

## **Magnetic curves, magnetic maps**

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### **Abstract:**

The Landau Hall problem is the study of the motion of a charged particle in a constant and static (time-independent) magnetic field on a Riemannian surface. The classical problem stands for a charged particle moving in the Euclidean plane  $E^2$ . The motion of the particle is described as the solution of Newton equation.

We investigate the trajectories of charged particles moving in spaces modeled by almost contact metric manifolds with closed fundamental 2 form.

Then, we introduce the notion of magnetic map between Riemannian manifolds. They are generalizations of both magnetic curves and harmonic maps. We provide some fundamental examples of magnetic maps.