Title: Radius and concurrent vector fields in spray and Finsler geometry

Author(s): Mike Crampin

I recall the definitions of a concurrent vector field and (from WHITEHEAD [11]) a radius vector field, and extend them so as to apply in spray and Finsler geometry. I discuss the role of radius vector fields in the theory of projective connections. I show that a concurrent vector field on a Finsler space is necessarily a radius vector field, and that if a connected manifold equipped with a spray supports a complete radius vector field which has a zero, then the manifold is diffeomorphic to \mathbb{R}^n with the standard flat spray.

Address:

Mike Crampin Orchard Rising Herrings Lane Burnham Market Norfolk UK