

1134-76-436

Elaine Cozzi* (cozzie@math.oregonstate.edu), Oregon State University, Department of Mathematics, Corvallis, OR 97331. *The aggregation equation with Newtonian potential.*

The aggregation equation with Newtonian potential models several different physical problems, including chemotaxis (when diffusion is present) and type-II superconductivity (without diffusion). In this talk, we apply techniques from two-dimensional fluid mechanics to investigate well-posedness theory and the inviscid limit for a generalization of this equation. This is joint work with Gung-Min Gie and James P. Kelliher. (Received September 12, 2017)