

Ralph Saxton

Title: The generalized inviscid Proudman Johnson equations

The inviscid Proudman Johnson equation provides a simple class of exact solutions for the incompressible, two-dimensional Euler equations and can be extended to allow related classes of solutions to be constructed for higher dimensions. Generalization beyond this leads to a rich variety in the evolution of solutions and to further applications. In this talk, we will give an overview of global existence and finite time breakdown properties for spatially periodic solutions in each case of the problem.

The work is joint with Alejandro Sarria.