

ERDŐS–PÓSA THEOREM FOR MATROIDS

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(This talk is based on joint work with James Davies (Leipzig University) and Meike Hatzel (TU Darmstadt).)

We will look at an analogue theorem of the classical Erdős–Pósa Theorem. We prove a $GF(q)$ -representable matroid analogue of Robertson and Seymour’s theorem that planar graphs have an Erdős–Pósa property. Given a matroid N , we prove that for every matroid M with bounded branch width, M either contains r skew copies of N , or there is a small perturbation of M that doesn’t contain N as a minor.