1064-03-166 **Carl Jockusch*** (jockusch@math.uiuc.edu), Department of Mathematics, 250 Altgeld Hall, University of Illinois, 1409 W. Green St., Urbana, IL 61801, and **Paul Schupp** (schupp@math.uiuc.edu), Department of Mathematics, 250 Altgeld Hall, University of Illinois, 1409 W. Green St., Urbana, IL 61801. *Generic computability, Turing degrees, and asymptotic density.*

Many authors have studied generic decidability in group theory and other areas, and we now study it in the context of classical computability theory. A set A of natural numbers is called *generically computable* if there is a partial computable function which agrees with the characteristic function of A on its domain D, and furthermore D has density 1, i.e. $\lim_{n\to\infty} |\{k < n \ : \ k \in D\}|/n = 1$. A set A is called *coarsely computable* if there is a computable set R such that the symmetric difference of A and R has density 0. We prove that there is a set which is generically computable but not coarsely computable and vice versa. We show that every nonzero Turing degree contains a set which is not generically computable and also a set which is not coarsely computable. We prove that there is a c.e. set of density 1 which has no computable subset of density 1. In further work, joint with Rod Downey, we show that the Turing degrees of such sets are precisely the nonlow c.e. degrees. (Received September 07, 2010)