

Online Number Theory Seminar

24 January 2025. – 17:00-17:50

J. Thuswaldner: Sequences of Matrices and Substitutions

It is well known that one can attach a Markov partition to a hyperbolic toral automorphism on the torus. Such an automorphism can be represented by a matrix with unit determinant. Generalizing this setting, we consider sequences of matrices with unit determinant. Such sequences are generated for instance by multidimensional continued fraction algorithms. By relating a sequence of substitutions to a sequence of matrices we are able to define Markov partitions and, hence, symbolic representations, for this "nonstationary" case.