

ANALYSIS AND DIFFERENTIAL GEOMETRY
SEMINAR

On Blow-ups of Compact Metrics and the Resulting Curvatures

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Abstract: On a compact Riemannian manifold with non-empty boundary, let a boundary defining function ρ be given. Multiplying the compact metric by ρ_{-2} defines a new metric. This conformal change, together with the interior of the original manifold, gives an infinite area Riemannian manifold (M, g) . The asymptotic behavior of the sectional curvatures of g will be studied. The main result of these considerations will justify the use of asymptotically hyperbolic manifolds in fields of Mathematics and Physics.

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MATHEMATICS AND COMPUTER SCIENCE
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