

Summer Particle Astrophysics Workshop 2024

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Intro to C++

Wednesday 8 May 2024 15:00 (2 hours)

C++ is an object-oriented successor to the programming language C and has become one of the most common programming languages used today. It sees widespread commercial use in video games, web services, robotics, and many other areas. In physics research, it is commonly used in simulation software packages like GEANT4, or analysis packages like CERN ROOT.

In this talk, it is assumed that attendees have zero knowledge of C++. Starting with the basics of data types and manipulation, a brief survey of control sequences, structs, vectors, arrays, and classes will be explored. The objective is to give you, the student, enough exposure to these concepts so that you can interpret, modify, and use the analysis scripts or simulations you shall encounter throughout your summer work. This presentation will not discuss the more complex topics of polymorphism, exception handling, or templates. At different points through the presentation, the student will be encouraged to work on a given problem that familiarizes them with the material. To be able to participate in these activities, the student will be required to have a C++ compiler (preferably g++, or equivalent), an editor, and a positive attitude!

Presenters: MORISON, Hugh; HILL, Remington (Queen's University)

Session Classification: Workshops