DYNAmore GmbH
Industriestr. 2

D-70565 Stuttgart
Germany

DYNAmore GmbH

DYNAmore is dedicated to support engineers to solve non-linear mechanical problems numerically. Our tools to model and solve the problems are the finite element software LS-DYNA as solver and LS-OPT for optimization. We sell, teach, support, and co-develop the software and provide engineering services.

Among the customers are car manufacturers, automotive suppliers, and small companies developing components, or consulting companies offering FEM analyses.

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Organization

Date/time: 22nd - 23rd November 2010, 9:00 am - 5:00 pm

Attendance fee: Industry: 980.— Euro
Academia: 490.— Euro
Per delegate plus VAT.

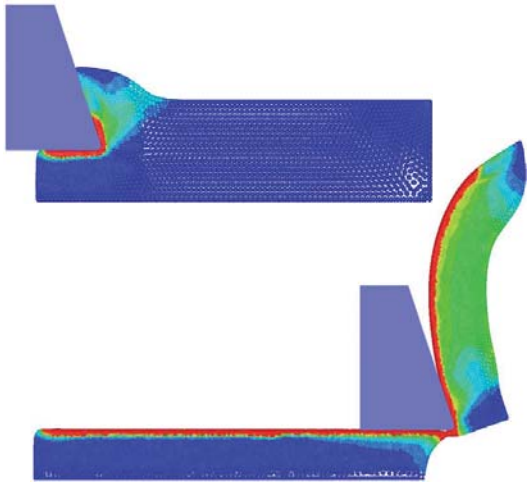
Seminar language: English

Venue: DYNAmore office in Stuttgart

Invitation to the seminar

MESHLESS METHODS IN LS-DYNA

22nd - 23rd November 2010, Stuttgart, Germany



Referent

Dr. Yong Guo (LSTC)

INVITATION

Meshless Methods in LS-DYNA

This seminar introduces to the application of the meshless "Element-Free Galerkin" (EFG) and "Smooth Particle Hydrodynamics" (SPH) methods in LS-DYNA.

The seminar outlines the theoretical basics and thoroughly refers to the settings required in the LS-DYNA input deck in order to carry out an EFG/SPH simulation. Examples are provided to get a better understanding of the methods.

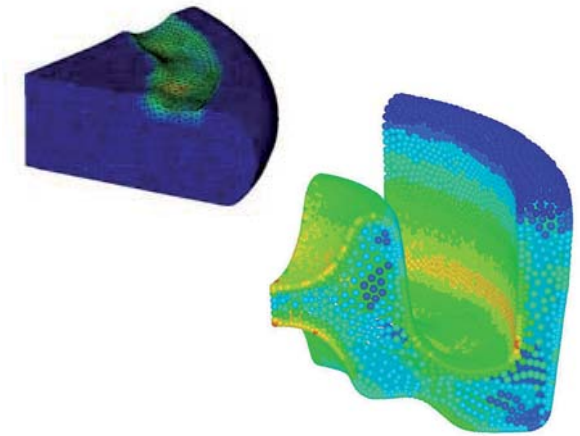
The lecturer, Dr. Yong Guo, is working as a software developer for LSTC. His activities are development and implementation of meshless methods in LS-DYNA.

It is recommended that the participants have already some experiences with general LS-DYNA simulations.

We would be very pleased to welcome you in Stuttgart.

Yours sincerely,

DYNAmore GmbH



CONTENTS

EFG

- Introduction
  - Outline of current meshless methods
  - Element-Free Galerkin Method
  - Reproducing kernel particle method
  - HP-Clouds, finite sphere method...
- General capabilities/applications
  - Variation functional
  - Lagrangian and Eulerian kernel
  - Treatment of boundary conditions
  - Area integration and patch test
- Advantage and limits of the method
  - Industrial applications
  - Incompressible limit
  - Numeric aspects
  - Lagrange method vs. Euler method
  - Galerkin access vs. collocation method
- Principle of the method
- Advantage and limits of the method
- Coupled finite element/EFG method
- Current research on meshless methods
- Current implementation and future plans for EFG in LS-DYNA

SPH

- Development (history) of the method
- General capabilities/applications of SPH
- Coupled finite element/SPH method
- Principle of the method
  - Characteristical lengths
  - Particle approximation of functions
  - Renormalization
- Neighbour search
- Input parameter on the basis of an example
  - Control input
  - Material, sections and parts
  - Output
- Pre- and postprocessing with LS-PrePost
- Workshop

REGISTRATION FORM

❑ I herewith register for the seminar:
"Meshless Methods in LS-DYNA"
22nd - 23rd November 2010 in Stuttgart, Germany
❑ Industry: 980.— Euro
❑ Academia: 490.— Euro
Per delegate plus VAT.

❑ Please contact me, I am interested in
❑ LS-DYNA
❑ DYNAmore services

❑ Please put me on your mailing list.

Sender

Last name _____

First name _____

Company/University _____

Department _____

Street _____

Zip-code city _____

Country _____

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E-Mail _____

Date _____

Signature _____

Please complete and fax to +49 (0) 7 11 - 45 96 00 29 or send to DYNAmore GmbH, Industriestr. 2, D-70565 Stuttgart, Germany

Online registration at www.dynamore.de