**How to install and run the fluid-structure interaction (FSI) module?**

The install of the FSI module should be done in two steps. First compile a C++ library required by the module. Second, compile an FSI solver using the library file created in the first step.

1. Go to the folder /files/codes/libraries and compile the scripts in it using the wmake command. Once finished, an library file with the name libfsiModule.so will be generated inside the folder $(FOAM\_USER\_LIBBIN)

2. Go to the folder /files/Solver/icoFSIFoam and compile the solver using again the wmake command. Once finished, an solver with the name icoFSIFoam will be generated and ready to employ.

3. Try the solver created in the second step by going to the example /files/Example/circularCylinder and type in the command icoFSIFoam. When running, the output results will be generated in a postProcessing folder.

**Comments on the C++ classes or the application in the scripts**

1. **binforces**

A class designed to compute the aerodynamic forces acting on different parts of a specific wall boundary.

2. **generalizedMotionState**

A class to store the generalized displacement, velocity, acceleration and loads

3. **threeDoFElasticBeamMotion**

A class to store the structural information of a 3 DOF beam and to compute its response subjected to aerodynamic loads

4. **icoFSIFoam**

An application for FSI simlation