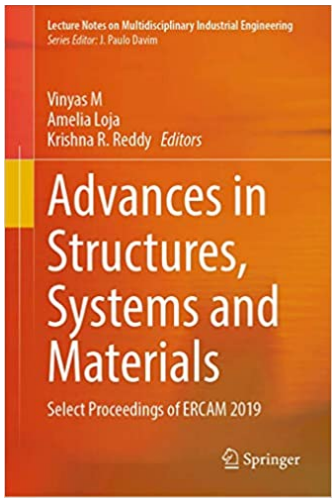

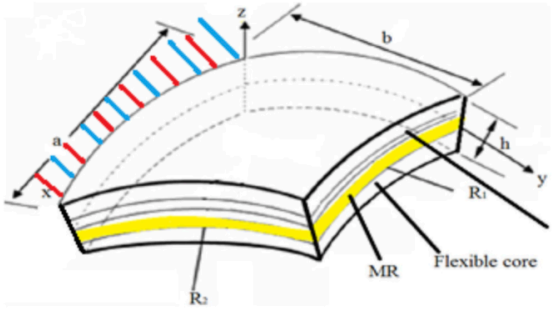

Fig. 1 Geometry of doubly curved multiscale composite shell with flexible core and MR layer in hygrothermal environment

The right-most image is from: Mahsa Karimiasl, Farzad Ebrahimi and Mahesh Vinyas, "Postbuckling analysis of piezoelectric multiscale sandwich composite doubly curved porous shallow shells via homotopy perturbation method", Engineering with Computers, August 2019, DOI: 10.1007/s00366-019-00841-x

Professor Mahesh Vinyas

See:
https://www.researchgate.net/profile/Vinyas_Mahesh
https://scholar.google.co.in/citations?user=KbdAx2gAAAAJ&hl=en

Department of Mechanical Engineering, Nitte Meenakshi Institute of Technology, Bangalore, Karnataka, India
and
Non-linear Multifunctional Composites Analysis and Design (NMCAD) Lab, Department of Aerospace Engineering, Indian Institute of Science, Bangelore, India
Formerly:
Dept. of Mechanical Engineering, National Institute of Technology Karnataka, India

Summary:

My research interests include computational mechanics of multifunctional composites, additive manufacturing, lightweight composite structures. The structural analyses are accomplished through FEM, VAM and analytical approaches. Currently my works are focused on Magneto-electro-elastic structures.

Selected Publications:

Book:

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

Journal Articles, etc.:

Vinyas, M. and Kattimani, S.C. (2017a), "Static studies of stepped functionally graded magneto-electro-elastic beam subjected to different thermal loads", Compos. Struct., 163, 216-237.
Vinyas, M. and Kattimani, S.C. (2017b), "A Finite element based assessment of static behavior of multiphase magneto-electro-elastic beams under different thermal loading", Struct. Eng. Mech., 62(5), 519-535.
Vinyas, M. and Kattimani, S.C. (2017c), "Static behavior of thermally loaded multilayered Magneto-Electro-Elastic beam", Struct. Eng. Mech., 63(4), 481-495.
Vinyas, M. and Kattimani, S.C. (2017d), "Multiphysics response of magneto-electro-elastic beams in thermo-mechanical environment", Coupled Syst. Mech., 6(3), 351-368.
Vinyas, M. and Kattimani, S.C. (2017e), "A 3D finite element static and free vibration analysis of magneto-electro-elastic beam", Coupled Syst. Mech, 6(4), 465-485.
Vinyas, M. and Kattimani, S.C. (2017f), "Static analysis of stepped functionally graded magneto-electro-elastic plates in thermal environment: A finite element study", Compos. Struct. 178, 63-85.

Vinyas, M. and Kattimani, S.C. (2017g), “Hygrothermal analysis of magneto-electro-elastic plate using 3D finite element analysis”, Compos. Struct., 180, 617-637
Vinyas, M. and Kattimani, S.C. (2018), “Finite element evaluation of free vibration characteristics of magneto-electro-elastic rectangular plates in hygrothermal environment using higher-order shear deformation theory”, Compos. Struct., 202, 1339-1352.
Farzad Ebrahimi, Ali Jafari and Vinyas Mahesh, “Assessment of porosity influence on dynamic characteristics of smart heterogeneous magneto-electro-elastic plates”, Structural Engineering and Mechanics, Vol. 72, No. 1, 2019, pp 113-129
M. Vinyas, “Vibration control of skew magneto-electro-elastic plates using active constrained layer damping”, Composite Structures, Vol. 208, pp 600-617, 15 January 2019
M. Vinyas, “A higher-order free vibration analysis of carbon nanotube-reinforced magneto-electro-elastic plates using finite element methods”, Composites Part B: Engineering, Vol. 158, pp 286-301, 1 February 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
Dehghan, M., Ebrahimi, F. and Vinyas, M. , “Wave dispersion characteristics of fluid-conveying magneto-electro-elastic nanotubes,” Engineering with Computers, July 2019
Karimiasl, M., Ebrahimi, F. and Vinyas, M., “Nonlinear vibration analysis of multiscale doubly curved piezoelectric composite shell in hygrothermal environment,” Journal of Intelligent Material Systems and Structures 30(10), 1594–1609, 2019
Mahsa Karimiasl, Farzad Ebrahimi and Mahesh Vinyas, “Postbuckling analysis of piezoelectric multiscale sandwich composite doubly curved porous shallow shells via homotopy perturbation method”, Engineering with Computers, August 2019, DOI: 10.1007/s00366-019-00841-x
Mahsa Karimiasl, Farzad Ebrahimi, Vinyas Mahesh, “Nonlinear forced vibration of smart multiscale sandwich composite doubly curved porous shell”, Article 106152, Thin-Walled Structures, Vol. 143, October 2019
M. Vinyas, K.K. Sunny, D. Harursampath, T. Nguyen-Thoi and M.A.R. Loja, “Influence of interphase on the multi-physics coupled frequency of three-phase smart magneto-electro-elastic composite plates”, Composite Structures, Vol. 226, Article 111254, 15 October 2019
Shariati, A., Ebrahimi, F., Karimiasl, M., Vinyas, M. and Toghroli, A. (2020), “On transient hygrothermal vibration of embedded viscoelastic flexoelectric/piezoelectric nanobeams under magnetic loading”, Adv. Nano. Res., 8(1), 49-58.
Mahsa Karimiasl, Farzad Ebrahimi and Vinyas Mahesh, “On nonlinear vibration of sandwiched polymer-CNT/GPL-fiber nanocomposite nanoshells”, Article 106431, Thin-Walled Structures, Vol. 146, January 2020
M. Vinyas, D. Harursampath and S.C. Kattimani, “Thermal response analysis of multi-layered magneto-electro-thermo-elastic plates using higher order shear deformation theory”, Structural Engineering and Mechanics, Vol. 73, No. 6, pp 667-684, March 25, 2020
M. Vinyas, D. Harursampath and T. Nguyen-Thoi, “Influence of active constrained layer damping on the coupled vibration response of functionally graded magneto-electro-elastic plates with skewed edges”, Defence Technology, in press
M. Vinyas, “On frequency response of porous functionally graded magneto-electro-elastic circular and annular plates with different electro-magnetic conditions using HSDT”, Composite Structures, Vol. 240 Article 112044, 15 May 2020