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Curves on surfaces with large topology

Surfaces of large genus are intriguing objects. Their geometry has been studied by finding geometric properties that hold for all surfaces of the same genus, and by finding families of surfaces with unexpected or extremely geometric behavior. The talk will discuss short pants decompositions on surfaces. Specifically, the talk will focus on two contrasting results. The first, joint with F. Balacheff and S. Sabourau, about how to find short pants decompositions on punctured spheres, and the second with L. Guth and R. Young about how to construct closed surfaces via random constructions with shortest pants decompositions relatively long.