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Diffraction of waves on manifolds with corners.

On a smooth, compact Riemannian manifold, singularities of solutions to the wave equation propagate at unit speed along geodesics: this is, in effect, classical geometric optics. On a manifold with corners, this propagation is augmented by diffractive effects. I will discuss recent progress in understanding the propagation and diffraction of singularities on a manifold with corners, and in particular the fact that the diffracted wavefront is often smoother than the directly propagated singularities. (Received August 03, 2007)