Positive curvature on 3-Sasakian manifolds

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Thursday, February 15, 2007
007 Kemeny Hall, 4:00 pm
(Tea 3:30 pm 300 Kemeny Hall)

Abstract

All known manifolds with positive sectional curvature arise as orbit spaces of group actions on Lie groups with nonnegatively curved left-invariant metrics. The search for such spaces has proven notoriously difficult with but a handful of spaces discovered over the last half century.

This talk discusses a different method of attack where positive curvature is sought by lifting positive curvature to the total spaces of certain V-bundles over positively curved orbifolds. In order to lift positive curvature technical conditions coming from mathematical physics come into play. We discuss examples where the speaker found positively curved metrics of this sort and related "hot" candidates where the technique holds some promise.

This talk should be accessible to graduate students.

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