Streamline Topology of Helical Fluid Flow

Morten Andersen DTU Mathematics

An incompressible velocity field with helical symmetry is investigated. Helical symmetry means the velocity field 'looks' the same as one moves on a given helix. This means a stream function can be constructed.

The focus is on a proper description of helical symmetry and a bifurcation analysis of a flow with helical symmetry.