

1116-76-1500 **James P Kelliher*** (kelliher@math.ucr.edu). *Aggregation equations and 2D incompressible fluids*. Preliminary report.

In recent works of Bertozzi, Garnett, Laurent, Verdera, and Léger, the inviscid aggregation equations with Newtonian potential have been treated much like an inviscid 2D incompressible fluid to obtain well-posedness and to prove the persistence of regularity of an aggregation patch boundary. We discuss how many other problems of fluids mechanics have a close analog in aggregation equations, and explore some of the complications that arise. We address, in particular, work with Cozzi and Gie to prove the vanishing viscosity limit. (Received September 20, 2015)