Testcases (examples/main) included in the full DualSPHysics package v5.0 in http://dual.sphysics.org/index.php/downloads/
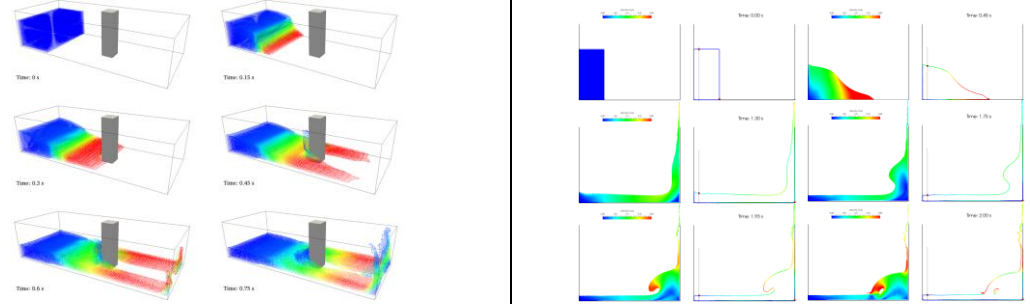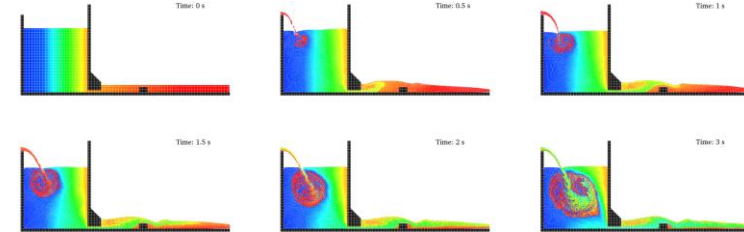
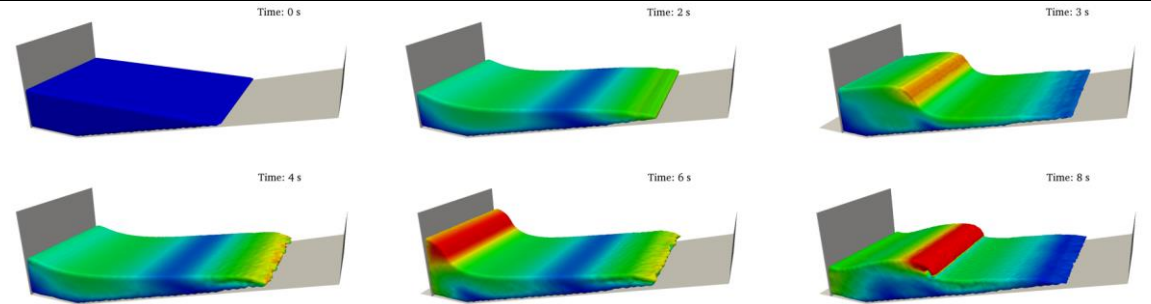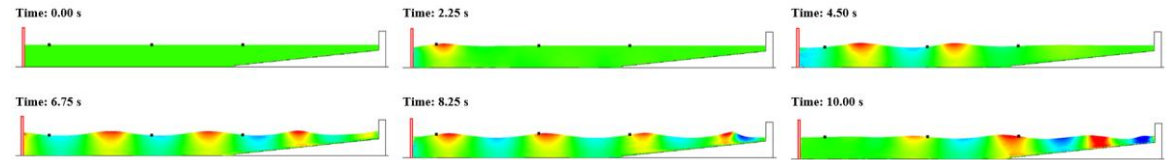|	
01_DAMBREAK • 3-D dam break flow impacting on a structure: numerical velocity, pressure and force are computed. Video • 2-D dam break and validation data from [Koshizula and Oka, 1996] experiment. Video	
02_PERIODICITY • 2-D case with Periodicity in X direction. Video Density diffusion term is applied.	

03_MOVINGSQUARE
 	
• 2-D case with square that moves with rectilinear movement. Video
  Example with no gravity; parameter "b" needs to be specified by the user.
  Shifting is used for this internal flow (no need to detect free surface).	
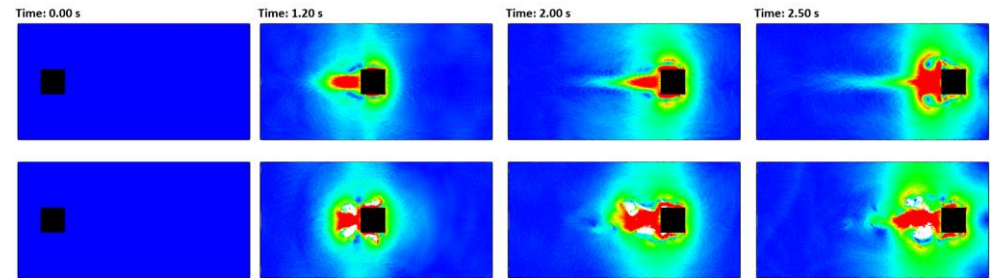
04_EXTERNALFORCES • External acceleration is loaded from a file and applied to two different volumes of fluid. Video Density diffusion term is applied.	
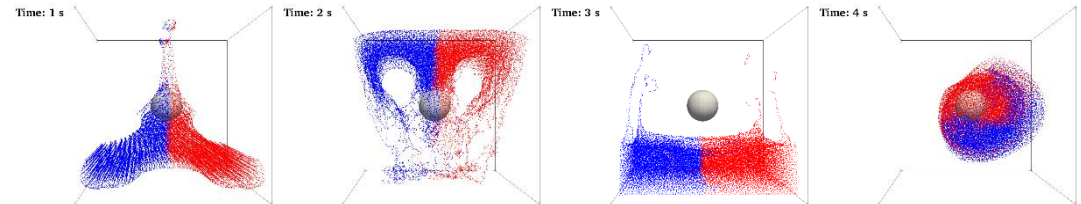
05_SLOSHINGTANK
 	
• 2-D sloshing tank that reads the rotational movement of the tank itself from a file. Video
• 2-D sloshing tank that reads external acceleration from a file.
  Validation with SPHERIC Benchmark #10 where pressure is computed.
  Density diffusion term is applied.	
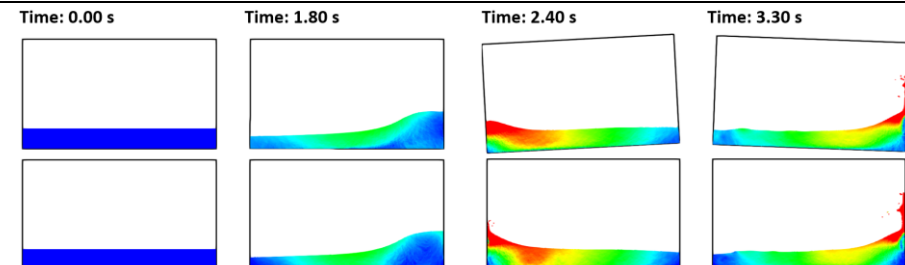
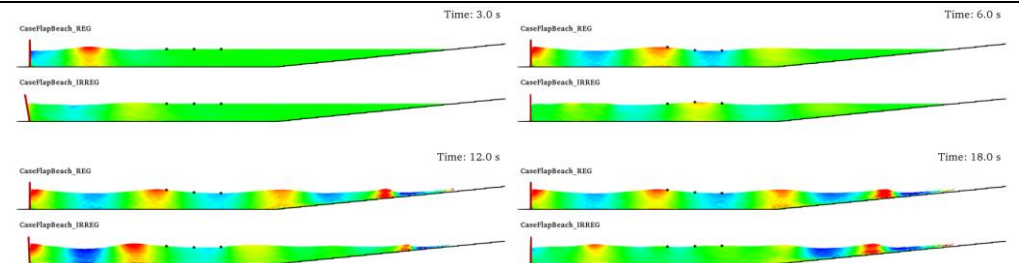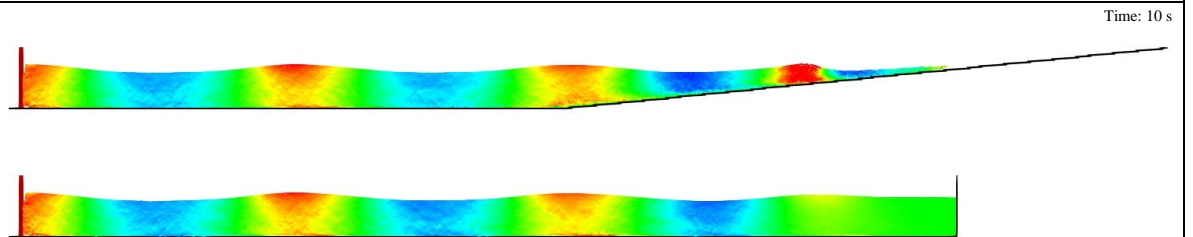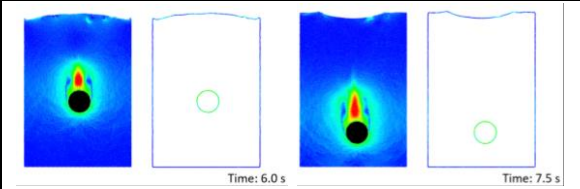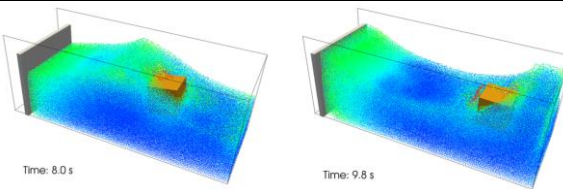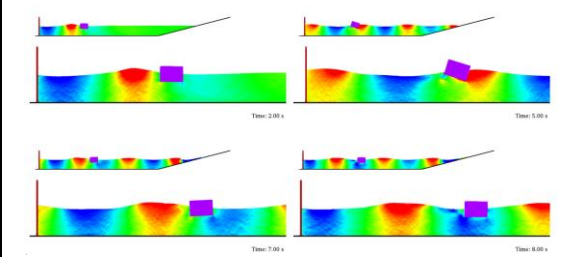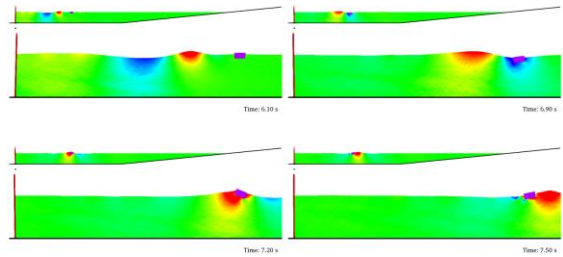|	
06_WAVEMAKER • 3-D tank with Periodicity in Y direction and piston with sinusoidal movement. Video Density diffusion term is applied.	
07_WAVEMAKERFILE • 2-D tank with piston motion loaded from external file and external structure (STL). Video Validation data from CIEMito experiment: numerical computation of wave surface elevation and force exerted onto the wall.	
08_WAVESFLAP • 2-D regular waves generated with flap and comparison with 2nd order wave theory (beach). Video • 2-D irregular waves generated with flap and comparison with 2nd order wave theory (beach).	
09_WAVESPISTON • 2-D regular waves with piston and comparison with 2nd order wave theory (beach & damping). Video • 2-D irregular waves with piston and comparison with 2nd order wave theory (beach & damping). Video	
10_WAVESPISTONAWAS • 2-D regular waves generated with piston interacting with a vertical wall with and without AWAS. Forces against the wall and dike with and without AWAS are compared. Video • 2-D regular waves generated with piston interacting with a trapezoidal dike with and without AWAS. Forces against the wall and dike with and without AWAS are compared. Video	
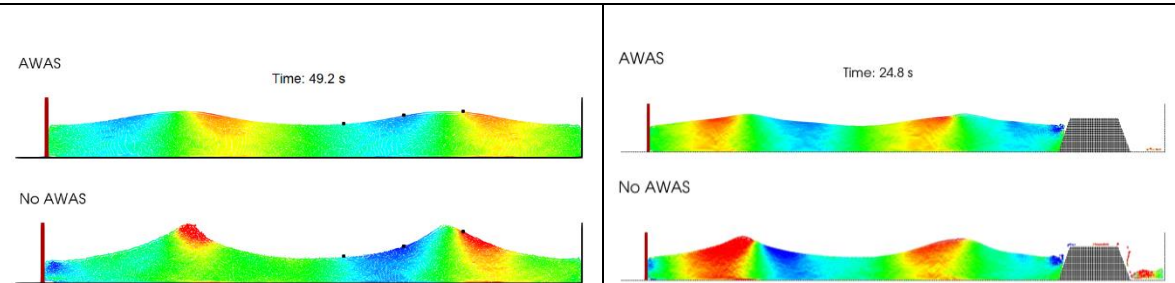
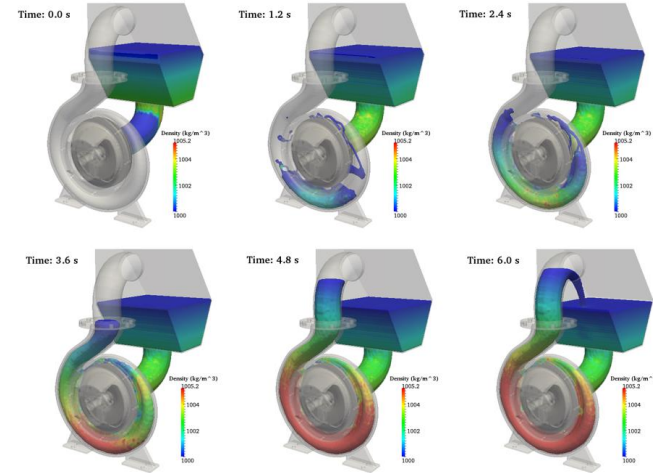|		
11_FLOATING • 3-D floating box in a wave tank with Periodicity in Y direction and piston with sinusoidal movement. Delta-SPH is used. Video • 2-D falling sphere that uses laminar+SPS viscosity. Validation data from [Fekken, 2004] and [Moyo and Greenhow, 2000]. Video		
12_FLOATINGWAVES • 2-D floating box under the action of non-linear waves with flap that reads rotational motion from a file and uses laminar+SPS viscosity. Video Validation data (motions of the box) from [Hadzic et al., 2005]. • 2-D floating box under the action of regular waves with piston. Video Validation data (motions of the box) from [Ren et al., 2015].		
13_PUMP • 3-D external geometries are imported (STL) and filling algorithm is used. Rotational movement is imposed. Video		
14_DEM • 2-D case only with DEM of a ball that impacts with blocks. Example without fluid particles. Video • 3-D dam-break and blocks where interaction between blocks and with walls used DEM and properties of materials. Video • 2-D case with 2000 floating objects that interact in terms of DEM approach. Video		
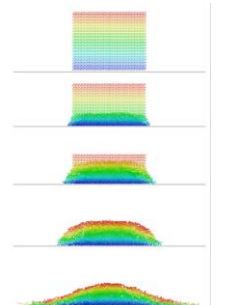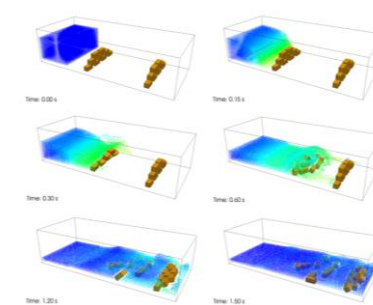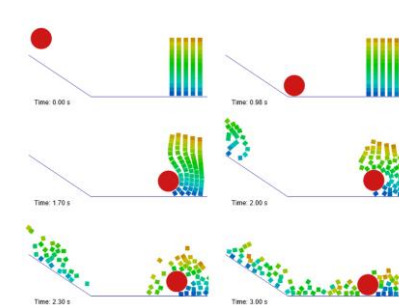
15_POISEUILLE	
• 2-D case of Poiseuille flow with laminar+SPS viscosity and using high resolution. Video	
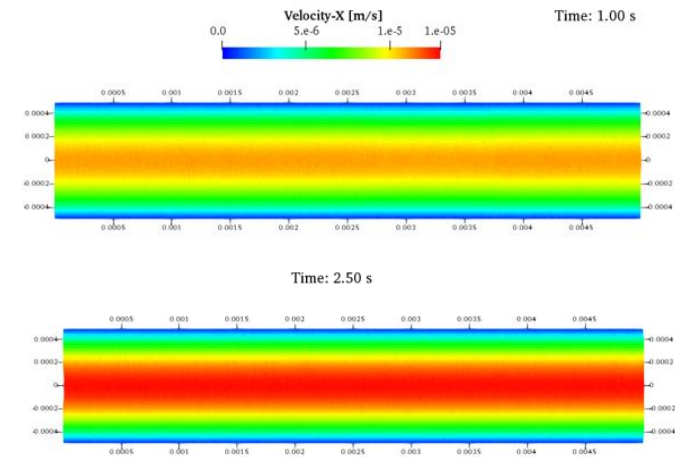
16_SOLITARYWAVES	
• 2-D solitary wave generated with 3 different theories. Video • 2-D case of triple solitary waves. Video	
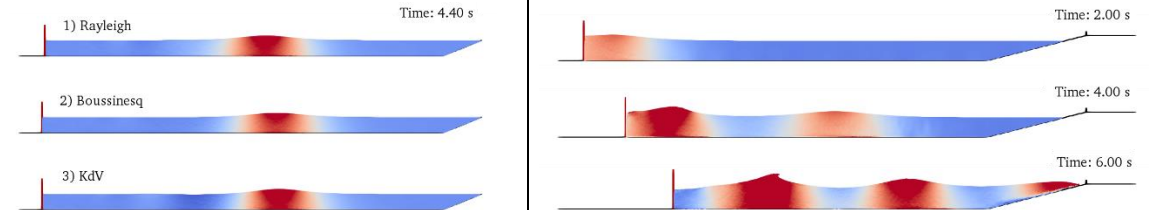
17_WAVERUNUP	
• 3-D regular waves interacting with a layer armour breakwater (STL) • Gauge system is used to compute Run-up. Video Validation data from CIEMito: wave surface elevation and wave run-up.	