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Editorial

CompTest 2003

The first international conference on “Composites Testing and Model Identification” was held from 27–29th January 2003 at Ecole Nationale Supérieure d’Arts et Métiers (ENSAM) in Châlons en Champagne. The meeting attracted about a hundred participants from 15 countries.

The objectives of the conference were twofold.

It was meant firstly not only to be a forum for the scientific community working on testing of composite materials and structures, but also to *promote interaction between modelling and experimentation* in so far as very often, testing is performed to measure the parameters of a model, hence the “model identification” term in the title of the conference. Therefore, CompTest aimed at covering the full range of testing activities including the parts where models are identified and/or validated.

The second essential issue that triggered CompTest was that very powerful experimental tools are now beginning to be available, such as optical full-field measurements, optical fibres, infrared cameras, 3D tomography etc. with the common feature that they provide very extensive experimental data. As a consequence, the idea was to put forward *new and innovative experimental procedures* taking full advantage of such techniques to improve testing methodologies.

Launched with the above objectives, the conference attracted 68 papers, split between 37 oral presentations and 31 poster presentations. The oral presentations were organised in 10 sessions running in single session format.

Three invited lectures aimed to give the flavour of the conference.

The first one was given by Dr Richard Burguete from Airbus UK in Filton (Experimental Mechanics Group) and was entitled *Industrial applications of full-field optical methods to composite materials*. Dr Burguete gave a very interesting presentation on Airbus experiences with full-field optical measurements, showing many practical applications of such techniques.

The second invited lecture entitled *Analytical and experimental characterization of damping in composite materials and structures* was given by Professor Ronald F. Gibson, from Wayne State University in Detroit, USA. Professor Gibson gave an excellent overview of the state

of the art on the important issue of damping measurements in composites, a large part of it based on his own extensive experience in the area.

Finally, Professor Michel Grédiac from Clermont-Ferrand University presented a lecture entitled *Applying full-field measurements for composite materials characterization: interest and limitations* where he highlighted the potential of full-field measurements for composites characterization, an area that will certainly strongly develop in the near future.

The range of applications of composites testing proved very wide, with sessions on “damage and failure”, “mechanical testing” (I and II), “identification”, “fabrics”, “structures”, “viscoelasticity/dynamic testing”, “manufacturing”, “physical properties” and “applications of optical techniques”, as well as a very lively poster session.

According to a large number of participants, CompTest2003 proved a success. Very interactive discussions took place in the sessions but also during the breaks. There was a feeling that very few focused conferences exist—at least on the European “market”—to discuss composites testing, and that the link with modelling was indeed essential to fully understand the testing issues. As a consequence, it was decided to organize a second edition of CompTest in 2004 at the University of Bristol.

We would like to take the opportunity here to thank all the people who made CompTest2003 possible, and also particularly the sponsors: the Champagne Ardenne Regional Council, the Marne District, the City of Châlons en Champagne and ENSAM for providing the premises. Also, we would like to acknowledge the scientific societies who gave their official support and helped us publicize the event: the French Mechanics Association (AFM), the French Society for Composites (AMAC) and the Institute of Materials, Mining and Minerals (IOM³) in the UK.

The selection of the papers that appear in this special issue has been performed according to the recommendations of the scientific committee following the reviewing of the extended abstracts. The authors concerned have then been asked if they would like to submit a full-length paper and this procedure led to the reception of 26 papers

that have then undergone the normal review process with two reviewers. Finally, 22 papers have been accepted for this special issue. The papers cover the whole range of the themes that appeared at the conference and give a very good flavour of the spirit of CompTest. We look forward enthusiastically to CompTest2004—further details at <http://www.aer.bris.ac.uk/comptest2004/>

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