

ABSTRACT
CONFORMAL VECTOR FIELDS OF THE SASAKI
METRIC

FATMA MUAZZEZ ŞİMŞİR, CEM TEZER

In this talk, we will describe conformal vector fields on the tangent bundle of a Riemannian manifold . The tangent manifold is understood to be equipped with the most "natural" Riemannian metric, the so called Sasaki metric. In this context the foremost question is of course the description of the Killing vector fields on the tangent manifold assuming that the same are known on the manifold itself. This problem has been solved by S. Tanno in 1976. I obtain an exact description of the conformal vector fields on the tangent manifold again assuming that the same are known on the manifold itself. A curiosity that commends itself especially to the attention is the fact that once the manifold is compact, the conformal vector fields on the tangent manifold are exactly the Killing vector fields on the tangent manifold.