Diophantine approximation and products of linear forms

Work in progress with Emmanuel Breuillard

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Subspace theorem

Let M be an subvariety defined over $\mathbb Q$ in $GL(d, \mathbb R)$. There exists a finite family of proper subspaces $\mathsf{V}_1,\ldots,\mathsf{V}_r$ in \mathbb{Q}^d , such that for all $\varepsilon>0,$ for almost every L in $\mathcal M,$ the solutions $\mathsf v\in\mathbb Z^d$ to the inequality

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all lie in $V_1 \cup \cdots \cup V_r$ except a finite number of them.

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