

# Hands-On Workshop on the “Learning with ATLAS@ CERN” Portal

## 1. Workshop Description

One of the main outcomes of the project “Learning with ATLAS @ CERN” is a portal with a web-based interface that integrates, under a common environment (repository), resources that make use of real scientific data from the ATLAS detector at CERN, scientific data analysis tools and various educational materials. In order to support the different user communities involved in the project (teachers, researchers, university staff, science centre staff etc) the existing content is organized properly.

The employment of the project’s developed Metadata Toolkit allows authoring and managing of metadata for all repository contents. Thus, archiving, cataloguing and indexing are specified in a structured manner. Furthermore, an advanced search mechanism system has been developed to increase the usability of the extended digital content. The objective is for users to find easily, through a user friendly interface, what they are looking for. This search mechanism supports the different categories of users of the system.

Our workshop, aims to introduce to teachers the “Learning with ATLAS @ CERN” Portal and train them on using the aforementioned data analysis tools, the Metadata Toolkit and the Search Mechanism in order to:

- Create educational material enriched with metadata and share them with other members of the portal
- Search for educational materials relevant to the instructional methodologies they are using in their classes
- Become members of the “Learning with ATLAS @ CERN” Community and be able to download the most popular educational material/learning activities and have access to the latest data available from the ATLAS Experiment.

## 2. List of Instructors

**Convenor:** *Dr. Sofoklis Sotiriou*

**(Part I)**

Dr. Crispin Williams  
(University of Bologna)

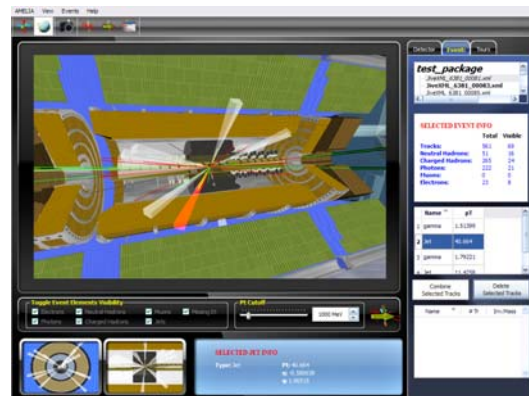
Dr. Angelos Lazoudis  
(Ellinogermaniki Agogi)

Dr. Sofoklis Sotiriou



(Ellinogermaniki Agogi)

**Figure 1. Screenshot of the Repository of the “Learning with ATLAS @ CERN” Outreach and Educational Portal.**



**Figure 2. Screenshot of the data analysis tool AMELIA (available at the “Learning with ATLAS @ CERN” Portal’s Toolbox section)**

**(Part II)**

Dr. Crispin Williams (University of Bologna)

“A hands-on demonstration of the construction of Multigap Resistive Plate Chambers for the muon telescopes of the EEE project”

The EEE project has a number of muon telescopes installed in ~30 high schools all over Italy. Each telescope consists of three multigap resistive plate chambers, which have been constructed at CERN, in our lab (ALICE TOF),

with the participation of pupils and teachers from the schools.

We will demonstrate the chamber construction, showing a small-size prototype: some phases of the construction will be "real" (for example, the stretching of the fishing line spacers between the glass resistive plates and the making of readout planes by sticking copper strips on vetronite); the rest will be explained by projecting video and/or photographs.