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Jan Reimann*, Department of Mathematics, Pennsylvania State University, University Park, PA 16802. *Random graphs, finite extension constructions, and complexity.*

The study of (infinite) random graphs has recently been greatly advanced by the development of the theory of graphons. These continuous structures yield countable random graphs "from above", via sampling, as opposed to the approach "from below", such as via Fraïssé limits.

Petrov and Vershik showed how to obtain countable universal random graphs by sampling them from graphons. Their approach was extended recently to other structures by Ackerman, Freer, and Patel.

We investigate the complexity of such universal graphons. Our main result is that if a 0-1-valued graphon is constructed in a "tame" way (via a kind of finite extension method), then the induced fiber topology (also known as the r_W -topology) is not compact.

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