

## **Polynomial-time algorithms on surfaces**

Richard Webb, University of Cambridge

We shall describe a polynomial-time algorithm that computes a geodesic in the curve graph between two given vertices. In particular, the asymptotic translation length of a mapping class on the curve graph can be computed, and its Nielsen--Thurston type can be determined, in polynomial time. Time permitting, we will also discuss the conjugacy problem.

This is joint work with Mark Bell.