

# January 26, 2023 (Week 1)

## High Energy Physics Computing Basics, Part 2

### Objectives:

- Set up functioning work station
- Learn basic bash functionality
- Learn text editors
- Learn to work on a remote server

### Outline:

- Opening
  - Office hours - Fridays 10:00 - 11:00
  - Open door policy
  - Homework submission
  - Intro to CERNBox
- Setup round-table
  - CERN account
- Exercises
  - Basic terminal commands (ls, cd, pwd, touch, more, rm, mv, cp, echo, which, which, wildcards, paths, options, history, man/--help)
  - Environment variables
    - \$PATH
  - Text editors (vim/emacs and VSCode)
  - .bash\_profile and .bash\_rc
    - Aliases
    - Prompt customization
  - ssh
    - Log into lxplus
    - X11 (XQuartz/Xming)
    - scp
    - ssh config
  - Shell scripts
    - Variables
    - Range-based loops
    - If/else controls
  - Permissions
    - chmod (0 = —, 1 = --x, 2 = -w-, 3 = -wx, 4 = r-, 5 = r-x, 6 = rw-, 7 = rwx)
  - VSCode GUI

## Homework - due 8am January 31, 2023:

- Practice terminal commands and create personal reference sheet
- Make sure you can access <https://gitlab.cern.ch/> and <https://cernbox.cern.ch/>
- Bash script
  - Include for loop
  - Include if/else logic
  - Print to screen