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Effective metastability of Halpern iterates in CAT(0) spaces

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This paper provides an effective uniform rate of metastability (in the sense of Tao) on the strong convergence of Halpern iterations of nonexpansive mappings in CAT(0) spaces. The extraction of this rate from an ineffective proof due to Saejung is an instance of the general proof mining program which uses tools from mathematical logic to uncover hidden computational content from proofs. This methodology is applied here for the first time to a proof that uses Banach limits and hence makes a substantial reference to the axiom of choice.

Comments:	some typos corrected
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