

Short Course on

Verification, Validation and Updating of FE Models for Structural Analysis (VVU-121)

Date and Location

April 25-27, 2012

Hotel Mercure Leuven Center
Alfons Smetsplein 7, 3000 Leuven,
Belgium.

Course Language

The course language is English.

Presenters

Ir. Eddy Dascotte, *DDS NV*
Dr. Tom Lauwagie, *FTNA LLC*

Course Fee

€ 950 euro per person.

This fee includes taxes (21 %),
course materials, lunches and
refreshments.

Registration

Advance registration is required. To
register, please complete the
attached form and return by fax or
use the online registration form at
<http://www.femtools.com/courses>.

Upon registration you will receive an
email confirmation of your reservation
with additional practical information
about the venue and course.

Cancellation Policy

A full refund will be made for all
cancellations received 7 days before
the start of the course. Afterwards
50% of the costs will be charged.

Substitute attendees will be accepted
at any time.

In the event that we have to cancel
the course, you will be refunded in full
but we disclaim any further liability.

Additional Information

<http://www.femtools.com/courses>
info@femtools.com
+32 16 40 23 00

Overview

During this course, participants will not only learn the basic principles of test-analysis correlation and finite element model updating, but also get hands-on experience using specialized software (FEMtools).

All aspects of a FE model validation process will be reviewed including importing and preparing FEA and test data, analyzing correlation, selecting updating parameters, defining realistic targets, computing sensitivity coefficients, running updating loops and postprocessing the results.

Complementary technologies and applications like probabilistic analysis, pretest planning, structural modifications, force identification and material characterization will also be discussed and applied.

The FEMtools software will be used for hands-on exercises during approximately half of the time. Participants are invited to bring a portable computer to use during the hands-on exercises.

Intended Audience

This course is suitable for anyone interested in learning the state-of-the-art in finite element model verification, validation and updating. Participants typically have a background in CAE, engineering quality assurance, structural dynamics, modal testing, noise and vibration troubleshooting. The methods shown can be applied to a wide range of industrial applications.

Course Contents

- Overview of model verification, validation and updating for structural dynamics
- Database management and interfacing with commercial finite element software and test data
- Using internal and external finite element solvers for re-analysis
- FE-test correlation analysis
- Modal pretest analysis
- Sensitivity analysis
- Model updating using static test data
- Modal-based model updating
- FRF-based model updating
- Advanced model updating concepts (multi-model updating, parameter relations, superelements,...)
- Probabilistic model validation and updating
- Applications of model updating
- Using approximations for fast re-analysis
- Force identification and updating
- Using scripting for database management, analysis integration and automation

Course Registration Form

Participant(s):

Name(s)

Company

Address

E-mail

Telephone Fax

Date Signature

Invoice Address:

Company

Invoice Address

VAT Number:
(if applicable)

I hereby register for the following course:

VVU121 – Verification, Validation and Updating of FE Models (April 25-27, 2012) – 950 euro

Course Fee: Fees will be charged by invoice and include 21% VAT*, course materials, lunches and refreshments.

Cancellation Conditions: A full refund will be made for all cancellations received 7 days before the start of the course. Afterwards 50% of the costs will be charged. Substitute attendees will be accepted at any time. In the event that we have to cancel the course, you will be refunded in full but we disclaim any further liability.

* DDS is legally obliged to charge 21% Belgian VAT on all course fees quoted. According to the European Union VAT Directive, VAT of the country hosting the educational event must be charged. Article 53 of the VAT Directive states that "cultural, artistic, sporting, scientific, educational, entertainment and similar activities are taxed at the place where those services actually take place". This is one of the exceptions to Article 44 of the VAT Directive.

To register, complete and fax this form to +32 16 40 24 00

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