



SOSC 2022 Fourth International School on Open Science  
Cloud

# SOSC22 Welcome and Logistics

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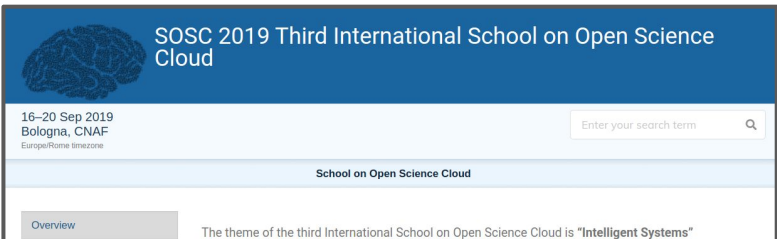
28 November 2022 to 2 December 2022

INFN Perugia

# Welcome to Perugia and to SOSC 2022

**SOSC (School on Open Science Cloud) is jointly organized by INFN, University of Perugia and University of Bologna.**

- The 2022 edition of SOSC comes to Perugia after 2 years long break due to pandemic
  - Fourth Edition
- 23 students, few auditors from INFN and University staff, a now traditional blending among theory and practice



# Logistic and Events

In order to attend the school, **you must register and check in.**

- If you have not done so yet, please tell us and we will take care of the registration process.

Wireless access is available either via **eduroam, or via a special SSID.**

- If you do not have eduroam, contact us and we will provide your credentials.

All the sessions of the school will be held in the “Aula di Informatica”

- feel free to choose your working station and keep it until friday

The school provides you with a **working station** to grant you the same environment for the hands-on & to develop the individual project (Thanks to INFN-Cloud resources)

- Nothing prevent you to use your laptop, we simply don't suggest it

Given we also have international students, **the lectures will be in English**

# Logistic and Events (cont.)

Each morning you should **sign the presence**

**Coffee breaks** will be served here in this room at mid-morning and mid-afternoon  
(**included in the Fee**)

Events:

1. **A welcome event with buffet** this night in conjunction with a focus event on FPGA (**included in the Fee**)
2. **Social Dinner** on Wednesday (**included in the Fee**)

# Lunch Breaks are not included in the fee

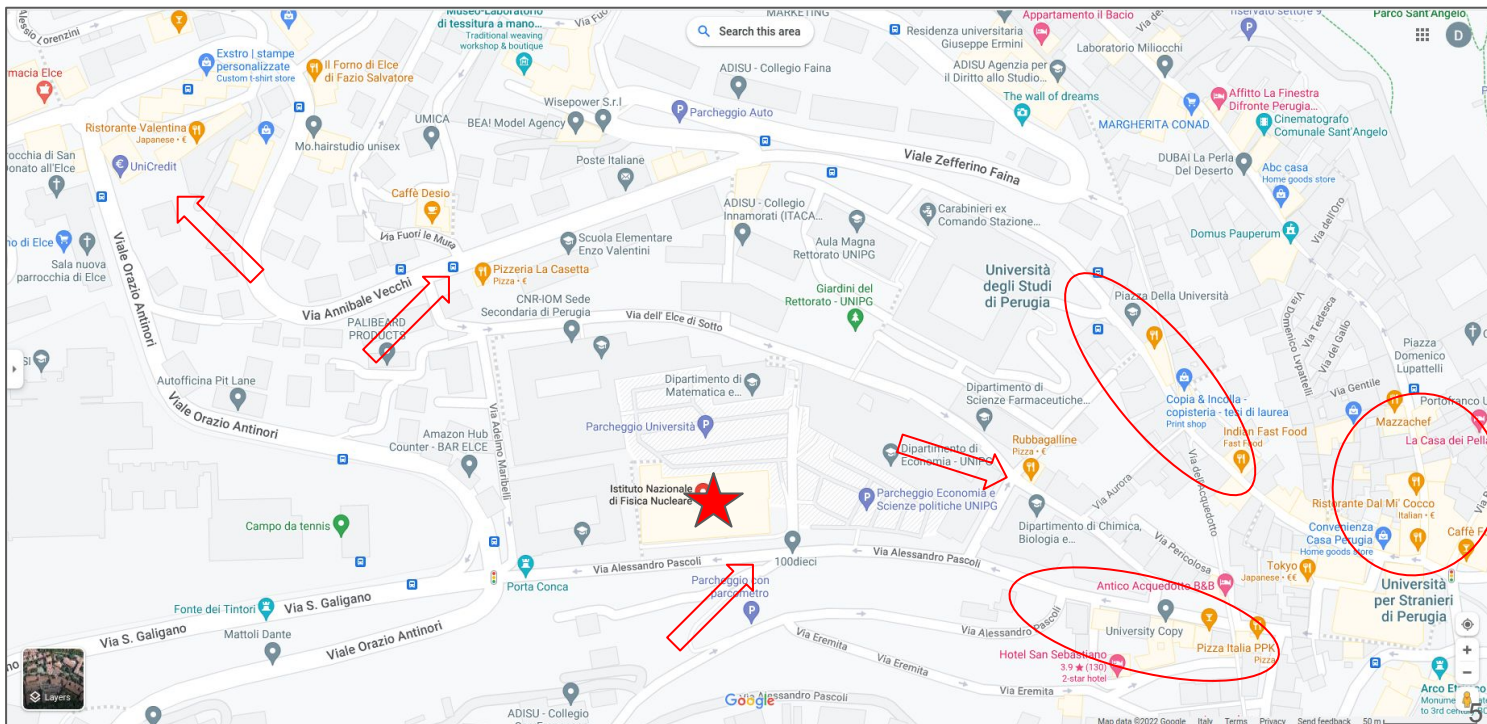
The break for lunch is 1h and 20 min long (sharp), please come back on time

## A Few Hints

Brizi  
Fiorucci  
Rubagalline  
110 Bar Café

Caffè Desio  
caffè della conca  
B-GOOD

Pizzeria la casetta  
LD pizzeria  
Pizzeria Paciotti  
Pizza paradiso  
Napoli pizza e sfizi



# Theme and structure of the School

The SOSC 2022 theme is “**Computing Models for Scientific Experiments**”; the school programme is organized in three main tracks:

1. **Fundamentals -> Monday and Tuesday**
2. **Machine Learning -> Tuesday and Wednesday**
3. **Workflow Management -> Thursday**

The school is structured with **lectures in the morning** and **hands-on sessions (mainly) in the afternoon**.

- Tuesday, Wednesday and Thursday (afternoons) there will be slots allocated to the individual project development

Please refer to the [SOSC 2022 agenda](#) for details and for the official timetable. All presentations will be uploaded there.

# Hands-on: tools

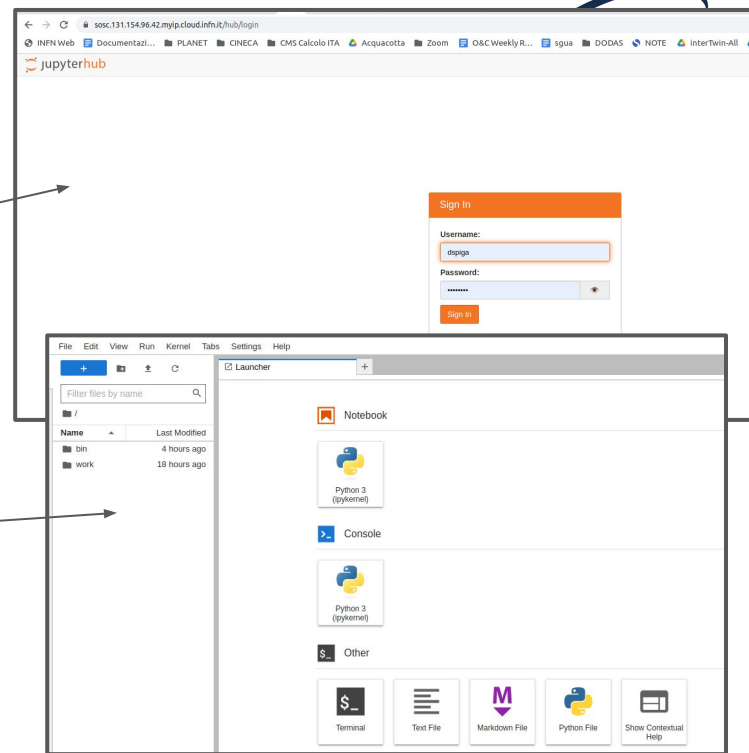
You've been asked to **register** [here](#):

- if you have not done so yet, please tell us and do it asap.

The provided cloud platform has been deployed via INFN-Cloud (for more information here see Davide's introduction). The platform will provide you with

- **A Jupyter environment**
- **A Cloud storage service** ([MinIO](#))
- **A Workflow automation service** ([Argo Workflow](#))

You will learn how to interact and operate with those services. We'll teach you.. That's part of the Fundamentals





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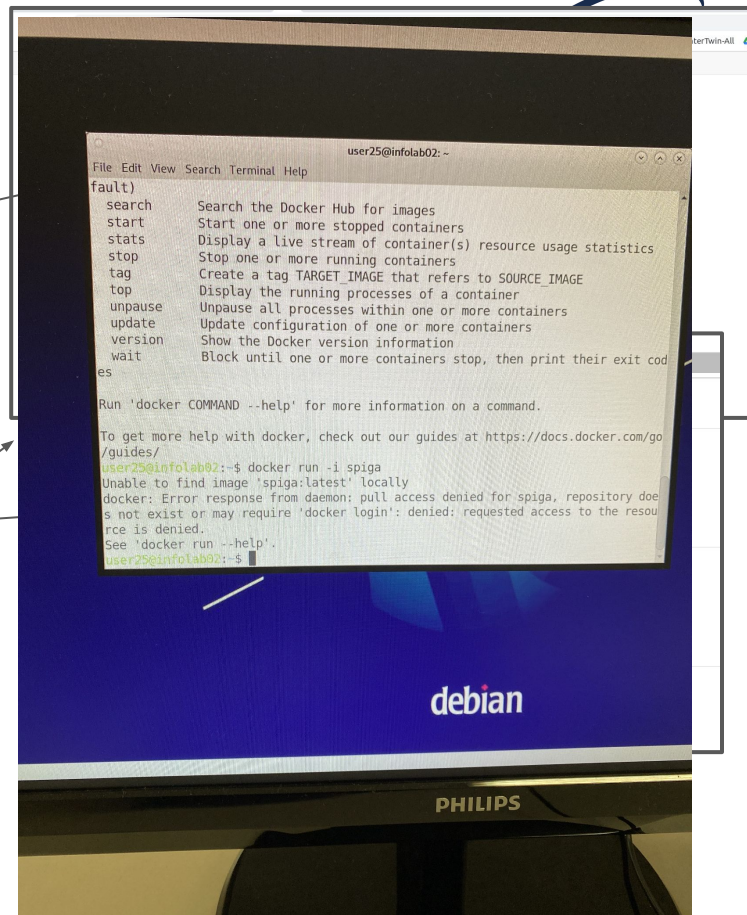
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And of course a **working station** where to do exercises and to connect to the cloud platform



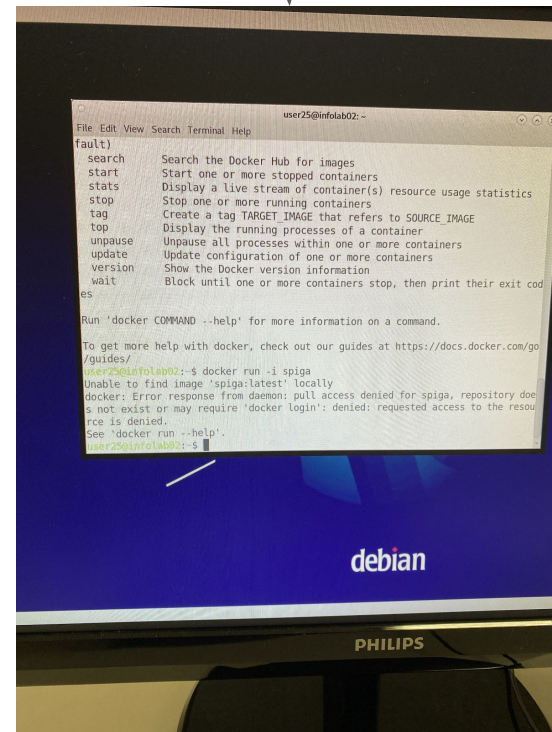


# How to Login into your terminal

## Three steps

1. Select **SOSC22** working environment
2. As user name just insert **userXX** where XX is the workstation number
  - a. i.e at **workstation 3** it will be **user03**
3. The password is **written in whiteboard**.
  - a. same passwd for all the station

Please give it a try and ask if you've any issue. You need it already this morning



# Hands-on: **Introduction**

The hands-on are meant as guided exercises that will treat most of the topics that will be required to develop your individual project. There will be hands-on several topics:

- Software packaging and software management
- Cloud Storage
- Workflow automation
- Dataset handling with Pandas and feature engineering
- Machine Learning (basics)
- Workflow distribution and parallelization

# About The individual project

The SOSC22 foresees the development of a personal project.

- Upon successful completion of the project the School will issue an official “**SOSC School of Computing Diploma**”

The project is structured with Jupyter Notebooks that will include also exercises. While the first part of the notebooks will be guided by tutors, the exercises will be developed just by you.

- On Tue: **Data sets exploration and feature engineering**
- On Wed: **machine learning**
- On Thu: **workload parallelization and distribution.**

The project foresees also **bonus tracks for advanced users**

**NOTE:** An attendance certificate will be provided to the students attending the whole School programme

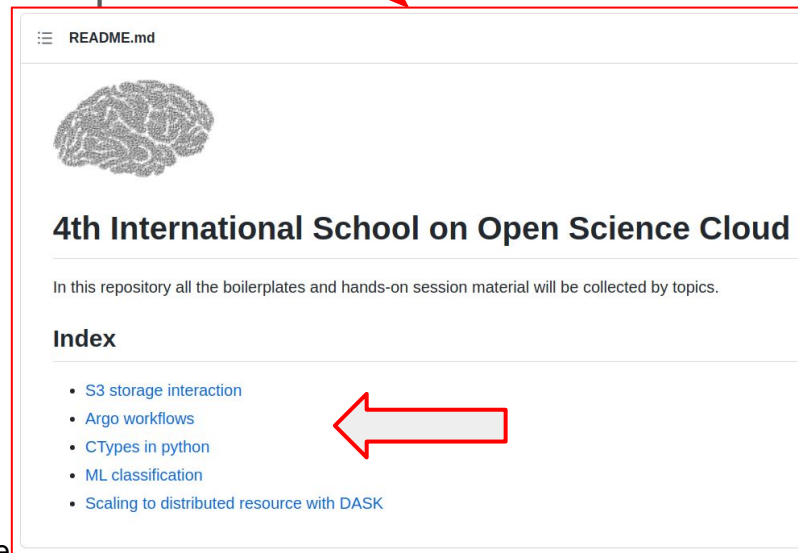
# Hands-on and Individual Project: **Material**

All the material for the guided hands-on as well as the tracks of the individual project will be in form of Jupyter Notebooks. Everything will be made available via the [github repo of the SOSJC22](#)

- You'll be guided to interact with git software repositories

## About the project material you will develop:

1. **On Wednesday morning** (prior to the start of the hands-on session) **You will be asked to provide your notebook** (we will tell you how).
2. **The same will happen on Thursday at the end of the day**
  - this will be a second and last round of Notebooks :)



# During the Closing session on Friday

On Friday we shall have:

- An overall SOSC 2019 **evaluation questionnaire**.
- The delivery of a **SOSC 2022 certificate to the students attending** the whole school program.
- The delivery of the **Official SOSC School of Computing Diploma**.
  - For the students successfully completing the project

**NOTE:** we will keep the cloud platform accessible for a week (9.12.2022). After that, the systems will be destroyed. At the end of the school you should be able to gather all your material, however ask us for any support

# Tonight the first event

**What:** First Special Event: The theme is FPGA

**Where:** It will be held at **T-Trane record store** [details in the next slide]

**When:** Tonight at 19.00 **SHARP**

The event is organized in two sessions **plus a Buffet**.

- The **second session will be demo-style** and can/will start even if the **buffet is still running**, it is intended for socializing. ← **Why**

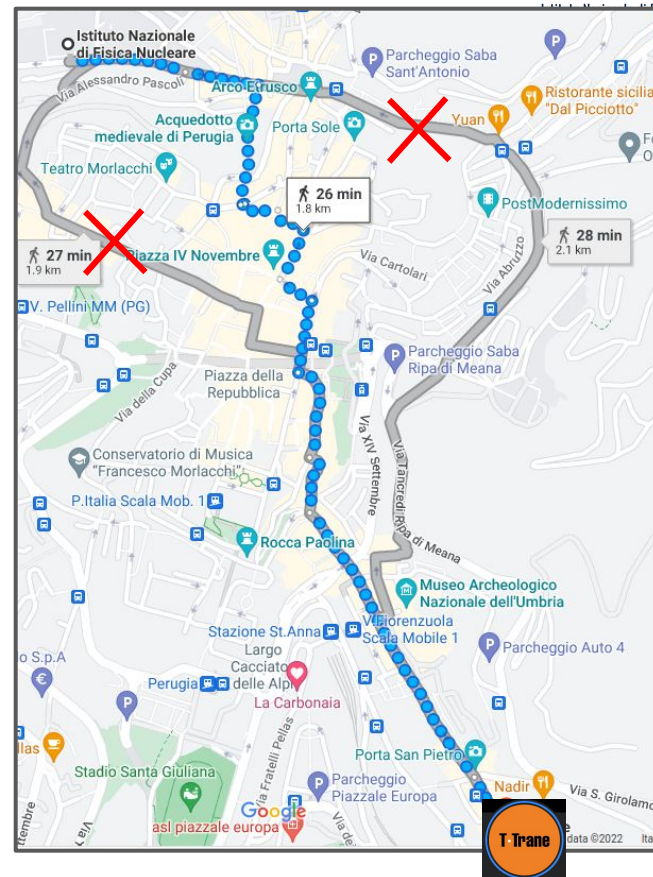
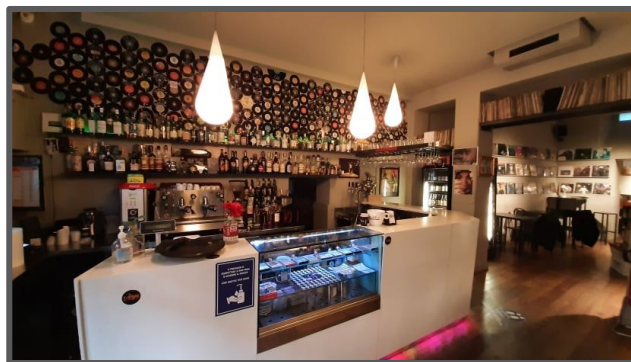


19:00	<b>FPGA and Machine Learning: Introduction</b> <i>Mirko Mariotti</i> T-Trane Record Store Borgo XX Giugno, 44, 06126 Perugia PG 19:00 - 20:00
20:00	<b>Buffet</b> T-Trane Record Store Borgo XX Giugno, 44, 06126 Perugia PG 20:00 - 21:00
21:00	<b>Exploring FPGA: Live Demo</b> <i>Mirko Mariotti</i> T-Trane Record Store Borgo XX Giugno, 44, 06126 Perugia PG 21:00 - 22:30
22:00	

# How to get there



25 minutes from here, Google Maps will help  
**Borgo XX Giugno, 44, 06126 Perugia PG**







# Recap

## Useful info and links

1. Login to the terminal on your desk: **userXX**[station number]. The passwd is on the whiteboard in front of you
2. SOSC22 **github** here: <https://github.com/SOSC-School/SOSC22-livesessions>
3. SOSC22 hands-on **Platform** here:  
<https://sosc.131.154.96.42.myip.cloud.infn.it/>
4. SOSC22 **agenda** of the school <https://web.infn.it/SOSC22>

Reach us here <https://discord.gg/DpJvJzyd>

# And now let's start the SOSC22

## Welcome again to SOSC 2022

Hope you will have a fruitful week. Enjoy the school and the social events, enjoy Perugia and, of course, do not forget to have fun!

For any further information, see us here, or email the SOSC 2022 Program Committee at [sosc22-pc@lists.infn.it](mailto:sosc22-pc@lists.infn.it)

### The SOSC 2022 Program Committee:

- |  |   |
|--|---|
| → <b>Lucio Anderlini</b> INFN Firenze              | → <b>Mirko Mariotti</b> , University of Perugia |
| → <b>Daniele Bonacorsi</b> , University of Bologna | → <b>Davide Salomoni</b> , INFN CNAF            |
| → <b>Diego Ciangottini</b> INFN Perugia            | → <b>Luca Scrucca</b> , University of Perugia   |
| → <b>Livio Fanò</b> , University of Perugia        | → <b>Daniele Spiga</b> , INFN Perugia           |