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 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.