



Professor Alfredo R. de Faria

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<http://www.mec.ita.br/~arfaria/resume.htm>

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<https://scholar.google.com/citations?user=6tHLp74AAAAJ>

Solid Mechanics Group

CTA-ITA-IEM, São José dos Campos, SP 12228-900, Brazil

Education:

PhD, Aerospace Science & Engineering , Feb. 2000, University of Toronto, Institute for Aerospace Studies (UTIAS) - Canada

MS, Aeronautical Engineering, Apr. 1995, Instituto Tecnológico de Aeronáutica (ITA) - Brazil

BS, Mechanical Engineering, Dec. 1993, Instituto Tecnológico de Aeronáutica (ITA) – Brazil

Work and Research Experience:

Dec. 2001 - present: Instituto Tecnológico de Aeronáutica (ITA), Brazil

Associate Professor in the department of mechanical engineering. Responsible for teaching undergraduate and graduate courses. CNPq fellowship holder (PQ 1D). Publications: 27 papers in refereed international journals, 43 papers in refereed conferences, and 1 book chapter.

Dec. 2005 - Apr. 2006: Massachusetts Institute of Technology (MIT), USA

Visiting Assistant Professor in the department of aeronautics and astronautics.

Mar. 2000 - Nov. 2001: Embraer, Brazil

Implemented knowledge-based engineering concepts for the structural design of the ERJ-190 wing box.

Selected Publications:

Almeida AE, Donadon MV, de Faria AR, Almeida SFM (2012) Aeroelastic stability analysis of orthotropic plates with embedded piezoelectric materials: finite element formulation. 1st Brazilian Conference on Composite Materials, 16-19 July, Natal, RN, Brazil.

Almeida A, Donadon MV, de Faria AR, Almeida SFM (2012) The effect of piezoelectrically induced stress stiffening on the aeroelastic stability of curved composite panels. *Composite Structures*, 94(12): 3601-3611.

de Faria AR, Oguamanam DCD, Donadon MV (2011) Prebuckling enhancement of imperfect composite plates using piezoelectric actuators. *Journal of Applied Mechanics*, 78(3): 0310071-8.

Ferreira APCS, de Faria AR (2010) Simultaneous buckling and fundamental frequency optimization of frames under uncertain loadings. *Journal of the Brazilian Society of Mechanical Sciences and Engineering*, 32(1): 71-77.

de Faria AR, Donadon MV (2010) The use of piezoelectric stress stiffening to enhance buckling of laminated plates. *Latin American Journal of Solids and Structures*, 7(2): 167-183.

Donadon MV, Almeida SFM, Arbelo MA, de Faria AR (2009) A three-dimensional ply failure model for composite structures. *International Journal of Aerospace Engineering*, 2009(2009), 22 pages.

de Faria AR (2007) Prebuckling enhancement of beams and plates under uncertain loadings and arbitrary initial imperfections. *Journal of the Brazilian Society of Mechanical Sciences and Engineering*, 29(4): 388-395.

de Faria AR, Almeida SFM (2006) The maximization of fundamental frequency of structures under arbitrary initial stress states. *International Journal for Numerical Methods in Engineering*, 65(4): 445-460.

Conrado AC, de Faria AR, Almeida SFM (2005) Optimum design for buckling of arbitrary shaped ribs under uncertain loadings. *The Aeronautical Journal*, 109(1102): 609-618.

de Faria AR, Oguamanam DCD (2005) Adaptive finite element analysis of the dynamic response of spherical caps under traversing loads. *Finite Elements in Analysis and Design*, 41(11-12): 1027-1042.

de Faria AR (2005) Compliance and buckling optimization of structures under multiple load cases. In *Real-World Multi-Objective System Engineering*, Nedjah N, Mourelle LM (eds). Nova Publishers: Hauppauge, NY; chapter 5.

de Faria AR (2004) Finite element analysis of the dynamic response of cylindrical panels under traversing loads. *European Journal of Mechanics / A Solids*, 23(4): 677-687.

de Faria AR (2004) On buckling enhancement of laminated beams with piezoelectric actuators via stress stiffening. *Composite Structures*, 65(2): 187-192.

de Faria AR, Almeida SFM (2004) Buckling optimization of variable thickness composite plates subjected to nonuniform loads. *AIAA Journal*, 42(2): 228-231.

de Faria AR, Almeida SFM (2003) Buckling optimization of plates with variable thickness subjected to nonuniform uncertain loads. *International Journal of Solids and Structures*, 40(15): 3955-3966.

de Faria AR (2002) Buckling optimization and antioptimization of composite plates: uncertain loading combinations. *International Journal for Numerical Methods in Engineering*, 53(3): 719-732.

de Faria AR, Hansen JS (2001) Buckling optimization of composite axisymmetric cylindrical shells under uncertain loading combinations. *Journal of Applied Mechanics*, 68(4): 632-639.

de Faria AR, Hansen JS (2001) On buckling optimization under uncertain loading combinations. *Structural and Multidisciplinary Optimization Journal*, 21(4): 272-282.

de Faria AR, Hansen JS (1999) Optimal buckling loads of nonuniform composite plates with thermal residual stresses. *Journal of Applied Mechanics*, 66(2): 388-395.

de Faria AR, Almeida SFM (1999) Enhancement of pre-buckling behavior of composite beams with geometric imperfections using piezoelectric actuators. *Composites Part B: Engineering*, 30(1): 43-50.

de Faria AR, Almeida SFM (1998) Axisymmetric actuation of composite cylindrical thin shells with piezoelectric rings. *Smart Materials and Structures*, 7(6): 843-850.