

**Some sufficient conditions for the ergodicity of the
Levy transformation**

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Time **Thursday, Nov 28, 2013 at 14:30**

Place **Campus Kirchberg, room B14**

The Levy transformation sends a Brownian path into another Brownian path obtained by subtracting the local time accumulated at level zero from the absolute value of the path. The question of ergodicity of this transformation was raised by Revuz and Yor in their book. In the last 20 years it turned out that the problem is difficult and the question is still unsettled. In the talk I will try to explain a hopefully non-trivial condition which would imply not only the ergodicity but also the strong mixing of the Levy transformation. In its simplest form, it is about the sequence obtained by evaluating the iterated paths at time 1. Zero is an accumulation point of this sequence by a density result of Marc Malric. The condition requires that this sequence has to approach zero sufficiently fast. I will also show some simulation results supporting the validity of the condition.