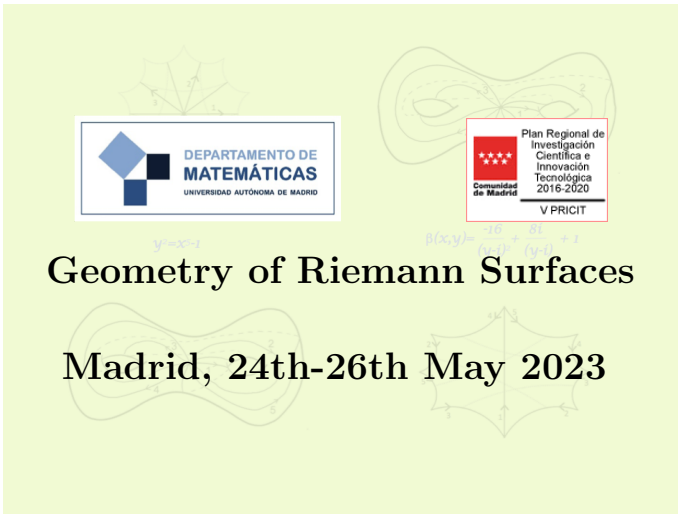

Speaker: Viveka Erlandsson, University of Bristol.

Title: Counting geodesics of given commutator length.

Abstract: It's a classical result by Huber that the number of closed geodesics of length bounded by L on a closed hyperbolic surface S is asymptotic to $\exp(L)/L$ as L grows. This result has been generalized in many directions, for example by counting certain subsets of closed geodesics. One such result is the asymptotic growth of those that are homologically trivial, proved by Katsura-Sunanda and Phillips-Sarnak. A homologically trivial curve can be written as a product of commutators, and in this talk we will look at the growth of those that can be written as a product of g commutators (in a sense, those that bound a genus g subsurface). We show that their number is asymptotic to a constant times $L^{6g-1}\exp(L/2)$, by first studying the asymptotic growth of the number of certain trivalent graphs on the S. This is joint work with Juan Souto.