

Fall School

“Modelling and Simulation for Non Destructive Evaluation”

INSTN - CEA Saclay, October 13-17, 2014

- General Introduction on NDE simulation and applications
- The use of NDE simulation in the Aircraft industry
- An overview of numerical methods for elastic wave modeling
- Semi-analytical models for ultrasonic propagation and scattering
- Application of FEM to ultrasonic propagation
- The use of modelling for inspection qualification of French nuclear power plants
- Simulation assisted Probability of Detection
- Physical principles, applications and modelling of guided waves
- Principles of RT modelling
- Computed tomography reconstruction algorithms
- Applications of RT modelling
- The simulation applied to ultrasonic arrays
- Numerical methods for electromagnetic NDE

- Modelling of Eddy Current inspection techniques

- The use of NDE modelling for tube inspection
- Hybrid models for electromagnetic methods
- Application of FEM to electromagnetic NDE
- Inversion techniques and NDE
- Surrogate models for NDE applications
- NDE Simulation: Perspectives

P. CALMON, CEA LIST, Saclay (France)
N. DOMINGUEZ, Airbus Group, (France)
A-S BONNET, ENSTA, POEMS, (France)
A. LHEMERY, CEA LIST, Saclay, (France)
B. CHASSIGNOLE, EDF (France)
L. DE ROUMILLY, EDF (France)

F. JENSON, CEA LIST, Saclay (France)
M. LOWE, Imperial College (UK)
A. SCHUMM, EDF (France)
S. LEGOUPIL, CEA LIST, Saclay, (France)
A. DERESCH, BAM (Germany)
Ph. BENOIST, M2M (France)
G. RUBINACCI, University of Napoli (Italy)

Th. THEODOULIDIS, University of West Macedonia (Greece)

B. BISIAUX, VALLOUREC (France)
C. REBOUD, CEA-DRT/LIST, Saclay, (France)
P. THOMAS, EDF (France)
D. LESSELIER, Supélec, L2S, (France)
S. BILICZ, University of Budapest, (Hungary)
S. MAHAUT, CEA LIST, Saclay, (France)

Computer Sessions with Practical Training using relevant software:

- **CIVA UT, ET, RT, Athena, Artist, Carmel**

Organizers:

Pierre CALMON, CEA LIST, Saclay, pierre.calmon@cea.fr
Philippe DUBOIS, EXTENDE, philipe.dubois@extende.com
Fabienne RUPIN, EDF R&D, Renardières, fabienne.rupin@edf.fr
Philippe BARANEK, EDF R&D, Renardières, philippe.baranek@edf.fr
Constantin MEIS, CEA/INSTN, Saclay, constantin.meis@cea.fr
Julian GALE, Curtin University, Australia, J.Gale@curtin.edu.au
Eric SIMONI, Université Paris Sud, vice-doyen-recherche.sciences@u-psud.fr
Pierre Richard DAHOO, UVSQ, pierre.dahoo@uvsq.fr

Registration deadline: September 19TH, 2014

Registration and Information : martine.mury@cea.fr

Phone: +33 | 69 08 89 09 Fax: +33 | 69 08 57 53

