

## Scientific Computing

- Publications
- Center for Biomedical Computing
- Projects
- Available Master's topics
- Intranet
- People

### CBC Talk on Integrating C++ with Python: How, Why, and When - February 13, 2013

On Wednesday 13 February, at 19:00, the Meetup "Integrating C++ with Python: How, Why, and When" is hosted at Simula. The talk will be given by Austin Bingham from Roxar in Stavanger.

Total number of participants: 42  
 Total number of guests outside of CBC: 31  
 Number of different nationalities represented: 5  
 Total number of speakers: 1  
 Total number of talks: 1

If you would like to learn how the industry uses Python to improve their simulators, please visit <http://www.meetup.com/oslo-python/events/83263572/> to register your attendance.

C++ is a great language for some tasks, but in many places it causes more problems than it solves. Python complements C++ well, and it's often an ideal language for writing those pieces of a system for which C++ is awkward. In this presentation I'll talk about how you can - and why you might want to - build C++ APIs on top of Python modules and use them directly from your C++ programs. This presentation is based in large part on actual experience with a large, complex, mission-critical C++ application, and I'll cover everything from technical challenges to political issues you might face.

The topics will include:



- \* Identifying where Python might be useful
- \* How to make the case for Python to your peers
- \* Technical aspects of interfacing the two languages
- \* Python runtime management: initialization, module loading, etc.
- \* Working with the "impedance mismatches" between the languages (e.g. duck-typing vs. static typing)

I will also discuss the reasons why C++ APIs on Python code represent a very useful and often powerful technique. The reasons range from simple pragmatism (you want to use an existing Python module in an existing C++ program) to productivity (writing Python code plus a C++ wrapper can be easier and faster than writing pure C++.)

Austin works professionally in Norway with both Python and C++ and is creator of and contributor to several Python open source projects.

The meetup takes place in Stortua, and there will be served some food and drinks.

|                     |   |
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| <b>What</b>         |   |
| <b>When</b>         | Feb 13, 2013<br>from 07:00 PM to 09:00 PM   |
| <b>Where</b>        | Storstua @ Simula   |
| <b>Contact Name</b> | Hans Petter Langtangen  |
| <b>Attendees</b>    | Andre Massing<br>Andreas Solem Kjær<br>Åsmund Ødegård<br>Austin Bingham<br>Bjørn Dyresen<br>Bjørn Schjerve<br>Cyrille Verrier<br>Denes Matetelki<br>Domenico Solazzo<br>Espen Grindhaug<br>Felix Nairz<br>Hans Petter Langtangen<br>Harish Narayanan<br>Igor Rafienko<br>Johan Hake<br>Johannes Langguth<br>Johannes Ring<br>John Burkhart<br>Jon Nordby<br>Jon Petter Åsen +1<br>Karin Lagesen<br>Kent-Andre<br>Martin Alnæs<br>Mathias Nedrebø<br>NN<br>NN<br>NN<br>Oddbjørn U. Bakke<br>Odin Hørthe Omdal<br>Ola Skavhaug<br>Omar Al-Khayat<br>Øyvind Evju<br>Paul J.<br>Pranav Singh<br>Razieh Behjati<br>Robert Smallshire<br>Simone |

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| <b>Add event to calendar</b> | Stephan Reiter +1<br>Thomas Kristensen<br>Thor-Inge Larsen   |
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