Sophie Grivaux (Univ. Lille)

Fourier coefficients of continous measures on the Furstenberg sequence

I will explain how to construct continuous probability measures on the unit circle which have the property that the modulus of their Fourier coefficients on the Furstenberg sequence $\{2^k 3^l \ ; \ k, l \geq 1\}$ is bounded away from zero. This answers in the negative a Conjecture of R. Lyons, motivated by the Furstenberg Conjecture concerning $\times 2$ and $\times 3$ invariant probability measures on the circle. This is joint work with Catalin Badea (Lille).