



# SEMINAR

APPLIED MATHEMATICS AND MECHANICS

FS936

30 April 2018

A DCAMM seminar No. 725 will be presented by

**Professor Roberta Massabò**  
**Department of Civil, Chemical and Environmental Engineering**  
**University of Genova, Italy**

The title of the lecture is

## **Multiscale structural modeling of layered structures**

### **Abstract:**

Multilayered composite structures are increasingly being used in many engineering applications, also to withstand extreme loadings in extreme environments. The inhomogeneous material structure and the presence of interfacial imperfections and delaminations profoundly affect local fields and global response of these systems. We have developed a multiscale structural approach which couples a global structural mechanics model and a local cohesive-interface model through homogenization to efficiently and accurately solve thermo-mechanical problems. Applications to wave propagation analyses and delamination fracture will be presented and advantages and limitations of the approach discussed.

<b>DATE:</b>	<b>Wednesday, 9 May 2018</b>
<b>TIME:</b>	<b>10:00 – 11:00 incl. questions</b>
<b>PLACE:</b>	<b>Room 013, Building 421</b> 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

**DANISH CENTER FOR APPLIED MATHEMATICS AND MECHANICS**

**• TECHNICAL UNIVERSITY OF DENMARK • AALBORG UNIVERSITY**  
**• AARHUS UNIVERSITY • UNIVERSITY OF SOUTHERN DENMARK**