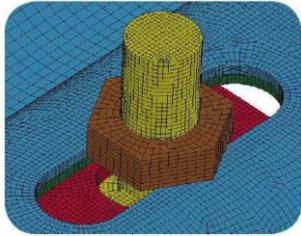# CRASH & DYNAMICS

We're looking for students with profiles:

Civil, Mechanical, Aeronautical, … Engineering who ideally had Finite Element Simulation courses
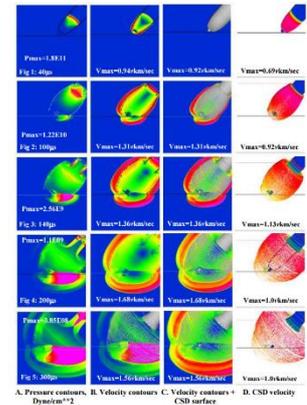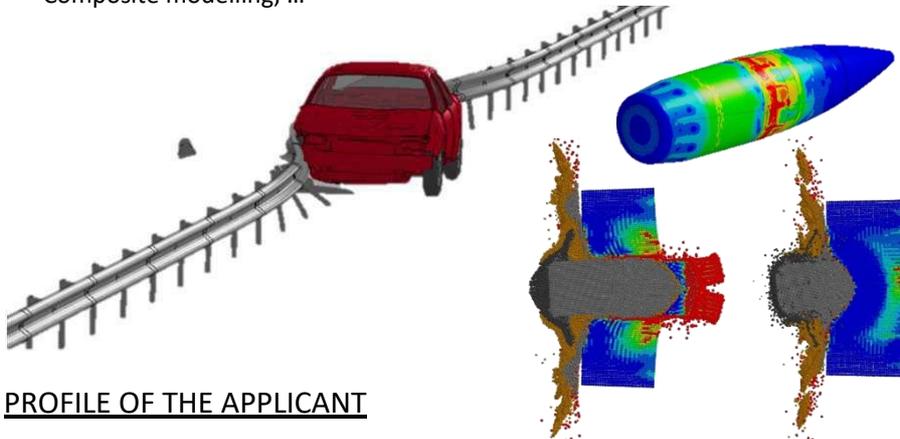
CONTEXT

Finite Element Simulation is a useful cost-effective tool to help manufacturers to design and pre-validate products during their development phases. GDTech is providing a service of calculation using Finite Element simulations and aims to be able to predict product behaviours with the maximum level of reliability. Some topics such as crash, explosion, impact simulations are difficult and require some fundamental investigations and possibly experimental results to progress. GDTech, with its collaboration with different universities, is proposing internship topics in line with its wish to acquire more advanced knowledge in those fields.

TOPICS TO BE DEVELOPED

Several end applications could be mentioned for the use of the more advanced modelling technique that would be proposed/studied by the student such as crash of vehicles, of roadside equipment, impact of bullets, fragmentation of rocket warheads, … The possible modelling technique that would be proposed to the applying student could be:

- Improvement of a roadside safety equipment modelling (bolts, rupture criteria, …)
- Improvement of vehicle modelling (impactors or EURONCAP tests)
- Soil models improvement for explicit calculations
- Defence (explosion, fluid/structure interaction, …)
- Fragmentation of rocket warheads, bullet impacts
- Modelling of pressured equipment subject to rupture
- Composite modelling, …

PROFILE OF THE APPLICANT

All fields of engineering are possibly concerned, best is to get in touch with GDTech to get a better description of the possible topics. Most (not all) of the topics are requiring the use of Finite Element Software (structure and/or fluid analysis) so knowledge of Finite Element Modelling is a plus. A good level of French or English is required.

CONTACTS

Interested students can contact : Jeffrey.Himpe@GDTech.eu and/or Joseph.Marra@gdtech.eu

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