1015-58-251   **Paul Loya*** (`paul@math.binghamton.edu`), SUNY Binghamton, Dept of mathematics, Binghamton, NY 13902. *The Calderon projector for manifolds with corners of codimension two.* Preliminary report.

The Calderon projector for Dirac operators on manifolds with smooth boundary completely determines the Fredholm properties of boundary value problems for the Dirac operator.

For manifolds with corners, the Calderon projector exists (even for manifolds with Lipschitz domains) as a singular integral operator, but not a lot has been studied in regards to its fine structure. For manifolds with corners of codimension two, it turns out that if all the corners are "blown-up", then the Calderon projector has a well-defined meaning on a space of functions with asymptotics. Moreover, it describes the Fredholm properties for boundary value problems of the Dirac operator on a corresponding space of functions with asymptotics and it can be "explicitly" described as an element of a type of Boutet de Monvel class of operators mapping between manifolds with boundary.

In this talk I will discuss these results and results for manifolds with corners of higher codimension. (Received February 07, 2006)