

Meeting: 1001, Evanston, Illinois, SS 8A, Special Session on Computability Theory and Applications

1001-03-67 **Noam Greenberg*** (erlkonig@math.cornell.edu), Department of Mathematics, University of Notre Dame, South Bend, IN, and **Antonio Montalban**, Department of Mathematics, Cornell University, Ithaca, NY. *Embedding and Coding Below a 1-Generic Degree.*

We show that the theory of $\mathcal{D}(\leq \mathbf{g})$, where \mathbf{g} is a 2-generic or a 1-generic degree below $0'$, interprets true first order arithmetic. To this end we show that 1-genericity is sufficient to find the parameters needed to code a set of degrees using Slaman and Woodin's method of coding in Turing degrees. We also prove that any computable lattice can be embedded below a 1-generic degree preserving top and bottom. (Received August 05, 2004)