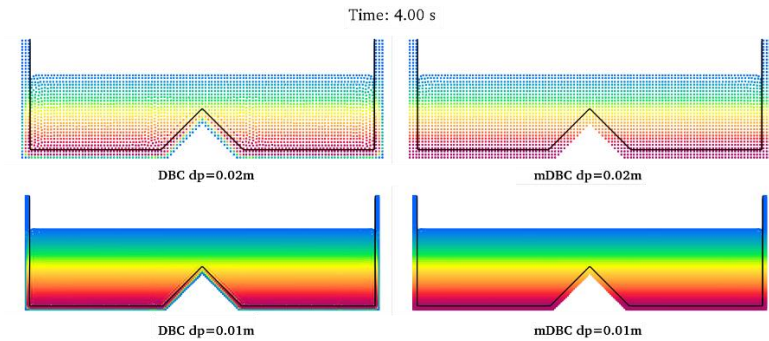


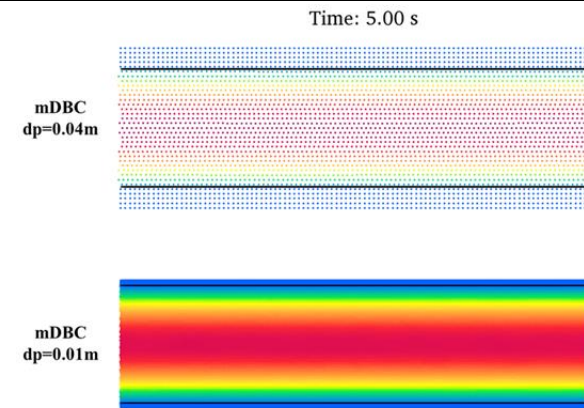
01_STILLWEGE

- A 2-D still water tank encloses a trigonal wedge in the bottom centre of the tank with. A low value of artificial viscosity is used to observe better the effects and noise generated by the different boundary conditions (DBC and mDBC). [Video](#)



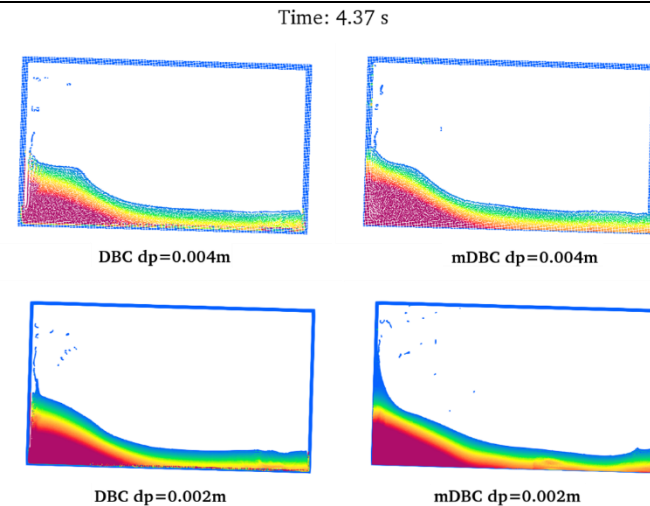
2_POISEUILLE

- Poiseuille flow is simulated with the boundary walls located at $z=\pm 0.5\text{m}$, the maximum velocity is $U=1\text{m/s}$ and the viscosity is $\nu=0.1\text{m}^2/\text{s}$ resulting in a Reynolds number of $Re=10$. [Video](#)



3_SLOSHING

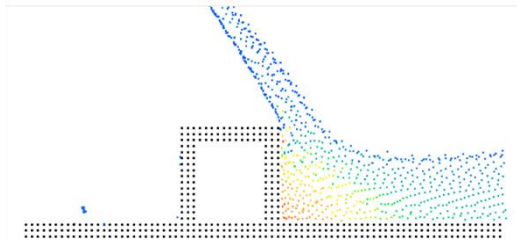
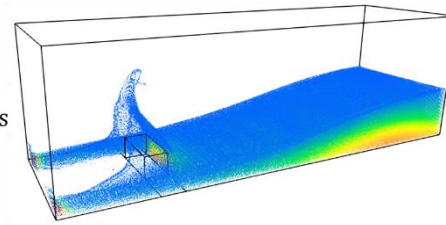
- The case will reproduce a sloshing experiment that includes moving boundaries: SPHERIC Benchmark Test Case #10. [Video](#)



04_DAMBREAK

- 3-D dam break experiment that includes moving boundaries proposed as SPHERIC Benchmark Test Case #2. [Video](#)

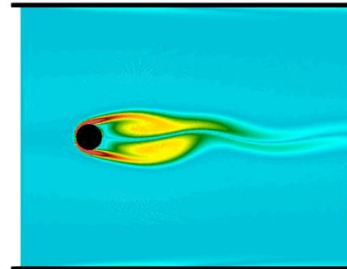
Time: 0.70 s



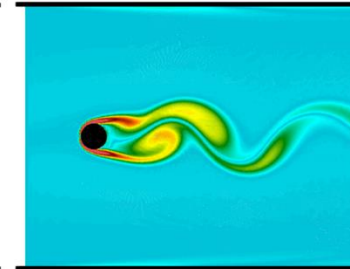
05_FLOWCYLINDER

- 2-D flow passing a cylinder of diameter $D=0.2\text{m}$, which is surrounded by a viscous fluid. Dimensions of the fluid domain are chosen to minimise boundary effects. The fluid is initialized with a constant velocity of $U=1\text{m/s}$ and with $Re=200$.
- The circle is created using the Free Draw Mode instead of the Cartesian grid. [Video](#)

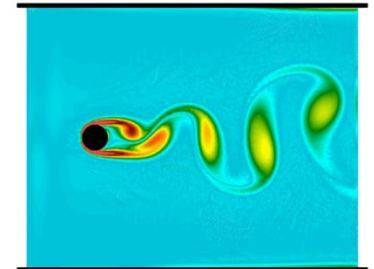
Time: 3.00 s



Time: 4.00 s



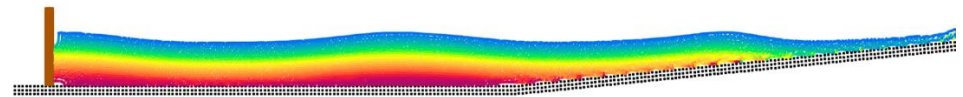
Time: 5.00 s



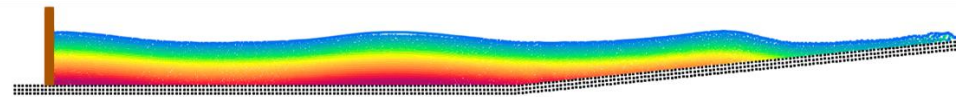
06_WAVETANK

- 2-D regular waves are generated and propagated in a numerical wave flume using DBC and the new mDBC.
- The beach is created using the Free Draw Mode instead of the Cartesian grid. [Video](#)

Time: 10.00 s



DBC $dp=0.03\text{m}$



mDBC $dp=0.03\text{m}$

07_WAVESCYLINDER

- 3-D regular waves ($H=0.1\text{m}$, $T=1.2\text{s}$, $d=0.5\text{m}$) passing a cylinder of diameter $D=0.2\text{m}$ and 0.7m high located in the middle of a wave flume.
- The cylinder is created using the Free Draw Mode instead of the Cartesian grid. [Video](#)

Time: 6.00 s

