

## ESCAPE SUMMER SCHOOL



ID de Contribution: 135

Type: Non spécifié

## Library overview

**Python:** this talk gives an overview about the Python language in the scientific context. It shows its strengths and weaknesses and also introduces a few important libraries which should be part of a scientist's toolbox.

**Numpy:** Numpy has built the foundation of numerical computing in Python. Without this package, Python could not have reached such a level of popularity in data science. This course will teach the basics of Numpy and shows how to utilise it to solve numerical problems.

**Pandas:** Pandas is a great library to work with tabular data and perform high-level statistical analyses with them. In this short lecture, we will explore how to load, transform, combine and analyse datasets using the powerful Dataframe structure.

**Matplotlib:** Visualisation is a key component of scientific work. Matplotlib is one of the most popular libraries to create static and interactive graphs with Python and offers endless possibilities to tweak those in detail. This lecture is a short introduction to the basics of working with Matplotlib.

**Julia:** Although Python has gained a lot of momentum as a scientific language in the past years, we cannot ignore the fact that it is by design not a language for scientific computing, it's the tools around Python which makes it so successful. Julia in contrast is a language which was created in 2012 and designed from the beginning for high performance while being as interactive and easy to use as Python. This talk gives an introduction to the language and shows why it might be the future of scientific computing.

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**Classification de Session:** Community specific analysis