Dynamic Design Solutions
CAE Software and Services

Short Course on

Verification, Validation and Updating of FE Models for Structural Analysis (VVU-101)

Date and Location

May 5-7, 2010

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, *DDS NV*

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

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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 want to register for the following courses:

☐ VVU101 – Verification, Validation and Updating of FE Models (May 5-7, 2010) – 950 euro

☐ OPT101 – Introduction to Structural Design Optimization (October 20-22, 2010) – 950 euro

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

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

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