

<https://geant4.slac.stanford.edu>

# Hands On Sessions

## Geant4 Tutorial

- There are four hands on sessions:
  - Hands-on 1 : Compile and execute Geant4 examples, familiarize with application
  - Hands-on 2 : A very simple geometry, command line scoring
  - Hands-on 3 : Building Geometry, Sensitive Detectors and introduction to User Actions
  - Hands-on 4 : More on User Actions, Multi-Threading integration, Histograms and Ntuples production
- Each Hands-on has several exercises.
- Hands-on **are self contained**, you do not need to finish all exercises of one hands on to proceed to the next
- Hands On 3 is probably the most complex since it goes through many geometry details
- “Hands On 4, Exercise 1 and 2” assume you are familiar with concepts that are discussed in “Hands On 3, Exercise 2 and 3” this is probably the only strong dependency between exercises
- Hands On 4 Exercise 3 deals with g4analysis, optional if you are not interested in

- Each Hands On session has a web-page in which the exercises are discussed
- Code tar-ball is linked from the web-page
- A tar-ball with the complete solution (e.g. what you will get at the end of each Hands On) is also available for each Hands On
- The solution code is also shown in the web-page.
  - Feel free to copy-and-paste, the goal is to learn the different aspects of the simulation, not to learn C++
  - Feel free to modify/extend the provided solution: it is only a guideline
  - Feel free to extend the application to test your particular needs
- We have tested the code, but if you think you have found a problem let us know!

# Some Notes

- Multi-threading: all exercises are multi-threaded. We do not cover in the hands-on the migration of existing code to MT, but we cover this in the tutorial slides