



EVENT TITLE

GRIDS Code17

SESSION TITLE

FEM 4 DUMMIES

Speaker(s)

João Oliveira**Robertt Valente**

Date / TIME

October 12th 2017 / 18h00

Duration

2 hours

Audience

College Undergraduates

DESCRIPTION

Computation and computational tools are, from day to day, an utmost and essential part of our reality, helping us in a large variety of fields and applications. For the case of an engineer (or the engineer of the future) this is even more real and important. As for today, engineers have an unprecedented level of access to incredible powerful computational tools, that make possible the solving of complex problems with the click of a button. It is even possible to create amazing 3D models using a simple computer, and manipulate them as they were real. This is possible by means of what is typically called “Computer Aided Design” (or simply CAD). With these computer-generated models, it is also possible to simulate real life conditions, such as the applications of forces, temperatures, strains and stresses, for instance, and this step into virtual reality and engineering calculation is simply called “Computer Aided Engineering” (CAE), which makes sense, right?

In this amazing session, all the participants will have a first (but passionate) contact with CAD and CAE, playing the role of engineering gods creating structures and testing them for several extreme conditions that appears in real life. This will be done with a technique called Finite Element Method (FEM), and everybody is invited to this FEMazing experience!

WEBSITE

<http://grids.web.ua.pt/index.php/events/grids-code17/>