AN EXHAUSTION OF THE SPHERE COMPLEX BY FINITE RIGID SETS

Fudan Topology Seminar

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Time: Thur, Mar. 24th, 15:00-17:00
Zoom Meeting ID: 956 0945 4208 **Passcode: hyperbolic**

Abstract: A subcomplex X < C of a simplicial complex is rigid if every locally injective, simplicial map X to C arises as the restriction of an automorphism of C. Curve complexes and other surface complexes have been found to exhibit remarkable rigidity properties. Aramayona and Leininger proved that the curve complex of an orientable surface can be written as an increasing union of finite rigid sets. The sphere complex of a connect sum of n copies of S^1 x S^2 is an analog the curve complex of a surface used in the study of Out(Fn). In this talk I will present joint work with C. Leininger where we prove that there is an exhaustion of the sphere complex by finite rigid sets when n >= 3.