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The Gauss–Bonnet theorem for the noncommutative torus II

We shall first give an outline of a spectral formulation and proof of the Gauss–Bonnet theorem for the noncommutative two torus due to Connes and Tretkoff. Then we shall explain our ongoing work in progress where this result is generalized to arbitrary values of the complex structure. This involves some heavy computer calculations with the heat kernel.

This is joint work with M. Khalkhali.