Eigenfunctions on random hyperbolic surfaces of large genus

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High frequency eigenfunctions in chaotic systems such as hyperbolic surfaces are known to exhibit some universal behaviour of delocalisation and randomness. We will introduce to some results on the behaviour of eigenfunctions on random compact hyperbolic surfaces, in the limit where the genus (or equivalently the volume) tends to infinity, and the frequency is in a fixed window. These results suggest that in the large scale limit we can expect a similar universal behaviour. We will focus on the Weil-Petersson model of random surfaces introduced by Mirzakhani. One advantage of this point of view is the analogy with eigenvectors of random regular graphs, about which there has been very strong developments in the recent years. Based on joint works with Tuomas Sahlsten and Joe Thomas.