1106-03-149 **Richard A. Shore*** (shore@math.cornell.edu), Cornell University, Ithaca, NY. *The Strength of Determinacy and Turing Determinacy within Second Order Arithmetic.*

We analyze the strength of standard Determinacy principles as well as ones for Turing Determinacy that are provable in (subsystems of) second order arithmetic (equivalently ZFC^-). These are all at low levels of the arithmetic hierarchy. We consider three notions of strength. The first is in the sense of reverse mathematics which asks what axioms (e.g. comprehension for Π^1_n formulas) are needed to prove the principles. The second is more traditionally proof theoretic in that we compare principles in terms of consistency strength. The third is recursion or set theoretic in that we want to determine the existence of which ordinals (or better levels of the constructible universe L) are is implied by theses principles. Here the measure is in terms of levels of admissibility (Σ_n replacement) or nonprojectability (Σ_n comprehension axioms).

This is joint work with Antonio Montalbán. (Received September 03, 2014)