ASYMPTOTIC OF PLANAR YANG-MILLS FIELDS

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This talk will be about Lévy processes on ≪ large ≫ compact groups - discrete or continuous - and two-dimensional analogues called pure Yang-Mills fields. The latter are indexed by loops of finite length in the plane and satisfy properties analogue to independence and stationarity of increments. There is a one-to-one correspondance between Lévy processes invariant by adjunction and pure Yang-Mills fields. I shall first explain how to construct a Yang-Mills fields associated to an invariant Lévy process with large jumps. In a second time, I will discuss two applications of an extension theorem, due to Thierry Lévy, similar to Kolmogorov extension theorem. On the one hand, it allows to construct pure Yang-Mills for any invariant Lévy processes. On the other, when the group acts on vector spaces of large dimension, this theorem also allows to study the behavior of traces. This is a joint work with Guillaume Cébron and Franck Gabriel.