## 1014-13-793 Claudia Polini<sup>\*</sup> (cpolini@nd.edu), Department of Mathematics, University of Notre Dame, Notre Dame, IN 46556. *Core of ideals.* Preliminary report.

A reduction of an ideal I in a commutative ring R is a subideal with the same integral closure as I. One can think of a minimal reduction as a counterpart of the integral closure. However, unlike the integral closure, minimal reductions are not unique. To make up for this lack of uniqueness one considers their intersection, called the core of I, which has been the object of much attention lately. One motivation for studying the core is that it encodes information about the reductions of I. Reductions are in turn key players in the study of blowup algebras. Another feature that leads to the study of the core is its close connection with the Briançon–Skoda theorem, and the adjoint or the multiplier ideal. Furthermore, Hyry and Smith have shown that Kawamata's conjecture on the existence of sections of certain line bundles is equivalent to a statement about the core of particular ideals in section rings, thus giving renewed importance to the study of cores. In this talk I will present some new results on cores of ideals. (Received September 24, 2005)