

**Invariant volumes, weakly-Berwald Finsler spaces,  
and the Landsberg–Berwald problem**

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**Abstract.** I discuss invariance of volume forms on a Finsler space. I show that a Finsler space which admits a vertically-invariant volume form which is invariant by the geodesic spray – a geodesically-invariant vertically-invariant volume form – is weakly Berwald, and deduce that a Landsberg space admits a geodesically-invariant vertically-invariant volume form if and only if the space is a Berwald space. I illustrate the ideas by considering Randers spaces.

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