



UNIVERSIDAD DE GRANADA

Person in charge:

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Courses concerned:

Structural mechanics

Finite Element Method

Vibrations of continuous systems.

General motivation of the use of Code-Aster:

I started working with Salomé-Meca and Code Aster in 2013, in the context of the final project of one of my students. This project was focused on fatigue analysis in steel structures according to the International Institute of Welding methods (hot-spot point, effective notch stress, or crack growth). We also used nonlinear analysis included in Code-Aster to solve low-cycle fatigue problems. We run our solvers in Ubuntu-Linux machines.

Since this moment, students, and colleges in my department become enthusiastic in using Code-Aster, for teaching and industrial purposes. I have used Salome and Code-Aster, in direct projects for the industry, such as:

- Fatigue analysis of wind barriers in the New Bridge over the Bay in Cadiz (Spain).
- Fatigue and nonlinear analysis –low cycle fatigue- in an offshore meteorological mast.
- Certification of prestressed bolted flange connection in metallic joints.
- Verification of new railway platforms based on Stone-Mastic-Asphalt.
- Analysis of some intermediate nonlinear stages in the construction of metallic bridges.
- Vibration problems in bridges for high-speed railway lines.