

Hands-on Session 4

Subject : Gamma-Ray Bursts with Machine learning for the redshift inference

Instructor : Maria Giovanna Dainotti

Outline : The hands-on session will consist of two of 90 minutes each. The first 30 minutes will be dedicated to explaining what Gamma-Ray Burst are and what are the techniques of machine learning used in the exercise.

The next hour will be devoted to the installation of the R studio for students who had problems with the first installation and all the packages needed and to importing the data file.

The next hour and a half lesson will be devoted to inferring the redshift of GRBs for a sample for which we do not have the redshift, the so-called generalization sample and check and discuss the results with the previous sample. We will also run the Kolmogorov-Smirnov Test on the samples of the redshift inferred and the previous observed redshift and discuss the nature of possible differences.

Maximum number of students to be accepted : 6

Language of instruction: English. All the hands-on sessions will be held fully in English. Requirement: please bring your own laptop and install R studio.