

MATHEMATICS DEPARTMENT GRADUATE SEMINAR
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Title: A Brief (and often imprecise) Introduction to Geometrization

Abstract: In this talk we will attempt to provide an elementary introduction to geometric structures and geometrization. In order to keep the exposition accessible we will illustrate most of the concepts in the two dimensional case, where there is also a very beautiful interplay of geometry and topology. Time and interest permitting, we also hope to give a statement of the three dimensional geometrization conjecture as well (and perhaps also indicate why one cannot hope for such a classification scheme in higher dimensions). Given the recent sensational work of Perelman in proving Thurston's geometrization conjecture (which yields a simple proof of the Poincare' conjecture as an easy corollary), we hope that this lecture will prove to be of interest and that it will provide a basic introduction to some of the terminology in this area (though we will not discuss Ricci flow).