

Supratik Mukhopadhyay

Contact information:

Assistant professor

Department of Mechanical Engineering

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Education:

PhD	Aerospace Engineering	University of Bristol	2016
M.Tech	Mechanical Engineering	IIT Kharagpur	2011
B.E	Production Engineering	Jadavpur University	2009

Research Interests

Mechanics of composites, Theory of Damage and failure, Numerical simulation of strain localization and fracture, Finite element method, Mesh-independent and mesh-free methods, Numerical simulation of manufacturing processes.

Positions held

Assistant Professor	IIT Kanpur	November 2018 - Present
Post-Doctoral Research Associate	University of Bristol	November 2015 - October 2018

Publications

Journal papers

- [1] Mukhopadhyay S, Jones M.I, Hallett S.R, Tensile failure of laminates containing an embedded wrinkle; numerical and experimental study, *Composites Part A: Applied Science and Manufacturing*, 77 (2015), 219-228.
- [2] Mukhopadhyay S, Jones M.I, Hallett S.R, Compressive failure of laminates containing an embedded wrinkle; experimental and numerical study, *Composites Part A: Applied Science and Manufacturing*, 73 (2015), 132-142.
- [3] Mukhopadhyay S, Nixon-Pearson O.J, Hallett S.R, An experimental and numerical study on fatigue damage development in laminates containing embedded wrinkle defects, *International Journal of Fatigue*, 107(2018), 1-12.
- [4] Tao C, Mukhopadhyay S, Zhang B, Kawashita L.F, Qiu J, Hallett S.R, An improved delamination fatigue cohesive interface model for complex three dimensional multi-interface cases, *Composites Part A: Applied Science and Manufacturing*, 107 (2018), 633-646.
- [5] Xie N, Smith R, Mukhopadhyay S, Hallett S.R, A numerical study on the influence of composite wrinkle defect geometry on compressive strength, *Materials and Design*, 140 (2018), 7-20.
- [6] Gong Y, Zhang B, Mukhopadhyay S, Hallett S.R, Experimental study on delamination migration in multidirectional laminates under mode II static and fatigue loading, with comparison to mode I, *Composite Structures*, 201(2018), 683-698.

Conference contributions

- [1] Mukhopadhyay S, Jones M I, Hallett S R, Modelling out-of-plane fibre waviness: tension and compression tests, *Composites 2013*, Azores, Portugal.
- [2] Smith R A, Mukhopadhyay S, Lawrie A, Roldo G, Application of ultrasonic NDT to aerospace composites, 5th international symposium on NDT in Aerospace, 2013, Singapore.
- [3] Mukhopadhyay S, Kawashita L F, Hallett S R, A mesh-independent simplified cohesive segment method to model matrix cracking in composites, *CFRAC 2015*, Paris, France.
- [4] Mukhopadhyay S, Hallett S R, Fatigue of out-of-plane fibre waviness defects; experimental and numerical study. *International Conference on Composite Materials (ICCM)*, 2015, Copenhagen, Denmark.

- [5] Mukhopadhyay S, Kawashita L F, Hallett S R, Mesh independent matrix crack model for laminates with embedded wrinkle defects, Composites 2015, Bristol, UK.
- [6] Mukhopadhyay S, Hallett S R Alleviating mesh orientation bias in modelling matrix cracks in composites, CFRAC, Nantes, France, 2017.

Teaching experience

- Served as a teaching instructor for the UG students in the academic year 2017-18 in the Aerospace Engineering Department, University of Bristol and was responsible for the course on 'Fatigue and Creep of materials'.

Awards and achievements

Honour	Commendation letter for being selected among the 10 best PhD thesis submitted in 2015-16 in the Engineering faculty	Queens school of Engineering, University of Bristol	2016
Award	Kenneth Harris James Prize for best journal paper in 2015 in the aerospace division of IMechE	Institute of Mechanical Engineers (IMechE), UK	2015
Award	University silver medal for being selected as the best student in order of merit among the outgoing M.Tech students in Mechanical Engineering Department in 2010-2011	IIT Kharagpur	2011
Award	B.M Belgaumkar memorial prize for highest CGPA among M.Tech students in Mechanical Engineering department in 2010-2011	IIT Kharagpur	2011
Award	Badri Narayan Singh memorial prize for highest CGPA after 4th Semester among all students in M.Tech in Mechanical Engineering Department in the year 2010-2011	IIT Kharagpur	2011
Award	University gold Medal for standing first in order of merit among B.E students of Production Engineering in batch 2005-2009	Jadavpur University	2009
Award	Indu-Bhusan Putatunda memorial award for highest CGPA in 2nd year University examination in the year 2007	Jadavpur University	2007