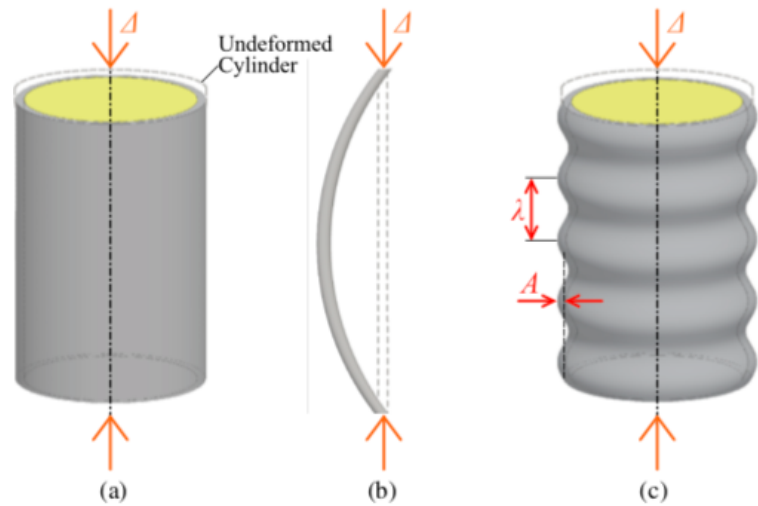




**Professor Craig A. Steeves**



From: Bharat Bhaga and Craig A. Steeves, "Modeling hybrid polymer–nanometal lightweight structures", *Aerospace Systems*, 05 February 2019, <https://doi.org/10.1007/s42401-018-00022-6>

See:

<http://www.eneews.engineering.utoronto.ca/sept3/facultyappointments.html>

<https://scholar.google.com/citations?user=Jp9FgtMAAAAJ&hl=en>

<https://ca.linkedin.com/in/craig-steeves-877b50131>

[https://www.researchgate.net/profile/Craig\\_Steeves](https://www.researchgate.net/profile/Craig_Steeves)

Institute for Aerospace Studies  
University of Toronto, Canada

### **Biography:**

(BA, University of Toronto, 1993; BASc, University of British Columbia, 1997; PhD, University of Cambridge, 2002)

The principal purpose of Craig Steeves' research is to improve the efficiency and performance of aerospace systems by closely integrating enhanced functionality into lightweight structural systems. His research combines mechanical models of thermostructural behaviours with models of other physical phenomena to achieve optimal component-level designs in a multidimensional and multidisciplinary design space.

After completing his PhD, Professor Steeves joined the Applied Physics Group of the Department of Mechanical and Aerospace Engineering at Princeton University where he worked on multifunctional sandwich structures in the context of magnetohydrodynamic power generation on reentering space vehicles.

Currently researching topics related to hypersonic flight, including shape morphing structures, low thermal expansion lattices, passive heat shielding and thermionic power conversion at the University of California - Santa Barbara, Professor Steeves joined the University of Toronto Institute of Aerospace Studies (UTIAS) in January 2009 as Associate Professor.

### **Selected Publications:**

C. Steeves and N.A. Fleck, "Z-pinned composite laminates: Knockdown in compressive strength", *Proceedings of the 5th Conference of Delamination and Fracture*, March 1999

Craig A. Steeves and Norman A. Fleck, "Failure modes in sandwich beams with composite face-sheets and PVC foam cores", Proceedings of the International Symposium on the Mechanics of Sandwich Structures, Vol. 245, pp 21-28, September 2000

Steeves CA, Norman A. Fleck, Collapse mechanisms of sandwich beams with composite faces and a foam core, loaded in three-point bending, part I: analytical models and minimum weight design. *Int J Mech Sci.* 2004;46:561–583.

Steeves CA, Fleck NA. Collapse mechanisms of sandwich beams with composite faces and a foam core, loaded in three-point bending. Part II: experimental investigation and numerical modelling. *Int J Mech Sci.* 2004;46:585–608

Craig A. Steeves and Norman A. Fleck, "Compressive strength of composite laminates with terminated internal plies", DOI: [10.1016/j.compositesa.2004.10.024](https://doi.org/10.1016/j.compositesa.2004.10.024)

Craig A. Steeves, "Optimizing sandwich beams for strength and stiffness", *Journal of Sandwich Structures & Materials*, Vol. 14, No. 2, September 2012

Lausic AT, Steeves CA, Hibbard GD (2014) Effect of grain size on the optimal architecture of electrodeposited metal/polymer microtrusses. *J Sandw Struct Mater* 16(3):573–595

Luersen MA, Steeves CA, Nair PB (2015) Curved fiber paths optimization of a composite cylindrical shell via Kriging-based approach. *J Compos Mater* 49(29):3583–3597

John T Hwang, Craig A Steeves, "Optimization of 3D lattice cores in composite sandwich structures", *Journal of Composite Materials*, Vol. 49, No. 17, pp 2041-2055, July 2015

Bharat Bhaga and Craig A. Steeves, "Modeling hybrid polymer–nanometal lightweight structures", *Aerospace Systems*, 05 February 2019, <https://doi.org/10.1007/s42401-018-00022-6>