



## Professor Mauricio Vicente Donadon

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### Education:

BS in Mechanical Engineering from Universidade do Estado de Santa Catarina (1997),

MS at Aerospace Engineering from Instituto Tecnológico de Aeronáutica (2000)

Ph.D in Aeronautical Engineering from Imperial College London - University of London (2005).

### Research Interests:

Composite materials, Multifunctional materials, Finite elements, Impact, Buckling, Manufacturing of composite aerostructures, Woven fabrics, Aeroelasticity and morphing wing design.

### Selected Publications:

Odeny D. de Matos Junior, Mauricio V. Donadon and Saullo G.P. Castro, "Aeroelastic behavior of stiffened composite laminated panel with embedded SMA wire using the hierarchical Rayleigh-Ritz method", Composite Structures, Vol. 181, pp 26-45, December 2017

Donadon, Mauricio V.; Arbelo, Mariano A., Bird Strike Modeling in Fiber-Reinforced Polymer Composites. International Journal of Structural Stability and Dynamics, v. 17, n. 6, AUG 2017

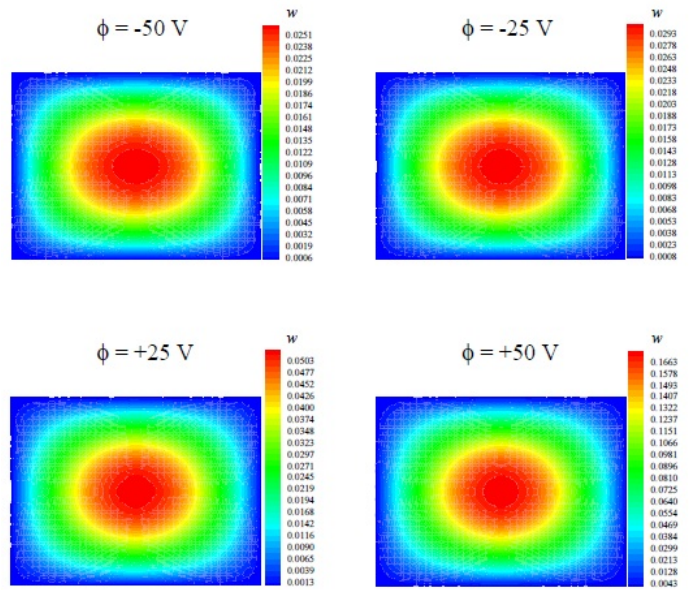


Figure 9 Buckling modes:  $[0/90]_S$  laminate and  $\lambda_{xx}$  loading

From: Alfredo R. de Faria and Mauricio V. Donadon, "The use of piezoelectric stress stiffening to enhance buckling of laminated plates", Latin American Journal of Solids and Structures, Vol. 7, No. 2, Rio de Janeiro 2010

Mendonca Sales, Rita De Cassia; Gusmao, Silas Rodrigo; Gouvea, Ricardo Francisco; Chu, Thomas; Fernandez Marlet, Jose Maria; Candido, Geraldo Mauricio; Donadon, Mauricio Vicente. The temperature effects on the fracture toughness of carbon fiber/RTM-6 laminates processed by VARTM. *Journal of Composite Materials*, v. 51, n. 12, p. 1729-1741, MAY 2017.

Saullo G.P. Castro and Mauricio V. Donadon, "Assembly of semi-analytical models to address linear buckling and vibration of stiffened composite panels with debonding defect", *Composite Structures*, Vol. 160, pp 232-247, January 2017

Mauricio V. Donadon and Alfredo R. de Faria, "Aeroelastic behavior of composite laminated shells with embedded SMA wires under supersonic flow", *Aerospace Science and Technology*, Vol. 52, pp 157-166, May 2016

Saullo G.P. Castro, Thiago A.M. Guimaraes, Domingos A. Rade and Mauricio V. Donadon, "Flutter of stiffened composite panels considering the stiffener's base as a structural element", *Composite Structures*, Vol. 140, pp 36-43, April 2016

Renato Dedding Martins, Mauricio Vicente Donadon, Sérgio Frascino Muller de Almeida, "The effects of curvature and internal pressure on the compression-after-impact strength of composite laminates", *Journal of Composite Materials*, Vol. 50, No. 6, pp 825-848, March 2016

Anaisa de Paula Guedes Villani, Mauricio V. Donadon, Mariano A. Arbelo, Paulo Rizzi, Carlos V. Montestruque, Flavio Bussamra, Marcelo R.B. Rodrigues, "The postbuckling behaviour of adhesively bonded stiffened panels subjected to in-plane shear loading", *Aerospace Science and Technology*, Vol. 46, pp 30-41, October-November 2015

Gehlen Rohrer, Rubens Zolar; Muller De Almeida, Sergio Frascino; Donadon, Mauricio Vicente. Optimization of composite plates subjected to buckling and small mass impact using lamination parameters. *Composite Structures*, v. 120, p. 141-152, February 2015

Arbelo, Mariano A.; De Almeida, Sergio F. M.; Donadon, Mauricio V.; Rett, Sandro R.; Degenhardt, Richard; Castro, Saullo G. P.; Kalnins, Kaspars; Ozolins, Olgerts. Vibration correlation technique for the estimation of real boundary conditions and buckling load of unstiffened plates and cylindrical shells. *Thin-Walled Structures*, v. 79, p. 119-128, June 2014

A. Almeida, M.V. Donadon, A.R. de Faria and S.F.M. de Almeida, "The effect of piezoelectrically induced stress stiffening on the aeroelastic stability of curved composite panels", *Composite Structures*, Vol. 94, No. 12, pp 3601-3611, December 2012

Arbelo, M.A., De Almeida, S.F.M. and Donadon, M.V. ., 'An experimental and numerical analysis for the post-buckling behavior of composite shear webs', *Composite Structures*, Volume 93, pp 465-473, 2011

Alfredo R. de Faria and Mauricio V. Donadon, "The use of piezoelectric stress stiffening to enhance buckling of laminated plates", *Latin American Journal of Solids and Structures*, Vol. 7, No. 2, 2010

Donadon, M.V., Rizzi, P., Almeida, A. E., (2010). A numerical study on the post-buckling behavior of shallow singly-curved panels. *Proceeding of VI National Congress Of Mechanical Engineering*

Maurício V. Donadon, Sérgio Frascino M. de Almeida, Mariano A. Arbelo, and Alfredo R. de Faria, "A Three-Dimensional Ply Failure Model for Composite Structures", *International Journal of Aerospace Engineering* Volume 2009, Article ID 486063, 22 pages doi:10.1155/2009/486063

M. V. Donadon, L. Iannucci, B. G. Falzon, J. M. Hodgkinson, and S. F. M. de Almeida, "A progressive failure model for composite laminates subjected to low velocity impact damage," *Computers and Structures*, vol. 86, no. 11-12, pp. 1232–1252, 2008.

M. V. Donadon, B. G. Falzon, L. Iannucci, and J. M. Hodgkinson, "Intralaminar toughness characterisation of unbalanced hybrid plain weave laminates," *Composites Part A*, vol. 38, no. 6, pp. 1597–1611, 2007

M. V. Donadon and L. Iannucci, "An objectivity algorithm for strain softening material models," in *Proceedings of the 9th International LS-DYNA Users Conference*, Dearborn, Mich, USA, June 2006.

M. V. Donadon, The structural behavior of composite structures manufactured using Resin Infusion under Flexible Tooling, Ph.D. thesis, Department of Aeronautics, Imperial College, London, UK, 2005  
Donadon, M.V., Hodgkinson, J.M., Falzon, B.G. and Iannucci, L. Impact damage in composite structures manufactured using resin infusion under flexible tooling (RIFT) process, 2004, ECCM 11, Rhodes, Greece  
M. V. Donadon, S. F. M. Almeida, and A. R. de Faria. Stiffening effects on the natural frequencies of laminated plates with piezoelectric actuators. *Composites Part B: Engineering*, 35(5):335-342, 2002