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Title: On natural Riemann extensions

Author(s): Oldřich Kowalski and Masami Sekizawa

A natural Riemann extension is a natural lift of a manifold with a symmetric affine connection to its cotangent bundle. The corresponding structure on the cotangent bundle is a pseudo-Riemannian metric. The classical Riemann extension has been studied by many authors. The broader (two-parameter) family of all natural Riemann extensions was found by the second author in 1987. We prove the equivariance property for the natural Riemann extensions. We also prove some theorems for Ricci curvature and scalar curvature.

Address:

Oldřich Kowalski
Faculty of Mathematics and Physics
Charles University in Prague
Sokolovská 83
186 75 Praha 8
The Czech Republic

Address:

Masami Sekizawa
Tokyo Gakugei University
Tokyo
Japan