

# Non-commutative Pointwise Ergodic Theorem for Actions of Amenable Groups

*jeudi 1 décembre 2022 11:00 (1 heure)*

Birkhoff's famous theorem asserts the pointwise convergence of ergodic averages associated with a measure preserving transformation of a measure space. In this talk, I will discuss generalizations of this theorem in two directions: the transformation will be replaced by the action of an amenable group, and the measure space by a von Neumann algebra equipped with a trace. A central role will be played by the notion of non-commutative maximal function, which extends for our purposes the notion of supremum to families of operators. The talk is based on joint work with Simeng Wang.

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