國立交通大學應用數學系
學術演講公告

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講　題：An asymptotic limit of a Navier-Stokes system with capillary effects

時　間：103 年 3 月 11 日(星期二) 下午 2:00 –3:00

地　點：(光復校區) 科學一館 223 室

茶　會：當天下午 1:30 (科學一館 205 室)

Abstract

A combined incompressible and vanishing capillarity limit in the barotropic compressible Navier-Stokes equations for smooth solutions is proved. The equations are considered on the two-dimensional torus with well prepared initial data. The momentum equation contains a rotational term originating from a Coriolis force, a general Korteweg-type tensor modeling capillary effects, and a density-dependent viscosity. The limiting model is the viscous quasi-geostrophic equation for the ``rotated'' velocity potential. The proof of the singular limit is based on the modulated energy method with a careful choice of the correction terms.

This is the joint work with A. Juengel and Kung-Chien Wu. It will appear in Communi. in Math. Physics 2014.

敬請公告　歡迎參加

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