

# **SOSC 2019 Third International School on Open Science Cloud**



**Monday, September 16, 2019 - Friday, September 20, 2019**

**Bologna, CNAF**

## **Scientific Program**

The 2019 school's theme is “**Intelligent Systems**”. The programme is organized over two tracks:

## **Machine Learning Methods and Applications**

### **Computing infrastructures**

The “Machine Learning Methods and Applications” track will provide a comprehensive introduction to basic Machine Learning concepts of as a way to set a common ground between participants. It will progress with advanced lectures intended for students who are looking to develop their knowledge and skills on Data Science techniques and applications.

The “Computing Infrastructures” track will provide students both with basic and advanced knowledge on how to build and use cloud-based infrastructures to implement workflows based on technologies and tools such as Hadoop, HDFS and Spark. These will be used as an effective approach to pre-process data-sets and to train developed Machine Learning models, and will include a taste of bleeding edge solutions, such as TPU-based processing.

The school is structured in **lectures and hands-on sessions**. The hands-on sessions will be designed to allow students to exercise with the most popular systems introduced in the lectures, taking tasks from real-world leading data driven scientific communities as examples.

The hands-on programme foresees the development of individual projects, which will allow students to also perform an optional **real Kaggle competition**.

The school is committed to a multidisciplinary approach, therefore special attention will be given to introducing and discussing collaborations with industry and with business needs, starting from specific use cases.

## **Machine Learning Methods and Applications**

Introduction to Machine and Deep Learning  
Statistical Learning and Data Analysis  
Data Science

## **Computing infrastructures**

Tool for Data Handling and Processing  
Cloud Solutions for Advanced Big Data Workflows  
Machine Learning in Industry