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Symplectic geometry of Finsler metrics of constant curvature

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Abstract

I will discuss Finsler metrics of positive constant flag curvature (definition, previous results and geometry will be recalled) on closed 2-dimensional surfaces. Besided PDE, relations to symplectic geometry and integrable systems will play an essential role. The main result is that the geodesic flow of such a metric is symplectically conjugate to that of a Katok metric. The result are almost contained in the papers arXiv:1710.03736 , arXiv:1710.01281 coauthored in different constellations with R. Bryant, P. Foulon, S. Ivanov and W. Ziller.