

**TYPICAL BEHAVIOR OF RANDOM MAPPING CLASSES AND
OUTER AUTOMORPHISMS**

Fudan Topology Seminar

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Abstract: Random walks on spaces that manifest hyperbolic properties have been studied for decades, as a means to investigate the structure of the isometry groups of such spaces. Notable results in this topic include descriptions of generic random isometries and limit laws for displacements and translation lengths. A recent technique called the pivoting technique led to further elaborations in these directions. In this talk, I will describe properties of generic random isometries of Teichmuller space or Outer space. Namely, generic mapping classes are principal pseudo-Anosovs that make displacements with many contracting subsegments. This frequently contracting property is shared with generic outer automorphisms, which are geometrically fully irreducible and whose expansion factors differ from their inverses'. If time permits, I will explain how this description is related to (1) Qing-Rafi's sublinearly Morse boundaries and (2) limit laws for random 3-manifolds.