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Hydrodynamic Vortex on Surfaces

Abstract: During the last 30 years the usual point vortex model on planar domains has been generalized to curved surfaces. A main contribution to this generalization is due to Boatto and Koiller. Part of this talk is dedicated to reviewing their work. Then a general formulation of the point vortex model on surfaces of finite topological type is presented (including the case of massive vortices). At the end some examples are provided. This is a joint work with H. H. B. Vighioni.