

# VORTEX DYNAMICS IN DOMAINS WITH HOLES

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We present a new formulation of incompressible two-dimensional ideal fluid motion in terms of vortex dynamics. The difficulty is a topological one: how to write the harmonic, or potential, part of the velocity in terms of vorticity. We use this reformulation of the flow equations to describe the limiting behavior of Euler solutions in a bounded domain with multiple holes, when one of the holes becomes very small.

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