Surfaces, braids and homotopy groups of spheres

Vladimir Vershinin

(Alexader Grothendieck Institute in Montpellie, France)

E-mail: `vladimir.verchinine@univ-montp2.fr`

We consider general surfaces: compact, with punctures, with boundary component. The only condition is that the fundamental group of the surface should be finitely generated. The fundamental group of a configuration space of a surface is the braid group of the surface. We consider in particular Brunnian braids, that is the braids which become trivial after deleting of any strand. We describe Brunnian braids of the projective plane and of the sphere with the help of homotopy groups of spheres.

The talk is based on the joint works with V. Bardakov, Jingyan Li, R. Mikhailov and Jie Wu.