



## NUMERICAL INTEGRATION OF PARTIAL DIFFERENTIAL EQUATIONS: TUTORIAL ON FIDISOL/CADSOL

Jorge Filipe Mónico Delgado<sup>1</sup>

<sup>1</sup>*Mathematics Department, Aveiro University, 3810-193, Aveiro, Portugal.*

In this minicourse, we shall learn how to use the professional package FIDISOL/CADSOL to solve elliptical partial differential equations that arise when one wants to obtain rotating solutions from a given theory of Gravity. In the first lecture, we will explore some of the inner workings of the package and we will obtain numerically the well-known Kerr solution. In the second lecture, we shall use a provided solution of a rotating mini-boson star to understand how we can extract some of its properties and phenomenology.