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Relative equilibria in the four-vortex problem with two pairs of equal vorticities

The N-vortex problem concerns the dynamics of N point vortices moving in the plane. Of particular interest in this problem are solutions that appear fixed when viewed in an uniformly rotating frame. Such solutions are called relative equilibria. In this talk I will give a complete classification of the relative equilibria in the four vortex problem with two pairs of equal vorticities. I will also describe some of the methods used to obtain such results.