



Thursday 17<sup>th</sup> September 2009, 10.00h

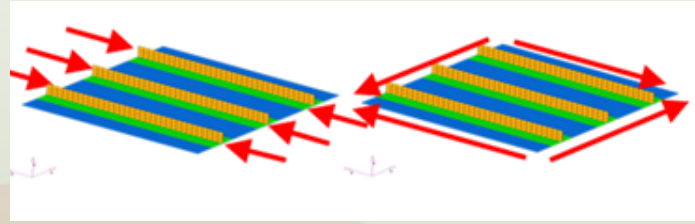
This webinar is run  
jointly with the  
Materials KTN



WCC Online Webinar

# Computational Analysis & Design for Composites

by Professor Johann Sienz and Dr. Mariela Luege  
School of Engineering, Swansea University



## Topic:

Following the increasing demand of knowledge in the design and response of composites materials and structures, this Webinar session will focus on the mechanics of composite materials and its numerical simulation within a commercial Finite Element software.

Briefly, the presentation will cover:

- Definition of a composite material and its material properties from a mechanical point of view
- Stress-strain relations for isotropic, orthotropic and anisotropic materials
- Macro-micro approaches to simulate composite materials: mixture theory and homogenization theory
- Composite laminates definition and stress analysis
- Laminate damage and failure criteria in composites
- Numerical simulation of a composite plate using a commercial Finite Element software: preparation of the input file and analysis of results.

## What you need:

Computer with broadband internet access, headphones or loudspeakers, and a microphone if you would like to ask questions

## What you will have to do:

Register as a member with the Materials KTN (free), download the conference software, and allocate 1.5 hours of your time to join the webinar on the day

## What we recommend:

- Register with the Materials KTN a few days **before** the webinar to give them time to set up your account
- Check your headphone/loudspeaker/microphone set up in time **before** the webinar

Detailed instructions can be downloaded from our website  
[www.welshcomposites.co.uk/webinars](http://www.welshcomposites.co.uk/webinars)

If you have any problems/questions with your computer set up, please contact Sue Alston on [s.alston@swansea.ac.uk](mailto:s.alston@swansea.ac.uk) or 01792 602009

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