

Sectional Curvature in 4-dimensional manifolds

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This talk will review the known work on the study of the sectional curvature function on 4-dimensional manifolds for metrics with positive definite or Lorentz signature. It will then deal with the remaining case of neutral signature. The talk will be divided into four parts; first, some historical comments of the sectional curvature function, second, a study of the structure of 2-spaces of the tangent space for neutral signature and a resume of the algebraic structure of the Weyl conformal tensor which turns out to be useful in this study, third, the study of the actual sectional curvature function for this case and finally a discussion of the degree of uniqueness of the metric from which a given sectional curvature function came.
