DANIEL WISE, McGill

Cube Complexes

Cube complexes have come to play an increasingly central role within geometric group theory, as their connection to right-angled Artin groups provides a powerful combinatorial bridge between geometry and algebra. This talk will primarily aim to introduce nonpositively curved cube complexes, and then describe some of the developments that have recently culminated in the resolution of the virtual Haken conjecture for 3-manifolds, and simultaneously dramatically extended our understanding of many infinite groups.