Geometric Extrema on Sasakian Space Forms

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Abstract - We apply techniques from optimization theory to find inequalities on Riemannian manifolds. We find the eigenvectors and the eigenvalues of curvature operator, the extrema of the quadratic curvature forms and bounds of the scalar curvature on a Sasakian space form of dimension $2m + 1$. Some inequalities regarding the scalar curvature are proven.
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