

**Marie Skłodowska-Curie
Early Stage Researcher - PhD position**

at the Prof. K. Baršauskas Ultrasound Research Institute,
Kaunas University of Technology, Lithuania
in the frame of the Marie Skłodowska-Curie European Training Network:

**NDTonAIR: Training Network in Non-Destructive Testing and Structural Health
Monitoring of Aircraft structures**

EU call: H2020-MSCA-ITN-2016 - www.ndtonair.eu

Title of the ESR-PhD Research Project: Guided-wave inspection of aerospace components using contactless measurements.

Abstract: A contactless ultrasonic inspection technique is one of the mostly preferable as it can be easier automated and more fast. On the other hand the guided waves are preferable when large components need to be inspected. The project aims are: (1) to investigate possibilities of application of laser interferometry for imaging of ultrasonic guided waves in composite plates; (2) to investigate possibilities of the air-coupled ultrasonic methods and laser interferometry for detection of defects in composite laminates; (3) to carry out experiments on different types of composite plates estimating sensitivity, accuracy and resolution of defects detection; (4) to develop algorithms of ultrasonic tomography suitable for dispersive guided waves.

Expected results: (1) contactless ultrasonic technique for inspection of composite aerospace components; (2) data processing algorithms based on the tomography of ultrasonic guided waves enabling visualize and characterize defects; (3) estimation of sensitivity, accuracy and resolution of defects detection and time required for the inspection, sensitivity to surface conditions and other parameters of laminate and defect.

Job description and eligibility criteria: The PhD position is in the PhD School of Electric and Electronic Engineering and Measurement Engineering. The research topic is in the field of ultrasonic measurements and nondestructive testing, a background in acoustic, electrical and electronical engineering is requested. Additional skills in signal and data processing using MATLAB as well capability to work with data acquisition systems are desirable. Appropriate competencies in English speaking and writing are mandatory. The research activity will be performed at the Prof. K. Baršauskas Ultrasound Research Institute of Kaunas University of Technology, but also during periods of secondment at other partners of the consortium are planned (TWI Limited –UK, The University of Warwick – UK, X-Phase s.r.l. – Italy).

The successful candidate will be therefore eager to move in other countries during the project.

In addition, the successful candidate will satisfy at the time of the recruitment (1st February 2017) the following mandatory characteristics:

- having not more than 4 years (full-time equivalent) of equivalent research experience (i.e. working as researcher after obtaining your master's degree);
- having not been awarded a title of PhD;
- having not resided or carried out her/his main activity in Lithuania for more than 12 months in the last 3 years.

Starting Date: 1st February 2017 **Duration:** 36 months

Deadline of the application: 31th December 2016

Annual Salary:

1. Living allowance € 27280
2. Mobility allowance € 7200
3. Family allowance € 3000 (depends on status on 1st February 2017).

Salary is a gross amount including employer and employee all taxes according to MSCA ITN rules.

For more info about salary calculation, the requisites for family allowance and more details on the employment conditions, please see the H2020 rules:

http://ec.europa.eu/research/participants/data/ref/h2020/wp/2016_2017/main/h2020-wp1617-msca_en.pdf

http://ec.europa.eu/research/participants/data/ref/h2020/other/guides_for_applicants/h2020-guide-appl16-msca-itn_en.pdf

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