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John Roe* (john.roe@psu.edu) and **Paul Siegel**. *Sheaves of C^* -algebras and K -homology*. Preliminary report.

The topological properties of Dirac operators are abstracted in the K -homology groups (Brown-Douglas-Fillmore, Kasparov). On the other hand, from a classical perspective the key topological invariant of a Dirac operator is its *symbol*, a section of a certain vector bundle. In this talk we describe a notion of symbol calculus appropriate to abstract K -homology (which makes use of sheaves of C^* -algebras) and give some applications. (Received September 11, 2012)