CodeWeek.

EVENT TITLE
GRIDS Code17

SESSION TITLE
Numerical Modelling of Projectile Motion with Air Resistance using MATLAB

Speaker(s)
Alexandre Cruz

Date / TIME
October 10th 2017 / 18h00

Duration
2 hours

Audience
College undergraduates

DESCRIPTION
The projectile motion is a type of movement in which an object is thrown on the surface of the Earth and according to which it describes a curved trajectory under the action of gravity. Usually it is assumed that air-resistance effects are negligibly small. Nevertheless, air resistance (often called air drag, or simply drag) can have a major effect on the motion of many objects, such as tennis balls, bicycles, airplanes, etc. In this context, it's not difficult to include the effect of air resistance in the equations for a projectile, but solving them can get quite complex. Fortunately, using a computer with MATLAB it gets fairly easy to perform quite precise numerical approximations to these solutions.

That's what this session is about! We will see how to numerically model the motion of projectiles subject to air resistance and therefore analyse and visualize the effect of the drag force on its trajectory.

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