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Writing robust C++ code for critical applications

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C++ is one of the most **complex**, expressive and powerful languages out there. However, its complexity makes it hard to write **robust** code. When using C++ to code **critical** applications, ensuring **reliability** is one of the key topics. Testing, debugging and profiling are all a major part of this kind of work.

In the BE department we use C++ to write a big part of the controls system for beam operation, which implies putting a big focus on system stability and ensuring smooth operation.

This talk will try to:

- Highlight potential problems when writing C++ code, giving guidelines on writing defensive code that could have avoided such issues
- Explain how to avoid common pitfalls (both in writing C++ code and at the debugging & profiling phase)
- Showcase some tools and tricks useful to C++ development

The attendees' proficiency in C++ should not be a concern. Anyone is free to join, even people that do not know C++, if only to learn the pitfalls a language may have. This may benefit future decisions on the design phase of a project.

Availability

Both days

Will you need the training center (Workshops)?

No

Primary author: OJEDA SANDONIS, Miguel (CERN)

Presenter: OJEDA SANDONIS, Miguel (CERN)