1067-03-737   **Vassilios Gregoriades*** (`gregoriades@mathematik.tu-darmstadt.de`), Arbeitsgruppe Logik, Fachbereich Mathematik, Technische Universität Darmstadt, Schloßgartenstr. 7, 64289 Darmstadt, Germany. *Applications of Logic to Analysis.*

In this talk we present some interactions of Effective Descriptive Set Theory and Analysis. We focus on results concerning the existence of Δ_1^1 (or HYP) members in some particular sets which arise naturally in Analysis. This kind of theorems lead to results about Analysis for which no "classic" i.e., non-effective proof is known. In particular we give two such examples, one of G. Debs' and one of the speaker's. In the first one we present the existence of a particular choice function which is Borel-measurable and in the second one a dichotomy result about sequences in Banach spaces. (Received September 14, 2010)