1042-03-193   **Janak Daniel Ramakrishnan*** (`janak@berkeley.edu`), Institut Camille Jordan, Universite
Claude Bernard Lyon I, 43 boulevard du 11 novembre 1918, 69622 Villeurbanne, France.
Decreasing types in o-minimal theories. Preliminary report.

We define the notion of a "decreasing type" in o-minimal theories. An n-type is decreasing if, roughly, given an ordering of the variables, no earlier variable is infinitesimal compared with a later variable. Any type can be made to be decreasing via reordering of the variables, and is interdefinable with a decreasing type of a certain standardized form. Combining decreasing types with definable types yields a clearer picture of definable elementary extensions in o-minimal theories. Furthermore, decreasing types can be applied to answer a question concerning continuous extensions of definable functions. (Received August 18, 2008)