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Ongoing and future R&D projects

1st Workshop on Nonlinear Analysis of Shell Structures

Ongoing research project

INTALES R&D

Sensitivity analysis using random fields

Team:

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TU Delft

- Dept. of Aerospace Structures

Task: Development of an improved method using the Karhunen-Loève expansion of random fields for the structural analysis of lightweight structures.

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Future research projects 1

Proposal to ASAP 7 of FFG:

Sensitivity analysis using finite elements for space applications

Topics: Layered Shell Elements

Development of sensitivity analysis methods based on the adjoint problem

Team:
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UIBK

- Dept. of Mathematics
- Unit for Engineering Mathematics
- Unit for Applied Mechanics

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Future research projects 2

FFG Bridge 10 Programme

A MANY-CORE COMPILER FOR INDUSTRIAL ENGINEERING
STABILITY ANALYSIS

Team:

UIBK - Dept. of Computer Science
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Task:

To solve the computationally-intensive nonlinear structural analysis problem of large and complex light weight structures by using modern parallel multi-core processors enhanced with hardware accelerators such as GPUs and Cell processors.

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Further R&D Strategy 1

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Our common research team:

Wishes to get feedback from the participants of this workshop

Appreciates intensive discussions with specialists from industry, agencies and universities

Proposes co-operation in national and international projects

Further R&D Strategy 2

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Continuous tuning of the developed tools together with ASTRIUM ST

New tools for carbon fibre materials

Industrialisation of the developed tools

Participation in future development projects

Cross checks for future launcher and spacecraft structures

Special tasks at the University Innsbruck

Doctoral School for „Computational Interdisciplinary modelling“

Teamwork of leading scientists from applied and basic research areas

-Astro-, Plasma, and Molecular Physics and Engineering –

and the methodologically oriented fields

-Mathematics and Computer Science

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<http://www.uibk.ac.at/dk-cim/index.html.en>

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