

**Kawaguchi, H.**

**On a concept of  $P$ -reducibility in Finsler spaces.** (English) [Zbl 0789.53014](#)

Szenthe, J. (ed.) et al., Differential geometry and its applications. Proceedings of a colloquium, held in Eger, Hungary, August 20-25, 1989, organized by the János Bolyai Mathematical Society. Amsterdam: North-Holland Publishing Company. Colloq. Math. Soc. János Bolyai. 56, 403-409 (1992).

To consider  $P$ -reducible Finsler spaces, the author defines an  $A$ -indicatrix  $H^{n-2}$  of a Finsler space  $F^n$  which is a hypersurface of the indicatrix  $I^{n-1}$  given by  $\log \sqrt{\bar{g}} = \text{const.}$ , where  $\bar{g}$  is the restriction of  $g = \det(g_{ij})$  to  $I^{n-1}$ .  $H^{n-2}$  is normal to the vector field  $A = (A_i)$  on  $I^{n-1}$ . The second fundamental form, Gauss and Weingarten equations are found for  $H^{n-2}$ . Consequently the necessary and sufficient condition for  $H^{n-2}$  to be a congruence of totally geodesic hypersurfaces is written explicitly.

For the entire collection see [\[Zbl 0764.00002\]](#).

Reviewer: M. Matsumoto (Kyoto)

**MSC:**

**53B40** Local differential geometry of Finsler spaces and generalizations (areal metrics)

**Keywords:**

$A$ -indicatrix; indicatrix; totally geodesic hypersurfaces; Gauss equation; Weingarten equation; second fundamental form