



D-STANDART FIRST TRAINING WORKSHOP



17 June 2024



Faculty of Aerospace Engineering
Building 62, Kluyverweg 1
2629 HS Delft



Delft University of Technology



This first training workshop is addressed to researchers and R&D engineers involved in any aspect of composites characterisation and testing. To get the most out of the training workshop requires attendees to be experienced in using advanced FEA software.



THE D-STANDART PROJECT AIMS TO

Develop rapid methods to characterise fatigue damage in composites and sustainability of composite supply chains and thereby model the durability and sustainability of large-scale composite structures with arbitrary layups under realistic conditions (loads, environment, manufacturing imperfections).

- **Through minimal and accelerated testing** of generic specimens.
-) Transferring the results of the experiments to large-scale structures using artificial intelligence and machine learning.

To support this ambition, the D-STANDART consortium is offering a free workshop to give researchers hands-on experience with fatigue testing of composite materials.

LEARNING OBJECTIVES

In this workshop you will:

-) Learn about different **experimental techniques for fatigue characterisation** of fibre reinforced composites.
-) Learn how to select an appropriate technique to support a given fatigue evaluation case.
-) Get hands-on practice with analysis of delamination growth experiment data.
-) Learn the principles of high frequency fatigue testing.
-) Get hands-on practice with numerical simulations of both quasi-static and vibration fatigue analysis.

TOP-CLASS RESEARCH EXPERTS WILL SUPERVISE THE TRAINING



J.A. Pascoe, Assistant professor in Faculty of Aerospace Engineering of Deflt University of Technology



D. Di Maio Associate Professor of Structural Dynamics in University of Twente

Look out the updates on the event on our website and LinkedIn:



Www.d-standart.eu



@d-standart

The event is public and without registration fees. **However, registration is mandatory.**



To sign up, please use the following form:

SIGN UP





PRELIMINARY PROGRAMME

| Start time | Session (theory / practice) | Organizer |
|------------|--|---|
| 9:00 | Fatigue testing methods | J.A. Pascoe, Delft University of Technology |
| 10:30 | Analysis of a fatigue delamination growth test | |
| 12:30 | Lunch | - |
| 14:00 | High frequency fatigue testing | D. Di Maio, University of Twente |
| 15:30 | Numerical analysis of vibrational fatigue | |
| 16:45 | Closure – drinks offered by the host | - |

PREREQUISITES AND ORGANIZATION ASPECTS:

Knowledge of mechanical behaviour and analysis of composite materials. Proficiency with advanced finite element software (e.g. HMI CAE Fatigue, ABAQUS, Ansys).

Preferably attendees should bring a laptop that is capable of running small to medium sized FE problems. Appropriate temporary licenses will be made available during the workshop.



TRAINING CERTIFICATE

Both practical sessions will include a test for validation of acquired knowledge.

A certificate of completion will be delivered shortly after the event to successful candidates.

ANY QUESTIONS?

Feel free to get in touch with us at:



<u>contact@d-standart.eu</u>



















