



## **Professor Hari Arora**

See:

<http://www.imperial.ac.uk/people/hari.arora04>

<http://www.imperial.ac.uk/people/hari.arora04/publications.html>

<https://scholar.google.com/citations?user=h6ZaAgYAAAAJ&hl=en>

[http://www.researchgate.net/profile/Hari\\_Arora2](http://www.researchgate.net/profile/Hari_Arora2)

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### **Summary:**

Hari is a Research Fellow in the Department of Bioengineering at Imperial College London. He did his undergraduate studies 2004-2008 in the Department of Mechanical Engineering, where he also later completed his PhD titled "Blast loading of fibre reinforced polymer composite structures".

His current research interests are focussed on lung mechanics, working within the Centre for Blast Injury Studies. This involves both macro- and micro-scale evaluation of thoracic structural response to blast. The aim of the research is to improve the understanding of underlying failure mechanisms occurring within the lungs to improve both the injury treatment and injury prevention.

Other research interests include:

Development of novel experimental techniques and numerical models to optimise the design of blast and ballistic resistant materials

Development of macro- and micro-scale finite element models to predict deformation and fracture behaviour of various structural and biological materials under a range of strain conditions

Extension and validation of micromechanics analytical models for application in the design of composite materials

### **Selected Publications:**

Kelly M, Arora H, Worley A, Kaye M, Linz PD, Hooper PA, Dear JP., 2015, Sandwich Panel Cores for Blast Applications: Materials and Graded Density, Experimental Mechanics

Arora H, Kelly M, Worley A, Del Linz P, Fergusson A, Hooper PA, Dear JP., 2014, Compressive strength after blast of sandwich composite materials, Philosophical Transactions of the Royal Society A-Mathematical Physical and Engineering Sciences, Vol: 372

Arora H, Hooper P, Del Linz P, Yang H, Chen S, Dear JP., 2012, Modelling the behaviour of composite sandwich structures when subject to air-blast loading, The International Journal of Multiphysics, Vol: 6, Pages: 199-218

Arora H, Hooper PA, Dear JP (2012) The effects of Air and underwater blast on composite sandwich panels and tubular laminate structures. *Exp Mech* 52:59–81

H. Arora, P. Hooper and J. P. Dear, “Blast loading of sandwich structures and composite tubes”, Chapter in *Dynamic Failure of Composite and Sandwich Structures*, edited by Abrate, Castanie and Rajapakse, 2012

Arora, H., Hooper, P., Dear, J., 2011. Dynamic response of full-scale sandwich composite structures subject to air-blast loading. *Composites Part A: Appl. Sci. Manuf.* 42 (11), 1651–1662.

H. Arora, P. Hooper and J. P. Dear, “Impact and blast loading of glass-fibre reinforced polymer composites”, *Proceedings of the IMPLAST 2010 Conference*, October 12-14, 2010, Providence, Rhode Island USA