

**6th International Conference on
Optical Measurement Techniques for Structures & Systems**



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Keynote lecture by Prof. Jean-José Orteu



Prof. Jean-José Orteu graduated in 1987 from a French "Grande Ecole" (ENSEIRB, Bordeaux, France) with an Engineering degree in Electrical and Software Engineering and a Master Thesis in Automatic Control. Working in the Robotics and Artificial Intelligence group of LAAS-CNRS (Toulouse, France) on the application of computer vision to the automation of cutting in mines, he received his PhD in Computer Vision in 1991 from Université Paul Sabatier (Toulouse, France). In 1992, he joined the Ecole des Mines d'Albi (Albi, France), a French "Grande Ecole" specialized in Process Engineering, as an Assistant Professor. From 1992 to 2000, he was head of the Electrical Engineering and Automatic Control department. He was promoted to the rank of Full Professor in 2002. From 2000 to 2007, he was head of the Dimensional and Thermal Optical Measurement group (17 people) dedicated to the development of non-contact methods for mechanical and thermal measurements in the field of material processing, for the study of the behaviour of materials and structures, and for process monitoring. Since 2008, he carries out his research work in the Institut Clément Ader (ICA) laboratory (220 people) and he is the Deputy Director of the ICA-Albi Research Center (70 people). He is also head of the Institut Clément Ader's "Metrology, Identification, Control and Monitoring" group (30 people) which is dedicated to full-field mechanical and thermal measurements for experimental mechanics and process monitoring, identification from full-field measurements and NDT/NDE. His main interest topics are computer vision and automatic control and he is now more specifically involved in the application of computer vision to 3D metrology, photomechanics, process monitoring and NDT/NDE.

OPTIMESS 2015 lecture:

"Computer-vision-based NDE in aeronautics"

Airplanes are periodically inspected, either on the airport tarmac between two flights (preflight inspection) or in a hangar during maintenance operations. Today, these inspections are done by human operators, generally visually and sometimes with the help of some inspection tools (for instance to evaluate the criticality of a crack detected on the plane fuselage).

In order to make the inspection more quick, more exhaustive and more accurate (and also for traceability reasons), a multi-partners research project is being carried on in order to develop a mobile robot equipped with several optical sensors (cameras and 3D scanners) to perform an automatic inspection of an airplane. This project will be presented.

