1126-03-318   **Wesley Calvert*** (`wcalvert@siu.edu`), Department of Mathematics, Mail Code 4408, 1245 LINCOLN DRIVE, Carbondale, IL 62901, and **Douglas Cenzer** and **Valentina Harizanov**. *Generically and Coarsely Computable Structures.* Preliminary report.

The usual study of computable structures is largely driven by worst-case analysis: we show that something is not computable by contriving an example, however artificial, of something that cannot be decided. To circumvent such artificiality, two asymptotic notions of computability, motivated by work in group theory, have seen significant recent interest in computability. Under these notions, a function is "effective" if and only if it is computable on a set of high density (in two different senses).

In the present work, we undertake the version of effective structure theory resulting from these alternate approaches to computability. In particular, we explore questions of existence of computable copies and of effective categoricity, both in the context of equivalence structures (where these questions are classically well-explored). (Received January 17, 2017)