



SEMINAR

APPLIED MATHEMATICS AND MECHANICS

FS942

29 October 2018

A DCAMM seminar No. 731 will be presented by

Postdoctoral Fellow Michael J. A. Smith
School of Mathematics
University of Manchester, United Kingdom

The title of the lecture is

Composites for the control of optical, mechanical, and opto-mechanical processes

Abstract:

When combining different materials together to form an inhomogeneous composite, most resulting properties (such as the optical, acoustic, or thermal properties) are typically given by some weighted average of the constituent values. I show that this is not the case for the opto-mechanical properties, namely, for a key opto-mechanical response known as photoelasticity, which describes how the optical properties of a medium change under mechanical deformation.

In recent work, I have shown that two materials with zero photoelasticity can be combined to make a composite that is strongly photoelastic. I will examine the role of the unexpected photoelastic contribution in a selection of composite geometries, describing the effect in closed-form

DATE:	Friday, 9 November 2018
TIME:	14:00 – 14:45 + questions
PLACE:	Room 061E, Building 414(024) DTU, Technical University of Denmark

Danish pastry, coffee and tea will be served 15 minutes before the seminar starts.

All interested persons are invited.

Niels Leergaard Pedersen

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