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***Cohomology of strong semilattices of Banach algebras.***

ABSTRACT. Calculating Hochschild or cyclic cohomology of Banach algebras has proved to be rather difficult (outside the biflat setting). One interesting case arises when the Banach algebra in question admits a so-called “strong  $\ell^1$ -grading” over a *semilattice*: the construction arises naturally in the study of  $\ell^1$ -convolution algebras of Clifford semigroups, and also in recent work on certain subalgebras of the Fourier-Stieltjes algebra of a locally compact group.

In this talk I will present some of the requisite background and some motivating examples, and then discuss a ‘disintegration theorem’ (*Houston J. Math., to appear*) that – roughly speaking – reduces the calculation of simplicial cohomology for such algebras to the calculation of the simplicial cohomology of each fibre. Even in the case of one-dimensional fibres the proof is harder than one might expect. If time permits I will comment briefly on what can be said for the cohomology of *commutative algebras* with general, *symmetric* coefficient modules.