



Mathematics > Differential Geometry

A geometric heat flow for vector fields

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This is an announcement of our work [5] on introducing and studying a geometric heat flow to find Killing vector fields on closed Riemannian manifolds with positive sectional curvature. We study its various properties, prove the global existence of the solution of this flow, discuss its convergence and possible applications, and its relation to the Navier-Stokes equations on manifolds. We will study the similar flow in [6] to find holomorphic vector fields on Kahler manifolds.

Comments: 11 pages, comments are welcome

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