H2020
Marie Skłodowska-Curie actions
European Training Networks

FULLCOMP Workshop

Novel Developments in Failure Analysis of Composite Materials and Structures

30-31 July 2018

Leibniz Universität Hannover

Institute of Structural Analysis

Objectives

This workshop presents recent developments in various aspects of failure analysis of composite structures, ranging from material modelling to structural modelling and from testing and identification aspects to numerical modelling. An important goal of this workshop for PhD students is to broaden their knowledge in the field of failure modelling of composite structures and to encourage them to apply these techniques and to develop new ones. This workshop is also a good opportunity for networking with other young researchers as well as with renowned scientists from academia and research institutes and discussing issues related to analysing and modelling damage and failure of composite structures.

Invited lecturers:
Prof. Stephen Hallett (University of Bristol, UK)
Dr. Tobias Wille (DLR, Germany)
Dr. Steffen Czichon (Fraunhofer Institute for Wind Energy Systems, Germany)
Prof. Silvestre Pinho (Imperial College London, UK)
Dr. Behrouz Arash (Leibniz Universität Hannover, Germany)
Dr. Paolo Tiso (ETH Zürich, Switzerland)
Prof. Stefano Mariani (Politecnico di Milano, Italy)
Dr. Benedikt Daum (Leibniz Universität Hannover, Germany)
Dr. Ilja Koch (Technische Universität Dresden, Germany)
Prof. Dirk Vandepitte (Katholieke Universiteit Leuven, Belgium)

Program

Monday, 30 July 2018; 13.30 – 17.30

13.30 - 13.40	Opening and welcome
13.40 - 14.20	Stephen Hallett: "High-fidelity modelling of composites failure"
14.20 - 15.00	Tobias Wille: "Structural evaluation of process induced deviations during composite layup and curing"
15.00 - 15.40	Steffen Czichon: "Numerical modelling of full-scale wind turbine blade testing and quantification of progressive failure"
15.40 - 16.10	Coffee break
16.10 - 16.50	Silvestre Pinho: "Mechanics of composites: from nano to macro and from simulation to engineering new damage-tolerant micro-structures"
16.50 - 17.30	Behrouz Arash: "Modeling and simulation of carbon nanotube/polymer nanocomposites: Insights from atomistic and coarse-grained simulations"

Program

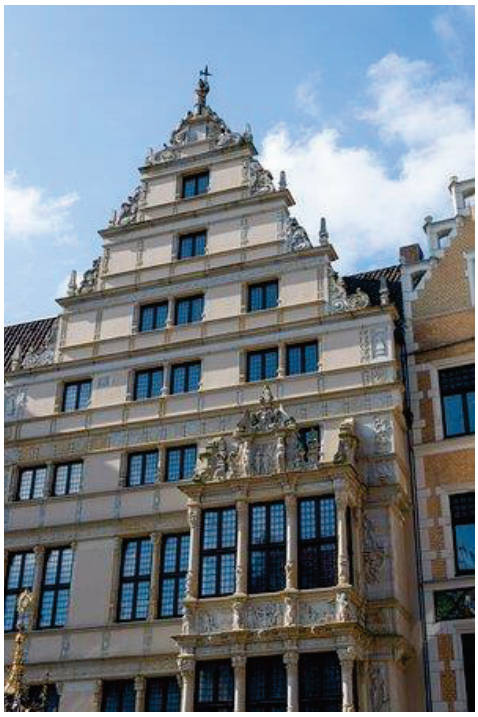
Tuesday, 31 July 2018; 9.00 – 13.00

09.00 - 09.40	Paolo Tiso: "Reduced order modeling for nonlinear thin-walled structures"
09.40 - 10.20	Stefano Mariani: "Kalman filter-driven ROM update and damage identification for nonlinear dynamic systems"
10.20 - 11.00	Benedikt Daum: "Applied failure modeling: Joints, polycrystals and fiber kinking"
11.00 - 11.30	Coffee break
11.30 - 12.10	Ilja Koch: "Damage behaviour of composite materials and structures under various loads – Identification and modelling"
12.10 - 13.00	Dirk Vandepitte: "Quantification and modelling of geometrical variability in textile composites"
13.00	Closure

Venue, Registration and Organization

Venue:

The course will take place at the Leibnizhaus in the center of Hannover. The venue is located close to the main railway station (800 m). Address: Leibnizhaus, Holzmarkt 4, 30159 Hannover, Germany.



Registration:

Participation is free of charge. Registration before 13 July (extended deadline) is required, by sending the registration form attached to m.akterskaia@isd.uni-hannover.de

Organization and contact:

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Sander van den Broek, M.Sc.

FULLCOMP

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