



SEMINARIO DE ANÁLISIS NUMÉRICO Y MODELACIÓN MATEMÁTICA

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Título de la Charla:

***A numerical scheme for sedimentation of suspensions
with non-homogeneous settling properties***

Fecha y Hora:

Martes 13 de Mayo de 2014, 15:30 Horas.

Lugar:

Auditorio Alamiro Robledo, FCFM

Universidad de Concepción.

Resumen

We consider a strongly coupled 2×2 Temple-class system modelling sedimentation of suspensions with non-homogeneous settling properties. The solution of the associated Riemann problem may contain a contact discontinuity, over which the solids velocity is preserved. This invariance is poorly captured by Godunov's method, a deficiency that result in spurious oscillations. Inspired by the random sampling strategy in we propose here a modification of Godunov's method, which is similar to but conceptually simpler than the wave-splitting scheme presented in. The numerical approximations satisfy a maximum principle for the settling velocity and simulations suggest convergence.

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