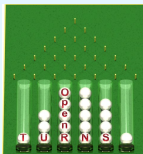


OpenTURNS developers training: agenda

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Developers training



Objectives

This 4 days training will give you the first elements to :

- Understand the OpenTURNS aim and architecture,
- Discover the coding rules, the development process and the associated infrastructure,
- Discover the OpenTURNS modules mechanism,
- Make your first steps in the OpenTURNS development by adding a new specialization of an existing concept both in the C++ library and the Python interface,
- Make your first steps in the OpenTURNS module development.

Agenda

Each of these four days will be organized as follow :

- 10.00am Welcome (coffee & tea)
- 10.15am Theory
- 12.30pm Lunch
- 13.30pm Theory or experimentation
- 15.30pm Break (coffee & tea)
- 15.45pm Experimentation
- 18.00pm End of the day

Day 1 : uncertainties, OpenTURNS platform, architecture

- Uncertainties : quick reminder on analysis, probability and statistics
- OpenTURNS platform : the global picture of OpenTURNS product and the website, short presentation of the development life-cycle.
- Architecture : the general organization of the product with some highlights on the key mechanisms and their implementation.
- Experimentation : basic manipulation of a numerical function and a probability distribution, navigation in the website (tickets, versioning system), exploration of examples en C++ and python.

Day 2 : development in the C++ library

- The development infrastructure : some elements on autotools and CMake.
- The development process : use cases, architecture, C++ implementation, tests, documentation.
- Practical case : add a new distribution to the library.

Day 3 : make the development visible in python

- Interfacing C++ and Python using SWIG.
- The development process : SWIG interface, python modules, tests, documentation.
- Practical case : make the new distribution visible within the OpenTURNS Python module.

Day 4 : create an OpenTURNS module

- The concept of module, its standard structure.
- The key steps in the development of a module.
- How to install and use a module?
- Practical case : add a new distribution as a module.

You are a new OpenTURNS developer !

- All the developments made during this training session will become part of OpenTURNS sooner or later, depending on their degree of maturity (quality ;) ?).
- The missing steps for a direct integration will be the testing phase, the validation phase and the documentation phase.
- The integration will be done using the EADS development branche (openturns/branches/lebrun).

Check the upcoming 0.14.0 release or a next release to see your work in action !