DIFFERENTIAL GEOMETRY/PDE SEMINAR

WEDNESDAY, November 18
Communications 228
3:45 pm

Global Existence for Wave Maps and Wave Maps with Torsion

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Wave maps are energy-critical maps from a Lorentzian manifold (the "base")to a Riemannian manifold (the "target"). In other words, they are the hyperbolic PDE version of harmonic maps. As with any nonlinear hyperbolic PDE system, one of the goals is to develop hypotheses sufficient to guarantee that solutions which evolve from smooth initial data are singularity free, and last forever. For targets with one space dimension, this is always the case. For targets with three space dimensions, singularities can occur. Two is the critical dimension for wave maps, and it is not yet known whether singularities can develop. We prove that they don't for a certain special family of wave maps with two spatial dimension base manifolds. We do this with and without torsion present in the base geometry.

For more information about this seminar, view the Differential Geometry/PDE Seminar World-Wide Web page at `http://www.math.washington.edu/DGPDE/dg.html` or from the **Seminars, Colloquia, and Conferences** section of the Math Department home page.

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