multilayered beams with embed- ded piezoelectric sensory and active layers. International Journal of Solids and Structures, 38:9179–9199, 2001.

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Kumari P., Nath J.K., Dumir P.C., Kapuria S.: 2D exact solutions for flat hybrid piezoelectric and magnetoelastic angle-ply panels under harmonic load. Smart Mater. Struct. 16(5), 1651–1661 (2007)

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S. Kapuria and P. Kumari. Three-dimensional piezoelasticity solution for dynamics of cross-ply cylindrical shells integrated with piezoelectric fiber reinforced composite actuators and sensors. Composite Structures, 92:2431–2444, 2010.

J.K. Nath and S. Kapuria, "Coupled efficient layerwise and smeared third order theories for vibration of smart piezolaminate cylindrical shells", Composite Structures, Vol. 94, No. 5, pp 1886-1899, April 2012

S. Kapuria and J.K. Nath, "On the accuracy of recent global-local theories for bending and vibration of laminated plates", Composite Structures, Vol. 95, pp 163-172, January 2013

S. Kapuria and J.K. Nath, "Coupled global-local and zigzag-local laminate theories for dynamic analysis of piezoelectric laminated plates", Journal of Sound and Vibration, Vol. 332, No. 2, pp 306-325, January 2013

S. Kapuria and M. Y. Yasin. A nonlinear efficient layerwise finite element model for smart piezolaminated composites under strong applied electric field. Smart Materials and Structures, 22:055021, 2013.

M. Yaqoob Yasin and S. Kapuria "An efficient layerwise finite element for shallow composite and sandwich shells", Composite Structures, Vol. 98, pp 201-214, April 2013

Jayanta Kumar Nath and Santosh Kapuria, "Global-local and zigzag-local theories for direct transverse shear stress computation in piezoelectric laminated plates under thermal loading", International Journal of Mechanical Sciences, Vol. 75, pp 158-169, October 2013

Santosh Kapuria, Mayank Patni and M. Yaqoob Yasin, “A quadrilateral shallow shell element based on the third-order theory for functionally graded plates and shells and the inaccuracy of rule of mixtures”, European Journal of Mechanics – A/Solids, Vol. 49, pp 268-282, January-February 2015
Adnan Ahmed and Santosh Kapuria, “A four-node facet shell element for laminated shells based on the third order zigzag theory”, Composite Structures, Vol. 158, pp 112-127, December 2016