



Professor Madhujit Mukhopadhyay

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Biography:

Dr Madhujit Mukhopadhyay is a professor in the department of Ocean Engineering and Naval Architecture, IIT Kharagpur. His field of research is in the area of plates and shells (bare or stiffened). He has a large number of research publications in reputed international journals of civil, mechanical, aerospace, engineering, and naval architecture and is the author of two textbooks.

Selected Publications:

Books:

Madhujit Mukhopadhyay, *Mechanics of Composite Materials and Structures*, Orient Blackswan, 2004, 388 pages

Madhujit Mukhopadhyay, *Structural Dynamics: Vibrations & Systems*, ANE Books, 2008, 556 pages

Madhujit Mukhopadhyay, *Matrix and Finite Element Analyses of Structures*, ANE Books, 2009, 464 pages

Journal Articles, etc.:

Mukhopadhyay M., Free vibration of rectangular plates with edge having different degrees of rotational restraint. *J. Sound Vibrat* 1979;67(4):459-468

Mukhopadhyay, M. 1981. Stiffened Plate Plane Stress Elements for the Analysis of Ships' Structures. *Computers & Structures*, 13, 563-573.

Mukhopadhyay, M. & Satsangi, S. K. 1984. Isoparametric Stiffened Plate: Bending Element for the Analysis of Ships' Structures. *Transactions of the Royal Institution of Naval Architects*, 126, 144-151.

Abhijit Mukherjee and Madhujit Mukhopadhyay, "Response of stiffened plated structures under stochastic excitation", *Computer Methods in Applied Mechanics and Engineering*, Vol. 71, No. 3, December 1988, pp. 273-292

- Mukhopadhyay, M. & Mukherjee, A. 1989. Recent Advances on the Dynamic Behavior of Stiffened Plates. The Shock and Vibration Digest, 21, 6-9.
- Mukhopadhyay M. Vibration and stability analysis of stiffened plates by semi-analytic finite difference method-part I: Consideration of bending only. J Sound Vib, 1989, 130(1): 27–39
- Mukhopadhyay, M., 1989, “Vibration and Stability of Stiffened Plates by Semi-Analytic Finite Difference Method, Part I: Consideration of Bending Displacement Only,” J. Sound Vib., 130 , pp. 30–41.
- Mukhopadhyay, M., 1989, “Vibration and Stability Analysis of Stiffened Plates by Semi-Analytic Finite Difference Method, Part II: Consideration of Bending and Axial Displacements,” J. Sound Vib., 130 , pp. 41–53.
- Satsangi, S. K. & Mukhopadhyay, M. 1989. A review of static analysis of stiffened plates. Journal of Structural Engineering, 15, 117-126.
- M. Mukhopadhyay, Vibration and buckling of rectangular plates with varying degrees of rotational restraint along the edges, Comput. Struct., 32 (2) (1989), pp. 341-346
- Mukherjee, A., and Mukhopadhyay, M., 1989, “Finite Element Free Vibration of Eccentrically Stiffened Plates,” Comput. Struct. 30 (6), pp. 1303–1317.
- Mukhopadhyay, M., Satsangi, S. K. & Mukherjee, A. 1990. A New Isoparametric Plate Element for the Analysis of Ship Structures. International Shipbuilding Progress, 37, 79-117.
- Mukhopadhyay, M. & Mukherjee, A. 1990. Finite Element Buckling Analysis of Stiffened Plates. Computers & Structures, 34, 795-803
- Mukhopadhyay, M. & Sinha, G. 1992. A review of Dynamic behavior of stiffened shells. The Shock and Vibration Digest, 24, 3-13.
- A.H. Sheikh and M. Mukhopadhyay, “Analysis of stiffened plate with arbitrary planform by the general spline finite strip method”, Computers & Structures, Vol. 42, No. 1, January 1992, pp. 53-67
- Sinha, G., Sheikh, A. H. and Mukhopadhyay, M. [1992] “A new finite element model for the analysis of arbitrary stiffened shells,” Finite Elem. Anal. Des. 12, 241–271
- Chattopadhyay, B., Sinha, P. K. & Mukhopadhyay, M. 1992. Finite Element Free Vibration Analysis of Eccentrically Stiffened Composite Plates. Journal of Reinforced Plastics and Composites, 11, 1003-1034.
- B. Chattopadhyay, P.K. Sinha and M. Mukhopadhyay, “Finite Element Analysis of Blade-Stiffened Composite Plates under Transverse Loads”, Journal of Reinforced Plastics and Composites, January 1993, vol. 12, no. 1, pp. 76-100
- A. H. Sheikh and M. Mukhopadhyay, “Free Vibration Analysis Of Stiffened Plates With Arbitrary Planform By The General Spline Finite Strip Method”, Journal of Sound and Vibration, Vol. 162, No. 1, March 1993, pp. 147-164
- Rao, P., Sinha, G. and Mukhopadhyay, M. [1993] “Vibration of submerged stiffened plates by finite element method,” Int. Shipbuild. Prog. 40(423), 261–292.
- Sinha G, Mukhopadhyay M. Finite element free vibration analysis of arbitrary stiffened shells. Journal of Sound and Vibration 1994;171(4):529–48.
- Mukhopadhyay, M., 1994, “Stiffened Plates in Bending,” Comput. Struct., 50 , pp. 541–548.
- Goswami S, Mukhopadhyay M (1994) Finite element analysis of laminated composite stiffened shell. J Reinf Plast Compos 13(7):574–616
- B. Chattopadhyay, P. K. Sinha M. Mukhopadhyay, “Geometrically nonlinear analysis of composite stiffened plates using finite elements”, Composite Structures, Vol. 31, No. 2, 1995, pp. 107-118
- Gobinda Sinha and Madhujit Mukhopadhyay, “Static and dynamic analysis of stiffened shells – A review”, Proc. Indian Natn. Sci. Acad., Vol. 61, A, Nos 3 & 4, pp 195-219, 1995
- Goswami, S. & Mukhopadhyay, M. 1995. Geometrically Non-Linear Transient Dynamic Response of Laminated Composite Stiffened Shells. Journal of Reinforced Plastics and Composites, 14, 618-640.

S. Goswami and M. Mukhopadhyay, "Finite Element Free Vibration Analysis of Laminated Composite Stiffened Shell", *Journal of Composite Materials*, December 1995, vol. 29, no. 18, pp. 2388-2422

Samanta, A. & Mukhopadhyay, M. 1998. Finite Element Static Analysis of Stiffened Shells. *International Journal of Applied Mechanics and Engineering*, 3, 55-87

Barik, M. and Mukhopadhyay, M. (1998). Finite Element Free Flexural Vibration Analysis of Arbitrary Plates. *Finite Elements in Analysis and Design*, 29(2):137-151.

A. Samanta and M. Mukhopadhyay (1999). Finite element large deflection static analysis of shallow and deep stiffened shells. *Finite Elements in Analysis and Design*, 33, 187-208

Samanta, A., and Mukhopadhyay, M. (1999). "Finite element static and dynamic analyses of folded plates." *Eng. Struct.*, 21(3), 277-287.

Y. V. S. Kumar, M. Mukhopadhyay, A new finite element for bucking analysis of laminated stiffened plates, *Composite structures* 46 (1999) 321-331.

Kumar, Y. V. S. & Mukhopadhyay, M. 2000a. Finite element analysis of ship structures using a new stiffened plate element. *Applied Ocean Research*, 22, 361-374.

Kumar, Y. V. S. & Mukhopadhyay, M. 2000b. A new triangular stiffened plate element for laminate analysis. *Composites Science and Technology*, 60, 935-943.

A. H. Sheikh and M. Mukhopadhyay, "Geometric nonlinear analysis of stiffened plates by the spline finite strip method", *Computers & Structures*, Vol. 76, No. 6, July 2000, pp. 765-785

Kumar, Y. V. S. & Mukhopadhyay, M. 2002. A New Modelling Tool for 3-D Finite Element Analysis of FRP Ships. *International Shipbuilding Progress*, 49, 5-35.

Kumar, Y. V. S., Mukhopadhyay, M. & Sarkar, T. 2002. Development of a New Efficient Stiffened Plate Element for Dynamic Analysis of a Three-Dimensional Ship Structure. *Journal of Engineering for the Maritime Environment*, 216, 45-56

Satish Kumar, Y. V., and Mukhopadhyay, M., 2002, "Transient Response Analysis of Laminated Stiffened Plates," *Compos. Struct.*, 58 (1), pp. 97-107.

A. H. Sheikh and M. Mukhopadhyay, "Linear and nonlinear transient vibration analysis of stiffened plate structures", *Finite Elements in Analysis and Design*, Vol. 38, No. 6, April 2002, pp. 477-502

M. Barik and M. Mukhopadhyay, "A new stiffened plate element for the analysis of arbitrary plates", *Thin-Walled Structures*, Vol. 40, Nos. 7-8, 2002, pp. 625-639

Samanta, A. & Mukhopadhyay, M. 2004. Free Vibration Analysis of Stiffened Shells by the Finite Element Technique. *European Journal of Mechanics A/Solids*, 23, 159-179.