

**Julien Marché**

Universit Pierre et Marie Curie

*A Jones polynomial for curves on surfaces*

In a recent work, T. Koberda et R.Santharoubane have studied representations of surface groups with the following property: every simple curve has an image of finite order. These representations come from topological quantum field theory (TQFT) and depend on an integer  $k$  called level. I will explain that when  $k$  goes to infinity, these representations are controlled by a sort of Jones polynomial which may distinguish simple curves from the others. This is joint work with R. Santharoubane.