Spectrum of Brownian motions in the General Linear Group

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For a multiplicative Brownian motion in GL(N,\C) we show that for any fixed time, in the large-N limit the empirical spectral distribution converges to a measure on the complex plane associated to a non-commutative process introduced by Biane in 1997. I will discuss some elements of the proof strategy and open questions on local spectral fluctuations. This is joint work with Tanya Brailovskaya, Todd Kemp and Félix Parraud.