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The Length of Infinite Time Turing Machine Computations

We show that the halting times of infinite time Turing Machines (considered as ordinals) are themselves all halting outputs of such machines. This gives a clarification of the nature of "supertasks" or infinite time computations. The proof further yields that the class of sets coded by outputs of halting computations coincides with a level of Goedel's constructible hierarchy: namely that of L_λ where λ is the supremum of halting times. A number of other open questions are thereby answered.