

Seminario de análisis matemático y aplicaciones  
Analisi matematikoa eta aplikazioak mintegia

Boundary regularity of vortex patches  
for the aggregation and Euler equations

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**ABSTRACT:** The aggregation equation is a simple model for non local interaction phenomena. The vorticity form of the Euler equation in the plane belongs to the same family. Vortex patches are solutions of any of the two equations with initial condition the characteristic function of a domain. The problem I will consider is showing that the boundary of the patch remains smooth for all time if the initial boundary is smooth. For the vorticity equation this is a famous result of Chemin. We will discuss the same result for the aggregation equation.

**LUGAR / LEKUA:**

Sala de seminarios de la sección de matemáticas

Matematika ataleko mintegi gela

**DÍA Y HORA / EGUNA ETA ORDUA:**

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