

## Advanced CFD and Turbulence Modelling targeting HPC: Code\_Saturne Training Course

### Objectives

The School is aimed at researchers who wish to gain a better understanding of methodologies and best practices in exploiting CFD and turbulence modelling applications on HPC systems.

The programme will contain the following topics:

- Introduction to turbulence, focusing on Large-Eddy Simulation (LES).
- Description of the latest fully validated version of Code\_Saturne (V5.0) and its structure.
- Use of Code\_Saturne's GUI.
- Use of Code\_Saturne's user subroutines.
- Introduction to HPC and an opportunity to run simulations on a local supercomputer using a large number of processors.

The hands-on tutorials will focus on flows in tube bundles, and then in pumps (showcasing the code-code coupling and turbomachinery modules).

The course will start at 10am (with registration from 9am) on Wednesday 3 October and finish at 2pm on Friday 5 October 2018.

This school is organised by the [Computational Engineering Group](#) of the [STFC](#) and [EDF Energy UK Research Centre](#) and is funded by the [CECAM UK Daresbury node](#).

Participation at the school is free of charge, excluding travel. Tea/coffee/lunch and dinners will be covered. Participants will work from local workstations and submit overnight simulations on one of the Barcelona Supercomputing Centre supercomputers.

*The deadline for registration is Friday 21 September 2018 - or whenever all places have been allocated.*

**ALL Students and PostDocs - in order to confirm your registration for this course you MUST send an email from your supervisor to [SCD\\_EVENTS@stfc.ac.uk](mailto:SCD_EVENTS@stfc.ac.uk) confirming that you have permission to attend.**

### Requirements

Participants are expected to have some experience with Linux systems and programming basics in C/Fortran. They are also expected to know the fundamentals of Computational Fluid Dynamics.  
Barcelona Supercomputing Center - Centro Nacional de Supercomputación

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