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Department of Mechanical Engineering  
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**Education:**

1998 Ph.D. Engineering Mechanics, Virginia Tech, Blacksburg, USA

1996 M.A., Mathematics, University of Pittsburgh

1996 M.S. Mechanical Engineering, University of Pittsburgh

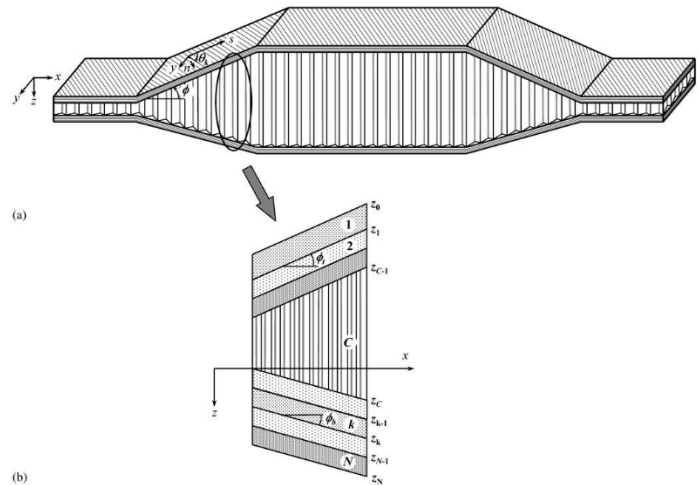
1993 B.Tech., Aerospace Engineering, Indian Institute of Technology, Madras, India

**Selected Publications:**

Cook A.C., Vel S.S., 2013, Multiscale thermopiezoelectric analysis of laminated plates with integrated piezoelectric composites, *European Journal of Mechanics-A/Solids*, 40: 11-33.

Poirier J.D., Vel S.S., Caccese V., 2012, Multi-objective optimization of laser-welded steel sandwich panels using a genetic algorithm, *Engineering Structures*, 49: 508-524.

Cook A.C., Vel S.S., 2012, Multiscale analysis of laminated plates with integrated piezoceramic composite



**Figure 1.** Coordinate system and layer numbering for a tapered sandwich composite beam with laminated facesheets.

From: Vel S.S., Caccese V., Zhao H., 2005. Elastic coupling effects in tapered sandwich panels with laminated anisotropic composite facings, *Journal of Composite Materials*, 39, 2161-2183.

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Vel S.S., 2011. Exact thermoelastic analysis of functionally graded anisotropic hollow cylinders with arbitrary material gradation, *Mechanics of Advanced Materials and Structures*, 18, 14-31.

Vel S.S., 2010. Exact elasticity solution for the vibration of functionally graded anisotropic cylindrical shells, *Composite Structures*, 92, 2712-2727.

Vel S.S., Pelletier J.L., 2007. Multi-objective optimization of functionally graded thick shells for thermal loading, *Composite Structures*, 81, 386-400.

Pelletier J.L., Vel S.S., 2006. Multi-objective optimization of reinforced composite laminates for strength, stiffness and minimal mass, *Computers & Structures*, 84, 2065-2080.

Pelletier J.L., Vel S.S., 2006. An exact solution for the steady-state thermoelastic response of functionally graded orthotropic cylindrical shells, *International Journal of Solids and Structures*, 43, 1131-1158.

Vel S.S., Caccese V., Zhao H., 2005. Elastic coupling effects in tapered sandwich panels with laminated anisotropic composite facings, *Journal of Composite Materials*, 39, 2161-2183.

Baillargeon B.P., Vel S.S., 2005. Active vibration suppression of sandwich beams using piezoelectric shear actuators: Experiments and numerical simulations, *Journal of Intelligent Material Systems and Structures*, 16, 517-530.

Vel S.S., Baillargeon B.P., 2005. Analysis of static deformation, vibration and active damping of cylindrical composite shells with piezoelectric shear actuators, *Journal of Vibration and Acoustics*, 127, 395-407.

Baillargeon B.P., Vel S.S., 2005. Exact solution for the vibration and active damping of composite plates with piezoelectric shear actuators, *Journal of Sound and Vibration*, 282, 781-804.

Vel S.S., Mewer R.C., Batra R.C., 2004. Analytical solution for the cylindrical bending vibration of piezoelectric composite plates, *International Journal of Solids and Structures*, 41, 1625-1643.

Vel S.S., Batra R.C., 2004. Three-dimensional exact solution for the vibration of functionally graded rectangular plates, *Journal of Sound and Vibration*, 272, 703-730.

Vel S.S., Batra R.C., 2003. Three-dimensional analysis of transient thermal stresses in functionally graded plates, *International Journal of Solids and Structures*, 40, 7181-7196.

Vel S.S., Batra R.C., 2003. Generalized plane strain thermopiezoelectric analysis of multilayered plates, *Journal of Thermal Stresses*, 26, 353-377.

Vel S.S., Batra R.C., 2002. Exact solution for thermoelastic deformations of functionally graded thick rectangular plates, *AIAA Journal*, 40, 1421-1433.

Vel S.S., Batra R.C., 2001. Exact solution for rectangular sandwich plates with embedded piezoelectric shear actuators, *AIAA Journal*, 39, 1363-1373.

Vel S.S., Batra R.C., 2001. Exact solution for cylindrical bending of laminated plates with embedded shear actuators, *Smart Materials and Structures*, 10, 240-251.

Vel S.S., Batra R.C., 2001. Analysis of piezoelectric bimorphs and plates with segmented actuators, *Thin-walled Structures*, 39, 23-44.

Vel S.S., Batra R.C., 2001. Generalized plane strain thermoelastic deformation of laminated anisotropic thick plates, *International Journal of Solids and Structures*, 38, 1395-1414.

Vel S.S., Batra R.C., 2000. Closure to 'The generalized plane strain deformations of thick anisotropic composite laminated plates', *International Journal of Solids and Structures*, 38, 483-489.

Vel S.S., Batra R.C., 2000. Three-dimensional analytical solutions for hybrid multi-layered piezoelectric plates, *Journal of Applied Mechanics*, 67, 558-567.

Vel S.S., Batra R.C., 2000. Cylindrical bending of laminated plates with distributed and segmented piezoelectric actuators/sensors, *AIAA Journal*, 38, 857-867.

Vel S.S., Batra R.C., 2000. The generalized plane strain deformations of thick anisotropic composite laminated plates, *International Journal of Solids and Structures*, 37, 715-733.

Vel S.S., Batra R.C., 1999. Analytical solutions for rectangular thick laminated plates subjected to arbitrary boundary conditions, *AIAA Journal*, 37, 1464-1473.