▸ LAURENT BIENVENU, BARBARA F. CSIMA, AND MATTHEW HARRISON-TRAINOR, *Some questions of uniformity in algorithmic randomness.*
LaBRI, CNRS & Université de Bordeaux, 351 Cours de la Libration, 33405 Talence, France.
E-mail: laurent.bienvenu@u-bordeaux.fr.
Department of Mathematics, University of Waterloo, 200 University Avenue West, Waterloo, ON, N2L 3G1, Canada.
E-mail: csima@uwaterloo.ca.
School of Mathematics and Statistics, Victoria University of Wellington, PO Box 600, Wellington 6140, New Zealand.
E-mail: matthew.harrisontrainor@vuw.ac.nz.

The Ω numbers—the halting probabilities of universal prefix-free machines—are known to be exactly the Martin-Löf random left-c.e. reals [3, 4, 5]. It was previously open however whether this equivalence was uniform, i.e., whether one can uniformly produce, from a Martin-Löf random left-c.e. real α, a universal machine U whose halting probability is α (see for example [1]). We answer this question in the negative. We also answer a question of Barmpalias and Lewis-Pye [2] by showing that given a left-c.e. real α, one cannot uniformly produce a left-c.e. real β such that $\alpha - \beta$ is neither left-c.e. nor right-c.e.

[1] George Barmpalias, *Aspects of Chaitin's Omega*, ***Algorithmic Randomness: Progress and Prospects*** (Johanna Franklin and Christopher Porter, editors), Springer, 2018, pp. 623–632.

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[3] Cristian S. Calude, Peter H. Hertling, Bakhadyr Khoussainov, and Yongge Wang, *Recursively enumerable reals and Chaitin Ω numbers*, ***Theoretical Computer Science***, vol. 255 (2001), no. 1-2, pp. 125–149.

[4] Gregory J. Chaitin, *A theory of program size formally identical to information theory*, ***Journal of the ACM***, vol. 22 (1975), pp. 329-340.

[5] Antonin Kučera and Ted Slaman, *Randomness and recursive enumerability*, ***SIAM Journal on Computing***, vol. 31 (2001), pp. 199–211.