

Dr. Parthasarathi Mandal

School of Mechanical, Aerospace and Civil Engineering The University of Manchester, Manchester, UK

Biography:

After his PhD from Cambridge University, Partha Mandal went on to join the University of Manchester (then UMIST), first as a research associate on an EPSRC sponsored project, and subsequently as a lecturer in the School of Mechanical, Aerospace and Civil Engineering. His specialization lies in the area of buckling of shell structures. His findings have provided a new explanation for the well-known paradoxical behavior of cylindrical shells under axial compressions, and he has published widely on this. He has also acted as a reviewer for various academic journals such as the SIAM Journal on Scientific Computing. His current research areas include structural stability and vibration of structures. These involve both analytical and experimental methods.

Publications:

2013

E. Suarez, F. Syed, T. A. Rasgado, P. Mandal, A. Bayat. Up-regulation of Tension Related Proteins in Keloids: Knock Down of Hsp27,_±2_≤1-. Plastic and Reconstructive Surgery. 2013 February; eScholarID:178748

2012

- H. Al-Aasam and P. Mandal. A simplified procedure to calculate byy hand the natural periods of semi-rigid steel frames. Journal of Structural Engineering, ASCE. 2012; eScholarID:178640 | DOI:10.1061/(ASCE)ST.1943-541X.0000695
- T. Alonso-Rasgado, D. Jimenez-Cruz, C.G. Bailey, P. Mandal, T. Board. Changes in the stress in the femoral head neck junction after osteochondroplasty for hip impingement: A finite element study. Journal of Orthopaedic Research. 2012; eScholarID:178644 | DOI:10.1002/jor.22164
- J. Mendoza, A. Sebastian, E. Allan, D. Allan, P. Mandal, T. Alonso-Rasgado, A. Bayat. Differential cytotoxic response in keloid fibroblasts exposed to photodynamic therapy is dependent on photosensitiser precursor, fluence and location of fibroblasts within the lesion. Archives of Dermatological Research. 2012 September; 304(7): 549-562. eScholarID:178756 | DOI:10.1007/s00403-012-1264-y
- N. Das Chakladar, S. K. Pal, and P. Mandal. Drilling of woven glass fibre reinforced plastic _ an experimental and finite element study. International Journal of Advanced Manufacturing Technology. 2012 January; 58(1-4): 267-278. eScholarID:152377 | DOI:10.1007/s00170-011-3386-3

2011

- Z. Tahir, P. Mandal. Effect of Asymmetric Meshing Technique on Buckling of Composite Laminated Cylindrical Shells. 2011: -. eScholarID:153487
- B. Al-Humeidawi and P. Mandal. Investigation of different dowel and pavement parameters on joint lockup. 2011: -. eScholarID:152380
- S. Elsawaf, Y. Wang, and P. Mandal. Numerical modelling of restrained structural subassemblies of steel beams and CFT columns connected using reverse channels in fire. Engineering Structures. 2011 April; 33(4): 1217-1231. eScholarID:152378 | DOI:10.1016/j.engstruct.2010.12.043

2010

S. Elsawaf, Y. Wang, P. Mandal. Numerical modelling of restrained structural subassemblies of steel beam to CFT column in fire. 2010: -. eScholarID:153486

2008

Mandal P, Calladine C. Structures and Granular Solids. CRC Press.2008: eScholarID:3e25

2005

Mandal, Parthasarathi. Koiter Circle and the Buckling of Thin Cylindrical Shells. Proceeding of Structural Engineering Convention (SEC-2005). 2005: eScholarID:2e432

2004

Mandal P, Ji T. Modelling dynamic behavior of a cantilever grandstand. Proceedings of ICE, Structures and Buildings. 2004 June; 157(SB3): 173-184. eScholarID:1e1027 | DOI:10.1680/stbu.2004.157.3.173

Mandal, Parthasarathi. Some new thoughts on th buckling of thin cylindrical shells. Proceedings of the 21st International Congress of Applied and Theoretical Mechanics (IUTAM). 2004: eScholarID:2e431

2002

MANDAL P. Prediction of buckling load from vibration measurements. In: H. Drew and S. Pellegrino, ed. New Approaches to Structural Mechanics, Shells and Biological Structures. Kluwer Academic Publishers.2002: 175-188. eScholarID:3a239

Mandal P. New Approaches to Structural Mechanics, Shells and Biological Structures. Springer.2002: eScholarID:3e8

Mandal, Parthasarathi. Expression of curvature ductility for RC sections. Proceedings of the Twelfth European Conference on Earthquake Engineering, London. 2002: eScholarID:2e153

Mandal P, Calladine C. Lateral-torsional buckling of beams and the Southwell plot. International Journal of Mechanical Sciences. 2002 December; 44(12): 2557-2571. eScholarID:1e1195 | DOI:10.1016/S0020-7403(02)00192-3

Potlouri, P, JW Hearle, TV Sagar, and Parthasarathi Mandal. Multi-scale modelling of fibrous network in textile composites. Polymer Fibres. 2002: eScholarID:2e433

Zhu E, Mandal P, Calladine C. Buckling of thin cylindrical shells: an attempt to resolve a paradox. International Journal of Mechanical Sciences. 2002 August; 44(8): 1583-1601. eScholarID:1e1196 | DOI:10.1016/S0020-7403(02)00065-6

2000

Mandal P, Calladine C. Buckling of thin cylindrical shells under axial compression. International Journal of Solids and Structures. 2000 August; 37(33): 4509-4525. eScholarID:1e218

1998

Mandal, Parthasarathi. Buckling of thin cylindrical shells. Proceedings of the International conference on Theoretical, Applied, Computational and Experimental Mechanics. 1998: eScholarID:2e434