

CHAMPS DE VECTEURS ET SOUS-VARIETES RIEMANNIENNES

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In 1958, Kobayashi proved that the nonisolated zeros of Killing vector fields form totally geodesic submanifolds. In 1974, Blair generalized the result for nonisolated zeros of conformal vector fields, proving that they give totally umbilical submanifolds. But his proof made essential use of Ferrand's theorem, thus applying only to compact manifolds. Together with Belgun and Moroianu, we proved that the essential zeros of conformal fields are all isolated. As a consequence, Blair's result follows in full generality, without compacity of the manifold.