ETSI Navales, UPM.

Seminario del Grupo de Investigación del Canal de Ensayos Hidrodinámicos (CEHINAV) y del Grupo de Innovación Educativa en Computación y Mecánica de Fluidos (GIE CFD).

An acoustic-damper term for Weakly-Compressible SPH schemes

Matteo Antuono (1), Chiara Pilloton (1), Peng-Nan Sun (2), Andrea Colagrossi (1)

(1) CNR-INM, Institute of Marine Engineering, Rome, Italy

(2) School of Ocean Engineering and Technology, Sun Yat-sen University, Zhuhai, China

The seminar describes the use of a viscous term specifically conceived to reduce the magnitude of acoustic waves in weakly-compressible Smoothed Particle Hydrodynamics models (WC-SPH). Such a term only acts on the acoustic component of the pressure field, which is generated as a consequence of the assumption that the fluid is weakly-compressible, whereas it leaves the incompressible-like component unchanged. In comparison to the existing regularising terms in the WC-SPH literature, this allows for noise-free simulations which are similar to simulations of incompressible flows, and, at the same time, it maintains the advantages of explicit schemes (i.e. scalability and easiness of parallelization).

Día: Lunes, 23 de Enero de 2023
Hora: 11:00 h
Duración: 50'
Idioma: Inglés
Lugar: E.T.S. Ingenieros Navales. UPM
Sala de conferencias, (1ª planta)
Avda. de la Memoria, 4, 28040 Madrid.

También por zoom en:
https://upm.zoom.us/j/85813504846?pwd=VDhMZllnV3pEd1AvaS9jWjJiVXNvdz09
ID de reunión: 858 1350 4846, Código de acceso: 036974