

Lesson 5 : Geometry of open manifolds of dimension 3 , by G. Besson

We shall discuss the geometry of open 3-manifolds. More precisely the course will give examples of contractible 3-manifolds which are not homeomorphic to R^3 . It is not known what are the best Riemannian metric that one can put on such manifolds. In general, a very interesting question is : what kind of complete Riemannian metric can be put on the complement of a Cantor set in the 3-sphere? We shall discuss this question and present some nice results obtained by J. Souto and maybe more.