

Materials Simulation & Engineering

Winter School

“ Computational Mechanics of Materials and Damage ”

From basic principles to the multi-scale approach

INSTN CEA Saclay, November 25-29, 2013

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| <ul style="list-style-type: none"> ➤ From mechanical behavior to fracture assessments ➤ Introduction to multi-scale modelling in mechanics of materials ➤ Basic principles of continuum mechanics ➤ Introduction to finite elements method (Static) ➤ Introduction to finite elements method (Dynamic) ➤ Behaviour laws ➤ Micro mechanics approach of damage ➤ Introduction to Fracture Mechanics ➤ Advanced computational Fracture Mechanics ➤ Computational methods for damage and fracture ➤ Advanced computational methods in non-linear mechanics ➤ Dislocation Dynamics ➤ Crystalline laws ➤ Introduction to the polar method for plane anisotropy ➤ Homogenization - Microstructure ➤ Future trends | <ul style="list-style-type: none"> S. LECLERCQ, EDF, France B. MARINI, CEA-Saclay, France G. CAILLETAUD, Mines ParisTech, France O. FANDEUR, CEA-Saclay, France F. ARNAUDEAU, ALTAIR ENGINEERING, France F. ARNAUDEAU, ALTAIR ENGINEERING, France T. PARDOEN Université Catholique de Louvain, Belgium K. WALLIN, VTT, Technical Research Centre, Finland S. MARIE, CEA-Saclay, France R.H.J. PEERLINGS, Eindhoven University, Netherlands. P. VERPEAUX, CEA-Saclay, France G. MONNET, EDF, & L. DUPUY, CEA-Saclay, France G. MONNET, EDF & L. VINCENT, CEA-Saclay, France P. VANNUCCI, Université de Versailles, UVSQ, France C. BERDIN, Université Paris Sud 11, Orsay, France G. PERRIN, AREVA, France |
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Computer Sessions with Practical Training using relevant softwares:

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| <ul style="list-style-type: none"> ➤ Finite elements method (Static) - CASTEM ➤ Finite elements method (Dynamic) - RADIOSS ➤ Fracture Mechanics - CASTEM ➤ Dislocation Dynamics – MICROMEAS/NUMODIS | <ul style="list-style-type: none"> C. BERDIN (Paris 11), S.PASCAL & B.TANGUY CEA-Saclay. B. ROYER & M. HERVE ALTAIR ENGINEERING. C. BERDIN (Paris 11), S.PASCAL & B.TANGUY CEA-Saclay. L. DUPUY, CEA-Saclay & G.MONNET, EDF |
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Organizers:

Ch. POUSSARD, CEA-Saclay & C. MEIS, INSTN, CEA-Saclay
 Ph. BARANEK & G. MONNET, EDF Renardières,
 H.SHAKOURZADEH & F. ARNAUDEAU, ALTAIR ENGINEERING
 C. BERDIN, Université Paris Sud 11, Orsay
 P-R DAHOO, Université de Versailles St Quentin en Yvelines

Registration deadline: October 31, 2013

Registration and Information:

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www-instn.cea.fr (upcoming events / 2013)