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**Zhongmin Shen\*** ([zshen@math.iupui.edu](mailto:zshen@math.iupui.edu)), Department of Mathematical Sciences, IUPUI, 402 N Blackford Street, Indianapolis, IN 46032. *Some Non-Riemannian Curvatures In Finsler Geometry*. Preliminary report.

In Finsler Geometry, there are several geometric quantities. The Riemann curvature is the natural extension of the Riemann curvature in Riemannian geometry. There are several other non-Riemannian quantities. They all vanish when the metric is Riemannian. It is important to understand the geometric meanings of these quantities and their interaction with the Riemann curvature. In this lecture, I will discuss some metric rigidity theorems for Finsler manifolds with special non-Riemannian curvature properties. (Received September 03, 2010)