Abstract

In this talk, I will introduce the problem of seeking non-contractible closed geodesics on Finsler (or Riemannian) compact space form (also including real projective space), especially I will report our recent result about the existence of infinitely many distinct non-contractible closed geodesics on every $\mathbb{R}P^2$ endowed with a Riemannian metric such that its Gaussian curvature is positive, and two or infinitely many distinct non-contractible closed geodesics on every Finsler $\mathbb{R}P^2$ with reversibility λ and flag curvature K satisfying $\left(\frac{\lambda}{1+\lambda}\right)^2<K\le 1$.