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Reynold Fregoli

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Improvements to Dirichlet's Theorem in the multiplicative setup and equidistribution of averages along curves

In this talk, I will discuss uniform approximation by rationals vectors in
the multiplicative set-up. Curiously enough, in this context, Dirichlet's Theorem is improvable, and, for m × n matrices the correct constant is bounded above by 2^{-m+1}. One can also show that almost all matrices are uniformly approximable by the function $x^{-1}(\log x)^{-1+\varepsilon}$ for any $\varepsilon > 0$. This emerges from the study of certain measures defined by averaging along particular curves the action of the full diagonal group on the space of (m + n)-dimensional unimodular lattices. The talk is based on a joint work with P. Bandi and D. Kleinbock.