1161-14-84 **Salim Tayou*** (salim.tayou@ens.psl.eu). *Exceptional jumps of Picard rank of K3 surfaces over number fields.*

Given a K3 surface X over a number field K, we prove that the set of primes of K where the geometric Picard rank jumps is infinite, assuming that X has everywhere potentially good reduction. This result is formulated in the general framework of GSpin Shimura varieties and I will explain other applications to abelian surfaces. I will also discuss applications to the existence of rational curves on K3 surfaces. The results in this talk are joint work with Ananth Shankar, Arul Shankar and Yunqing Tang. (Received August 11, 2020)