DIFFERENTIAL GEOMETRY/PDE SEMINAR

Wendsday, November 16, 2011
Padelford C-36
3:50PM–5PM

Fefferman-type constructions for parabolic geometries

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Parabolic geometries cover a wide class of geometric structures, including projective, conformal and CR structures. Interesting relations between different geometric structures can often be obtained by Fefferman-type constructions: this is a generalized proceduredue to A. Cap that is analogous to the famous construction of a conformal structure on a circle bundle over a CR-manifold obtained by Ch. Fefferman. In the talk I will introduce the basic notions of parabolic geometries, describe the framework of Fefferman-type constructions and discuss closely related issues like holonomy reductions and special solutions to BGG-equations. I will discuss some interesting examples of such constructions in conformal spin geometry. As an outlook to possible extensions of the procedure I will present some recent results of joint work with K. Sagerschnig, [arXiv:1109.4231], where we succeeded in carrying out the construction in a case where a common normality assumption fails to hold.

For more information about this seminar, visit the DG/PDE Seminar Web page (from the Math Department home page, `www.math.washington.edu`, follow the link **Seminars, Colloquia, and Conferences**).