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Matthias Lesch*, Mathematisches Institut, Universitaet Bonn, Beringstrasse 1, D-53115 Bonn, Germany. *Regularized traces and K-theory invariants of parametric pseudodifferential operators.*

I will outline our recent construction of invariants of relative K-theory classes of multi-parameter dependent pseudodifferential operators, which recover and generalize Melrose's divisor flow. These are 'higher' divisor flows that are obtained by pairing relative K-theory classes with relative cyclic cocycles manufactured out of regularized traces. They take integral values and can be interpreted as 'suspended' versions of the spectral flow. This talk is based on joint work with Henri Moscovici and Markus Pflaum. (Received February 28, 2007)