1053-60-292 **Michel Ledoux*** (ledoux@math.univ-toulouse.fr). *From concentration to isoperimetry: semigroup proofs.*

In a remarkable series of works, E. Milman recently showed how to go back from measure concentration inequalities to dimension free isoperimetric type inequalities in spaces with non-negative curvature. The results cover two basic instances, linear isoperimetry under arbitrarily slow concentration, logarithmic strenghtenings above the linear case under exponential decays of the concentration function. The proofs are developed in a Riemannian (with densities) context making use of isoperimetric minimizers and refined tools from geometric measure theory. In this talk, we present simple semigroup arguments to cover the superlinear case, of potential usefulness in more general settings. A particular emphasis is put on functional inequalities for heat kernel measures. (Received September 07, 2009)