

# HARMONIC AND SPECTRAL ANALYSIS

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## Desingularization of the Biot-Savart integral and the Localised Induction Approximation for the the evolution of vortex filaments

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I'll present the so called Localised Induction Approximation (LIA) for the dynamics of an isolated vortex within the frame work of Euler equation. Some particular examples of solutions with a fractal behaviour will be showed. I'll also present some results about using the Navier Stokes flow to desingularize the Biot-Savart integral.