

Exposé court

88 *On ergodic theorems and the Riemann hypothesis*

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We use subsequence ergodic theorems applied to Boole's transformation and its variants and their invariant measures on the real line to give new characterisations of the Lindelöf Hypothesis and the Riemann hypothesis. This builds on earlier work of R. L. Adler and B. Weiss, M. Lifshits and M. Weber, J. Steuding, J. Lee and A. I. Surijaya using Birkhoff's ergodic theorem and probability theory. The talk is on work with Jean-Louis Verger-Gaugry (Chambéry) and Michel Weber (Strasbourg).