# EQUIVALENT CURVES ON SURFACES

## Fudan Topology Seminar

## Speaker: Binbin Xu

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**Time: Fri, Nov. 17th, 15:30-16:30**

**Venue: Room 102, SCMS**

**Abstract:** We consider a closed oriented surface of genus at least 2. To describe curves on it, one natural idea is to choose once for all a collection of curves as a reference system and to hope that any other curve can be determined by its intersection numbers with reference curves. For simple curves, using the work of Dehn and Thurston, it is possible to find such a reference system consisting of finitely many simple curves. The situation becomes more complicated when curves have self-intersections. In particular, for any non-negative integer k, it is possible to find a pair of curves having the same intersection number with every curve with k self-intersections. Such a pair of curves are called k-equivalent curves. In this talk, I will discuss the general picture of a pair of k-equivalent curves and the relation between k-equivalence relations for different k's. This is a joint-work with Hugo Parlier.