



Exploded view of a three-layered fibre-reinforced composite material.

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Image on the right is from: Aldo Carvalho, Tiago A.N. Silva and Maria A.R. Loja, “Assessing static and dynamic response variability due to parametric uncertainty on fibre-reinforced composites”, *Journal of Composites Science*, Vol. 2, No. 6, 2018

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Overview:

Amélia Loja is presently Adjunct Professor at Mechanical Engineering Department of the Engineering Institute of Lisbon (ISEL, IPL), invited Associate Professor at Physics Department of the University of Évora (UEvora) and Senior Researcher of the Mechanical Engineering Institute (IDMEC, IST). Her academic background integrates a BSc with honours in Marine Engineering from the Portuguese Nautical School and a BSc in Computer Science. Her MSc and PhD degrees in Mechanical Engineering were conferred by the Technical University of Lisbon and the Habilitation in Mechatronic Engineering by the University of Évora. Her major areas of interest include the scientific areas of Computational Solids Mechanics, Optimization and Reverse Engineering, among others. Until now she published 48 papers in scientific international journals. Amélia Loja is Chairperson of the ECCOMAS thematic series of conferences SYMCOMP (International Conference on Numerical and Symbolic Computation: Developments and Applications) and she coordinates the Research Centre on Modelling and Optimization of Multifunctional Systems (CIMOSM, ISEL). Since 2017 she has been invited by the European Commission Research Agencies to evaluate project proposals in different subjects related to her competences.

Selected Publications:

Book:

M. Vinyas, Amélia Loja and Krishna R. Reddy (Editors), *Advances in Structures, Systems and Materials*, Select Proceedings of ERCAM 2019, Springer

Journal Articles, Etc.:

- Loja MAR, Barbosa JI, Soares CMM. Buckling behaviour of laminated beam structures using a higher-order discrete model. *Compos Struct* 1997;38:119–131.
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- Bernardo GMS, Loja MAR (2015) Reconstruction of surfaces from unstructured points clouds, using compactly-supported radial basis functions. In: 2nd international conference on numerical and symbolic computation
- Bernardo GMS, Loja MAR (2015) Static and free vibrations behavior of particulate composite plates using radial basis functions. In: 2nd international conference on numerical and symbolic computation
- M. A. R. Loja, J. I. Barbosa, and C. M. Mota Soares, “Dynamic behaviour of soft core sandwich beam structures using kriging-based layerwise models,” *Composite Structures*, vol. 134, pp. 883–894, 2015.
- Bernardo G.M.S., Damásio F.R., Silva T.A.N., Loja M.A.R., A study on the structural behaviour of FGM plates static and free vibrations analyses, *Composite Structures*, 2016, 136, 124-138
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A.F. Mota and M.A.R. Loja, "Mechanical behavior of porous functionally graded nanocomposite materials", *Journal of Carbon Research*, Vol. 5, No. 34, 2019

M. Vinyas, G. Nischith, M.A.R. Loja, F. Ebrahimi and N.D. Duc, "Numerical analysis of the vibration response of skew magneto-electro-elastic plates based on the higher-order shear deformation theory", *Composite Structures*, Vol. 214, pp 132-142, 15 April 2019

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