

4TH HEP C++ COURSE AND HANDS-ON TRAINING

15 - 17 MAR 2022

STEFAN ROISER

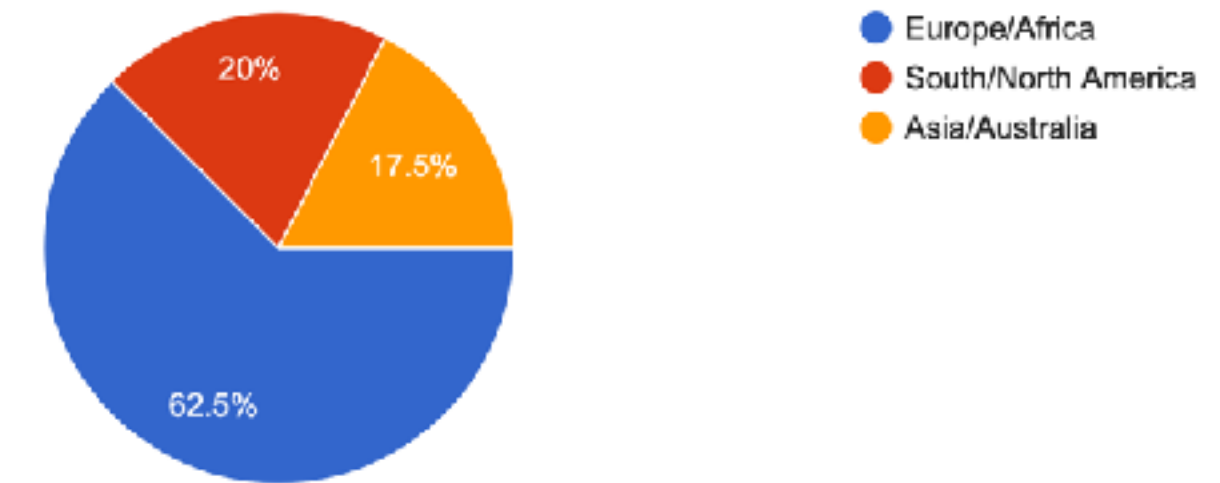


SIDIS
Software Institute for
Data-Intensive Sciences

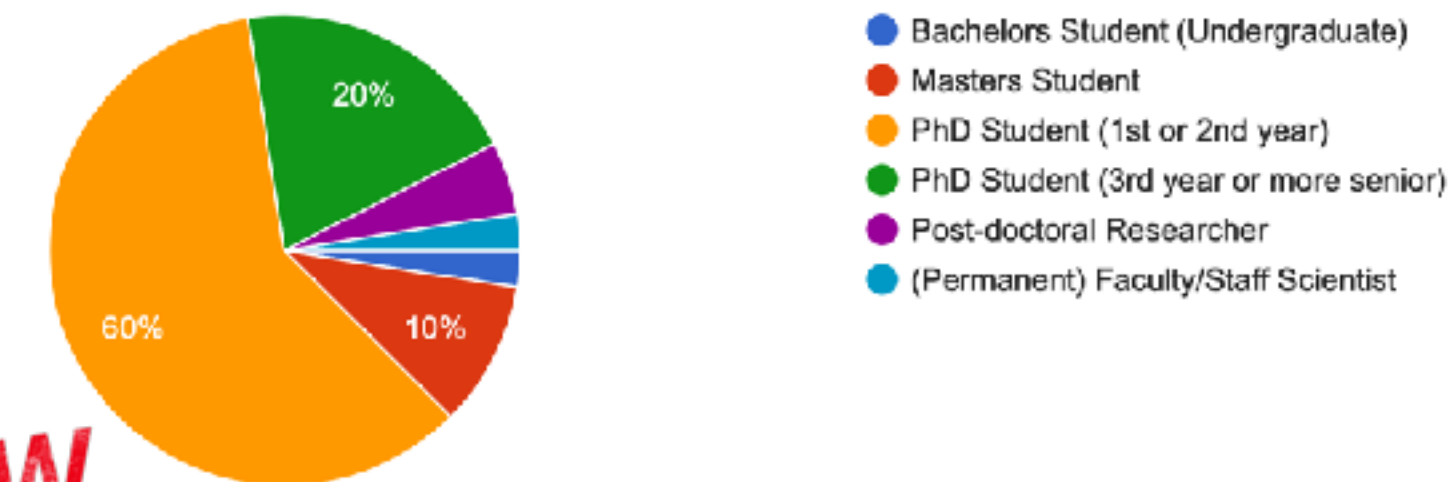
WELCOME

- ▶ Fourth edition of a C++ course and training
- ▶ Course material originally prepared by Sebastien Ponce
- ▶ Co-organised by [HSF](#) and [SIDIS](#)
- ▶ New lecturers Stephan Hageböck and Bernhard Gruber **NEW**
- ▶ Course content split into "Essentials" (this course) and "Advanced" **NEW**
- ▶ We will record the morning lectures and post them on indico and CDS
- ▶ Recording done by the CERN audio/video team **NEW**
- ▶ Organised from within the HEP community for HEP

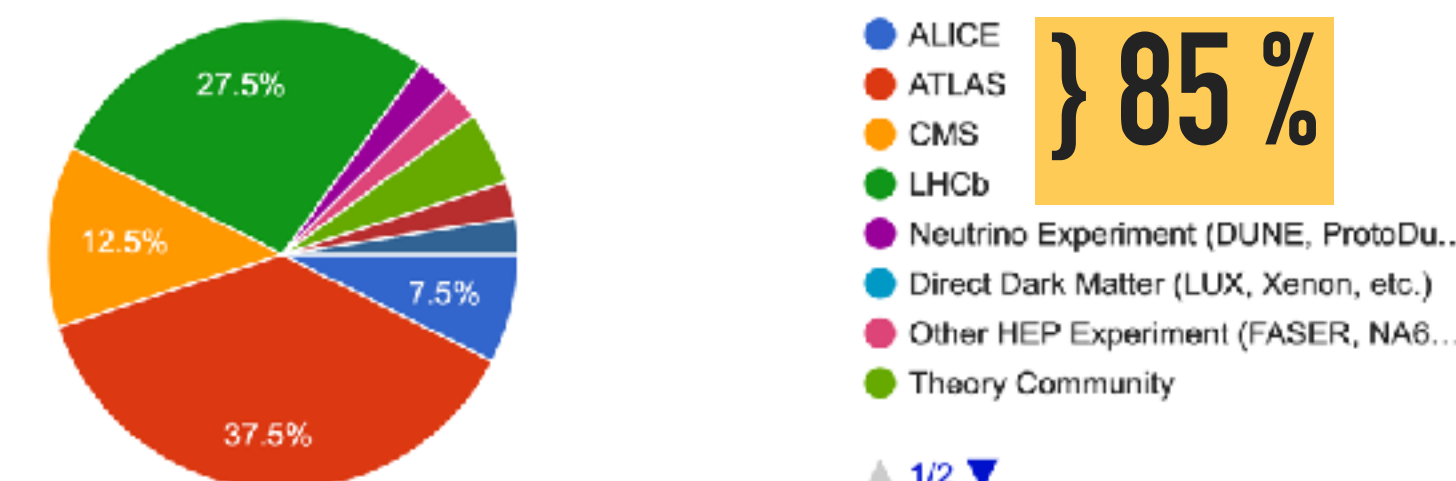
Physical location
40 responses



Academic level
40 responses



What is your experimental collaboration?
40 responses



OVERALL ORGANISATION

- ▶ Feedback is more than welcome
 - ▶ We'll send you a link to a post-training survey on Friday, please fill it in
- ▶ Communication tools:
 - ▶ [This zoom room](#), used for lectures and training
 - ▶ [Mattermost channel](#), interact with organisers, ask questions ([register first](#))
 - ▶ Surveys ([pre](#)/post training), please help us to improve the course and training!

MORNING LECTURES

- ▶ Every day, Tuesday - Thursday, 9.00 - 11:45 CST including a 15 minutes break
- ▶ The slides are available on the indico page
- ▶ Content is organised in smaller chapters (~ 15 minutes each)
- ▶ Please keep questions until the end of a chapter & use "raise hand zoom feature"

Tue	Wed	Thu
Basics (syntax, pointers, references, compound types, objects ...)	Tools (compile chain, gdb, ...) Object Orientation (classes, inheritance, ...)	More OO (object allocation, ...) Modern C++ (constness, exceptions, templates, STL, ...)

AFTERNOON TRAININGS

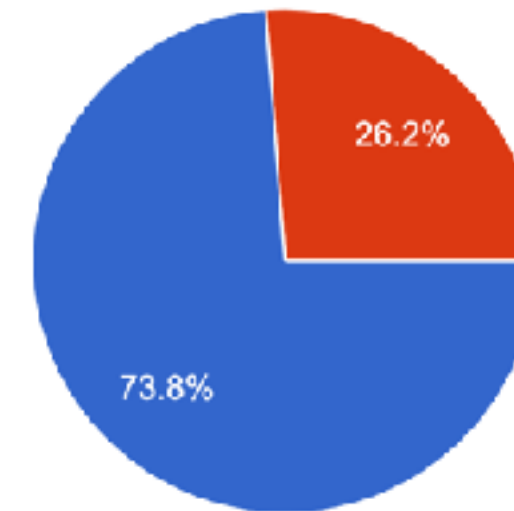
- ▶ Every day Tuesday - Thursday, 14.00 - 16.00 CEST
- ▶ A set of examples are provided at the end of the morning
- ▶ Organised in "breakout rooms", 1 mentor / ~ 10 students
 - ▶ Connect again to **this zoom room** and you can join breakout rooms from here
- ▶ Style "a la university lab", i.e. students work mostly on their own, ask mentors for help in case they have questions or get stuck

Tue	Wed	Thu
Environment Setup & Basics	Tools & Object Orientation	Object Orientation

ATTENDANCE CERTIFICATE

It would be helpful if an accreditation certificate be provided for attending this course.

42 responses



- Yes, this would help me.
- No, this does not matter to me.

- ▶ ~ 80 % of you prefer an attendance certificate
- ▶ Please drop me a mail if you want to receive one
- ▶ Please also make yourself "findable" in zoom (i.e. use a name that we can associate to your registration)
- ▶ Are you interested to have this course accredited with your university (e.g. via ECTS points)?
- ▶ We cannot promise that this works but we can try to provide additional info if needed
- ▶ Please also drop us a mail if you need support or you were successful.



CERTIFICATE OF PARTICIPATION

Amy Farrah Fowler

has attended the first **HEP C++ Course and Hands-on Training** from **12 - 16 October 2020**

The course was organised into 12.5 hours of lectures and 8 hours of training sessions.

The lessons were taught by Dr. Sebastien Ponce (CERN) and the training sessions supported by mentors from within the high energy physics community.

The course content ranged from basic to advanced concepts of C++ software engineering and included up to the C++ '17 ISO standard.

The event was co-organised by the training working group of the **HEP Software Foundation*** and the **Software Institute for Data Intensive Sciences****

More information about the event can be found at <https://indico.cern.ch/e/cppfall20>

 _____ Dr. Graeme A Stewart CERN / HSF	 _____ Dr. Sebastien Ponce CERN / Course Lecturer	 _____ Dr. Stefan Roiser CERN / SIDIS
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* <https://hepssoftwarefoundation.org>
** <https://sidis.web.cern.ch>

AFTERNOON BREAKOUT TRAINING ROOM ORGANISATION

- ▶ Today Tuesday we start with setting up your environments and some first examples. Mentors today are:

Sebastien Ponce	Linux
Attila Krasznahorkay	Linux, MacOS, Windows
David Chamont	Linux, Docker
Guillermo Fidalgo	Linux
Stephan Hageboeck	Linux, MacOS
Michal Kamil	Linux
Bernhard Gruber	Windows, Linux

ONE TRAINING SESSION IN A MEETING ROOM?

Many thanks to all volunteering mentors:

SEBASTIEN PONCE
ABISHEK LEKSHMANAN
NATHAN BREI
DAVID SMITH
GUILLERMO FIDALGO
GRAEME STEWART
DAVID CHARMONT
ATTILA KRASZNAHORKAY
MICHAL KAMIL
STEPHAN HAGEBOECK
BERNHARD GRUBER

Amy

Questions

Please contact us also at hep-cpp-course-organizers@cern.ch