

1030-53-429

**Jean-Francoise Lafont\***, Department of Mathematics, Ohio State University. *Recovering parallel Jacobi fields from ultraflats.*

I will show how the presence of flats in an asymptotic cone  $X$  for a simply connected, complete, Riemannian manifold of non-positive curvature  $M$  can be used to find parallel Jacobi fields inside  $M$ . When used in conjunction with the celebrated Ballmann-Burns-Spatzier rank rigidity result, this can be used to obtain new proofs for various well known rigidity theorems. This is work in progress with Stefano Francaviglia (Univ. Autonoma de Barcelona). (Received August 15, 2007)