

# Geant 4

*A Short Course on Geant4 Simulation Toolkit*

**How to learn more?**

<http://cern.ch/geant4>

# After the course

**How can you get more information about Geant4?**

- Documentation
- User support

# Geant4 Web Home Page

## ■ The main source of information

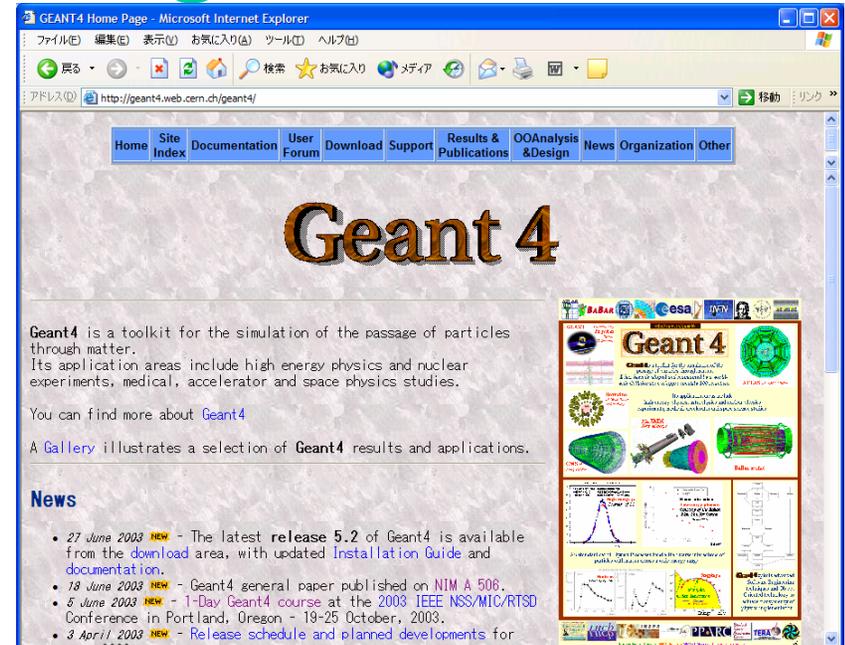
- *All important information can be accessed through this page*

## ■ Address

*<http://cern.ch/geant4>*

## ■ You can find

- Documentation
- User Forum
- Support
- Download
- Results & Publications
- OO Analysis & Design
- News
- Organization



# Documentation

## ■ Coverage

It covers all the information necessary for newcomers to advanced users, and for those who want to extend the functionality of Geant4

## ■ Basic structure

- An introduction document and 5 user manuals
- Available in *html, pdf, ps, ps.gz*
- Search engine

Search a key over the entire Geant4 documentation

# Overview of the User Manuals-1

## ■ Introduction of Geant4

- Information on the Geant4 collaboration, history, etc.
  - *You may skip this!*
- Basic information such as
  - required minimal software knowledge
  - computing environment
  - guide line for user supports, etc.

## ■ Installation Guide

- How to install Geant4 in the user's computing environment
- Detail instructions for
  - Unix
  - Windows

# Overview of the User Manuals-2

## ■ User's Guide: For Application Developers

- **Most important document** both for novice & advanced users
- Step-by-step tutorial for a novice user
- How to use the toolkit with a lot of example code
  - *You should read this first if you are new to Geant4*

## ■ User's Guide: For Toolkit Developers

- For a user who wants to extend the functionality
  - *For example, to add a new physics process, a new volume shape, etc.*
- Description of the object-oriented analysis and design
- Guidance on how to extend specific aspects of the functionality of each package
  - *Document under construction – not urgent for new users!*

# Overview of the User Manuals-3

## ■ Physics Reference Manual

- Description of physics interaction models
- Separation of physics topics from how to use the toolkit
  - ➔ *Dedicated to physics models, theory, etc.*

## ■ Software Reference Manual

- Detailed description of classes and their public methods
- Automatic generation on demand by the CGI script
  - ➔ *No printed version is available, i.e. only on web page*

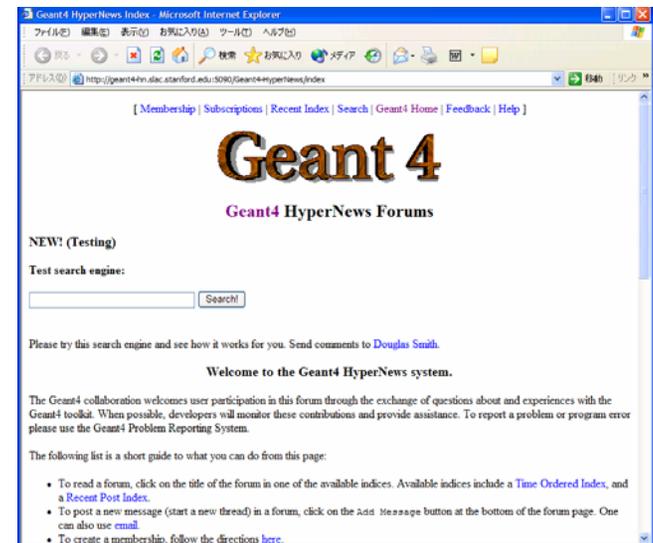
# User Support: HyperNews User Forum

- Exchange of questions and experience among users and developers
- Based on the HyperNews system
  - Anyone can read
  - Anyone can add messages
  - Anyone can join as a member
- Available main subjects (~ 20 forums available)
  - Control of runs, events, tracks, particles
  - Experimental Setup
  - General matters
  - Interfaces
  - Physics

## ■ To access to this forum:

***Geant4 Home Page***

***→ User Forum***



# User Support: Problem Reporting

- You can report a problem you encounter and ask developers to fix it
  - Anyone can send a report once he/she registers to the problem report system
  - Problem report will be sent to an expert automatically
  - History of handling the problem will be recorded
  - You can trace the history of your problem via web

## ✓ *Some notes*

- Before making a report, check the list of known problems
- You can check this on web
- To access to this system:

*Geant4 Home Page*

➔ *Support*

➔ *Training Material*



# User Support: Training Material

- The Geant4 collaboration regularly holds both international and national/specific training courses
- You can find material presented in these courses under the following web page:

*Geant4 Home Page*

→ *Support*

→ *Training Material*

# User Support: Other Useful Information-1

## ■ FAQ

*Geant4 Home Page*

→ *Support*

→ *FAQ*

## ■ Cross referenced (LXR) source code browser:

*Geant4 Home Page*

→ *Support*

→ *LXR source code browser*

## ■ Educated guess of PhysicsList (*for hadronic*)

*Geant4 Home Page*

→ *Support*

→ *Physics Lists*

# User Support: Other Useful Information-2

- Download the most recent released codes:

*Geant4 Home Page*

→ *Download*

- A collection of Geant4 reports, results, publications, etc

*Geant4 Home Page*

→ *Results & Publication*

- News – web archives for the Geant4 mailing list

*Geant4 Home Page*

→ *News*