

I herewith register for

- Webinar (free of charge):
„Multiphysics“
29 November 2017, Stuttgart, Germany
- Seminar:
„ICFD – Incompressible Fluid Solver in LS-DYNA“
30. Nov. - 1. Dec. 2017, Stuttgart, Germany
- Industry: 1.100,- € Research institution: 550,- €
 Student: free of charge, if there are vacancies

Sender

First name: _____

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Date, Signature: _____

Please complete and fax to +49(0)711-459600-29, send to DYNAmore GmbH, Industriestr. 2, D-70565 Stuttgart, Germany, or e-mail to seminar@dynamore.de.

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Online registration at www.dynamore.de/seminars

Declaration of consent to the use of personal data:

With your registration you allow us the use and the processing of your data for the seminar organization and promotional purposes. You may, at any time, revoke your consent by contacting DYNAmore GmbH via phone or in writing.

DYNAmore GmbH

DYNAmore is dedicated to support engineers in solving nonlinear mechanical as well as multiphysical problems numerically. Our product portfolio includes the finite element solver LS-DYNA, the pre- and postprocessor LS-PrePost and the optimization software LS-OPT as well as numerous finite element models needed for crash worthiness simulation (dummies, barriers, pedestrian and human models, ...). Our main field of activity is to sell, teach, support, and co-develop the software LS-DYNA and LS-OPT. In addition, we provide engineering services for numerical analysis and integrate simulation software in your CAE environment.

Our advanced training offer includes classical seminars, workshops, webinars, support and information days as well as LS-DYNA user conferences. More detailed information can also be found on our support and tutorial websites: www.dynasupport.com and www.dynaexamples.com

We are one of the first addresses for pilot studies and development projects with respect to the simulation of nonlinear dynamic problems. We are always at your disposal to answer your questions on specific applications as well as test licenses. You will find DYNAmore in Stuttgart, Dresden, Ingolstadt, Berlin, Wolfsburg, Langlingen, Zürich (CH), Linköping (S), Göteborg (S), Turin (I), Versailles (F) und Dublin, Ohio (USA).

Organization

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Registration

For your registration please use the registration form, send an E-Mail with details to seminar@dynamore.de or use the online registration links which are provided in the description.

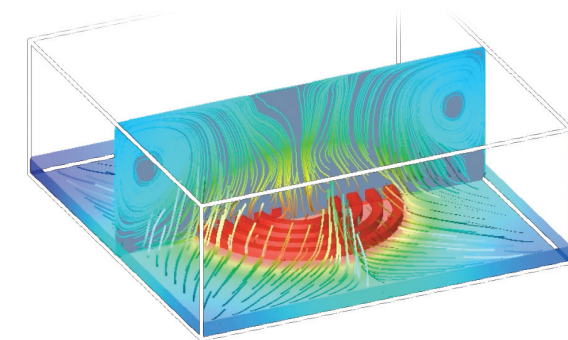


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Invitation to the event series

Multiphysics and Incompressible Fluid Solver in LS-DYNA

in Stuttgart



Webinar (free of charge):
Multiphysics

29 November

Seminar: ICFD – Incompressible
Fluid Solver in LS-DYNA

30 Nov. - 1 Dec.

Webinar: Multiphysics

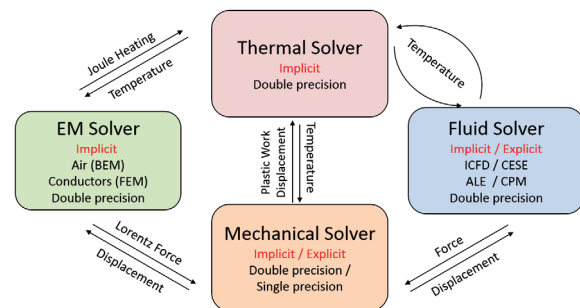
The modern term "Multiphysics" can be understood as a synonym for the solution of generally coupled problems. Following this, multiphysical applications are often classified according to the nature of their coupling in terms of a weak or strong interaction of the involved processes, methods, materials, physical fields or scales as well as combinations thereof.

Moreover, the interacting quantities may result in either volume- or surface-coupled problems. Thus, the success of multiphysical simulations strongly depends on the coupling abilities of the underlying simulation platform. In the case of LS-DYNA, this is achieved in a unified simulation environment.

The goal of this webinar is to enlarge upon the basic difficulties with the set-up of multiphysical simulations and to provide suitable solutions by embracing the available discretization schemes in space and time in LS-DYNA. In particular, a great variety of finite elements in a Lagrangean, Eulerian or Arbitrary-Lagrange-Eulerian formulation can be coupled with boundary elements, isogeometric elements or even meshfree methods like SPH, EFG or DEM. Moreover, implicit as well as explicit time integration schemes are provided and can be combined depending on the strength of the coupling.

On the basis of practical examples, an overview on the current coupling abilities in LS-DYNA is given. Herein, the attention is mainly on the mutual interaction of solids and fluids with thermal and electromagnetical fields.

Date: 29 November, 14:00 - 16:00
 Fee: Free of charge
 Language: English
 Registration: www.dynamore.de/mp-web



Seminar: ICFD – Incompressible Fluid Solver in LS-DYNA

This course provides an introduction to the incompressible fluid solver (ICFD) in LS-DYNA. It focuses on the solution of CFD problems, where the incompressibility constraint may be applied, e. g. ground vehicle, aerodynamics, hemodynamics, free-surface problems, ship hydrodynamics, etc.

The solver may run as a stand-alone CFD solver, where only fluid dynamics effects are studied, or it can be coupled to the solid mechanics solver to study loosely or strongly coupled fluid-structure interaction (FSI) problems.

The first day of the course includes a presentation of the general principles and applications of the solver, a step by step guide to setting up a simple CFD problem, advanced feature introduction (FSI, conjugate heat transfer) and so forth.

A brief review of basic fluid mechanics and CFD concepts are also offered such that no expert knowledge of fluids is required.

The second day will deal with the newly implemented features and advanced applications.

Contents

Day 1:

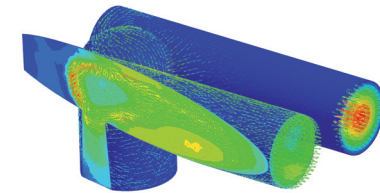
Introduction to the ICFD solver in LS-DYNA
 General principles and supported applications

- Step by step keyword description
- Setting up a pure CFD problem for aerodynamics
 - Setting boundary conditions
 - Fluid volume mesher
 - Mesh refinement tools
- Strong and loose FSI coupling
- Thermal coupling and conjugate heat transfer
- Computation of the heat transfer coefficient

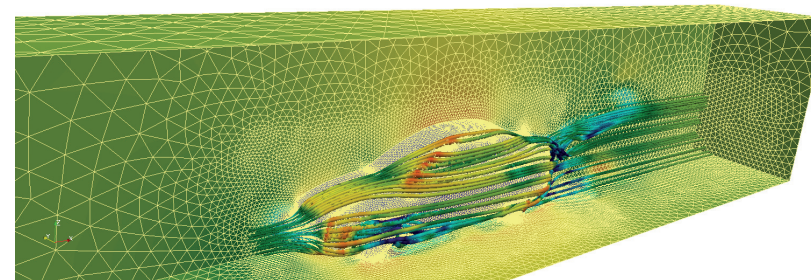
Day 2:

Advanced topics and new features

- Advanced controlling and monitoring tools
- Turbulence modeling
 - New models and picking the right one
 - Law of the wall and boundary layer
- Non Newtonian flows
- Flow in porous media
- DEM coupling
- New postprocessing tools in LS-PrePost



Date: 29 Nov. - 1 Dec., 9:00 - 17:00
 Fee: 1.100 €
 550 € for research institutions
 students free of charge, if there are vacancies
 Venue: DYNAMore Stuttgart
 Lecturer: I. Çaldichoury (LSTC)
 Language: English
 Registration: www.dynamore.de/icfd



ICFD Solver in LS-DYNA