DIFFERENTIAL GEOMETRY SEMINAR

MONDAY, APRIL 24
COMMUNICATIONS 226
3:45 P.M.

Connection-free structures in differential geometry

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According to a commonly-held view, differential geometry is the study of connections, associated with further structures, whether they be Riemannian metrics or otherwise.

Notable exceptions are structures defined by tangent vector fields (with applications to Lie groups, differential equations, etc.) and differential forms (with applications to de Rham cohomology, for example).

This lecture deals with another kind of pointwise-defined structure, the vector 1-forms: tensor fields of type $(1,1)$. (Their best known application is to almost-complex structures.)

The talk will focus on differential invariants of vector 1-forms, and their properties. Some of these are illustrated with graphs, replacing otherwise seemingly aimless calculations. Derivations (differential operators, whether formal or real), which appear everywhere in D.G. (whence its name), play an important part here, as well.

For more information about this seminar, view the Differential Geometry Seminar World-Wide Web page at

`http://www.math.washington.edu/~lee/Seminars/dg.html`

To request disability accommodations, contact the Office of the ADA Coordinator, at least ten days in advance of the event: 543-6450 (voice); 543-6452 (TDD); 685-3885 (FAX); `access@u.washington.edu` (E-mail).