

Professor Tanmoy Mukhopadhyay

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Autobiography:

I am currently working as an Assistant Professor at the Aerospace Engineering Department of IIT Kanpur. Prior to that I was a postdoctoral researcher at the Engineering Science Department of the University of Oxford, UK. I completed my PhD from the College of Engineering of Swansea University, UK. My research interests and expertise broadly lie in the field of mechanics and multi-physics analysis focusing on mechanical metamaterials and advanced functional composites at multiple length-scales covering forward and inverse problems in engineering that warrants frequent excursions among the boundaries of applied mathematics, physics, probability theory and nanotechnology.

Selected Publications:

Sudip Dey, Tanmoy Mukhopadhyay and Sondipon Adhikari (College of Engineering, Swansea University, Swansea SA2 8PP, United Kingdom), "Stochastic free vibration analyses of composite shallow doubly curved shells – A Kriging model approach", Composites Part B: Engineering, Vol. 70, pp 99-112, March 2015 S. Dey, T. Mukhopadhyay, S. Sahu, G. Li, H. Rabitz, S. Adhikari, Thermal uncertainty quantification in frequency responses of laminated composite plates, Compos Part B: Eng, 80 (2015), pp. 186-197 S. Dey, T. Mukhopadhyay, H.H. Khodaparast and S. Adhikari (College of Engineering, Swansea University, Swansea, UK), "Stochastic natural frequency of composite conical shells", Acta Mechanica, Vol. 226, No. 8, pp 2537-2553, August 2015



Fig. 1 Laminated composite curved panel with cutout

From: S. Dey, T. Mukhopadhyay, S.K. Sahu and S. Adhikari, "Effect of cutout on stochastic natural frequency of composite curved panels", Composites Part B: Engineering, Vol. 105, pp 188-202, November 2016 S. Dey, T. Mukhopadhyay, H. Haddad Khodaparast, P. Kerfriden and S. Adhikari, "Rotational and ply-level uncertainty in response of composite shallow conical shells", Composite Structures, Vol. 131, pp 594-605, November 2015

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Mukhopadhyay, T., Naskar, S., Dey, S. and Adhikari, S. (2016), "On quantifying the effect of noise in surrogate based stochastic free vibration analysis of laminated composite shallow shells", Compos. Struct., 140, 798-805 Dey, S., Mukhopadhyay, T. and Adhikari, S. (2017), "Metamodel based high-fidelity stochastic analysis of composite laminates: A concise review with critical comparative assessment", Compos. Struct., 171, 227-250. T. Mukhopadhyay, S. Chakraborty, S. Dey, S. Adhikari and R. Chowdhury, "A critical assessment of Kriging model variants for high-fidelity uncertainty quantification in dynamics of composite shells", Archives of Computational Methods in Engineering, Vol. 24, No. 3, pp 495-518, July 2017

Karsh, P.K., Mukhopadhyay, T. and Dey, S. (2018), "Spatial vulnerability analysis for the first ply failure strength of composite laminates including effect of delamination", Compos. Struct., 184, 554-567.

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S. Dey, T. Mukhopadhyay, S.K. Sahu and S. Adhikari, "Stochastic dynamic stability analysis of composite curved panels subjected to non-uniform partial edge loading", European Journal of Mechanics – A/Solids, Vol. 67, pp 108-122, January 2018

P.K. Karsh, T. Mukhopadhyay and S. Dey, "Stochastic dynamic analysis of twisted functionally graded plates", Composites Part B: Engineering, Vol. 147, pp 259-278, 15 August 2018
T. Mukhopadhyay, S. Naskar, P.K. Karsh, S. Dey and Z. You, "Effect of delamination on the stochastic natural

T. Mukhopadhyay, S. Naskar, P.K. Karsh, S. Dey and Z. You, "Effect of delamination on the stochastic natural frequencies of composite laminates", Composites Part B: Engineering, Vol. 154, pp 242-256, 1 December 2018 S. Dey, T. Mukhopadhyay, S. Naskar, T.K. Dey, H.D. Chalak and S. Adhikari, "Probabilistic characterization for dynamics and stability of laminated soft core sandwich plates", Journal of Sandwich Structures & Materials, Vol. 21, No. 1, pp 320-365, January 1, 2019

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