Extract of the paper "Understanding Uncertainties in Thermographic Imaging"

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Abstract

The present article proposes a workflow based on free/open-source software solutions for the acquisition of competences in engineering courses related to the use of thermographic images. The approach is aimed to three-dimensional visualization techniques over thermographic images to improve the comprehension and interpretation of the different error sources that affects the measurements, and therefore the conclusions and analysis derived from them. The present work is framed inside the virtual laboratories discipline, as the new learning material can be employed for the acquisition of competences and skills. Additionally, it can be used for the evaluation of competences in asynchronous and e-learning programs. The learning materials could be easily deployed in a learning management system, allowing the students to work with the models by means of open-source solutions easily, both in asynchronous and face-to-face courses. Consequently, the present approach will improve the application of professional techniques, so the future professionals will reach the working market better prepared.

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Keywords

Educational innovation; ICT; E-Learning; Engineering; Virtual laboratory; Thermography

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