INTRODUCTION TO SPECIAL CUBE COMPLEXES

SCMS and NYU Shanghai joint mini-course

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Time: Tue, Jun 24th; Thur, Jun 26th; Fri, Jun 27th; 10:00-11:00am
Venue: Room 102, SCMS

Abstract:

Special cube complexes are non-positively curved cube complexes with several additional combinatorial features. They plays major roles in resolving a number of important conjectures, like virtual Haken conjecture in 3-manifold theory, and Baumslag conjecture in group theory.

This is a three-part minicourses on the theory special cube complexes of Haglund and Wise, as well as some of its more recent developments, with a focus on combination of special cube complexes. Here is a rough plan:

Lecture 1: basics on non-positive curved cube complexes, canonical completions and retractions of special cube complexes.

Lecture 2: Discussion of several major classes of cube complexes which are virtually special and which are not special.

Lecture 3: Combination theorems for special cube complexes, finite stature.

Part of the lecture is based on joint work with D. Wise.