



SEMINARIO DE ANÁLISIS NUMÉRICO Y MODELACIÓN MATEMÁTICA

Departamento de Matemática, UBB
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Título de la Charla:

***A multilayer shallow water system for
polydisperse sedimentation***

Fecha y Hora:

Martes 04 de Diciembre de 2012, 16:00 Horas.

Lugar:

Sala Seminario, Facultad de Ciencias, Universidad del Bío Bío.

Resumen

We consider the flow of a fluid containing one disperse substance consisting of small particles that belong to different species differing size and density. The flow is modelled by combining a multilayer shallow water approach with a polydisperse sedimentation process. The resulting model is less expensive, from a computational point of view, than a full coupled two- or three-dimensional sedimentation-flow coupled model. The new model is adequate in situations where the settling takes place from a suspension that undergoes horizontal movement such as the transport and deposition of suspended particulate matter in rivers and estuaries. Numerical examples are presented. This presentation is based on joint work with E.D. Fernández-Nieto, E.H. Koné (U. de Sevilla, Spain) and T. Morales de Luna (U. de Córdoba, Spain).

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