

1096-03-1881 **James T. Long*** (jtl209@lehigh.edu), Christmas-Saucon Hall, 14 E Packer Avenue, Bethlehem, PA 18015, and **Lee J. Stanley**. *A Busy Beaver Problem for Infinite-Time Turing Machines*.

In 1962, T. Radó introduced the so-called busy beaver function, which came to occupy an important place in classical (finite-time) computability. Among other things, Radó showed that it asymptotically dominates every classical total computable function from \mathbb{N} to \mathbb{N} .

We introduce a generalization to the infinite-time Turing machine (ITTM) setting and show that it asymptotically dominates all ITTM total computable functions from \mathbb{N} to \mathbb{N} . We argue that this analogue of one of Radó's main results in the classical setting is strong evidence for the naturality of the generalization. (Received September 16, 2013)