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Pierre Albin*, Massachusetts Institute of Technology, Department of Mathematics, 77
Massachusetts Avenue, Cambridge, MA 02139-4307. *The signature package on Witt
spaces*. Preliminary report.

I will report on joint work with Eric Leichtnam, Rafe Mazzeo, and Paolo Piazza on understanding the signature operator on a stratified manifold with C^* -algebra coefficients. This operator comes up naturally in the study of higher signatures of stratified manifolds.

Assuming the space is Witt we inductively construct a parametrix and prove the operator is Fredholm, extending results of Cheeger to the C^* -algebra context. I will also discuss work in progress identifying the index class of this operator with the ‘symmetric signature’ of the Witt space. (Received August 28, 2009)