Algebra Seminar

Virtual retraction properties in groups

Ashot Minasyan
University of Southampton - England

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Zoom

Abstract.

A subgroup H is said to be a virtual retract of a group G if H is a retract of some finite index subgroup K of G (i.e., $H \leqslant K$ and there is a homomorphism $\phi : K \to H$ such that that $\phi(h) = h$ for all $h \in H$). Virtual retracts are important in Group Theory, as they inherit many properties of the ambient group. They play a prominent role in the theory of virtually special groups of Haglund and Wise, which was fundamental in Agol's resolution of the virtual Haken Conjecture.

During the talk I will give examples of discrete groups in which "many" subgroups are virtual retracts. Various applications and related results will also be discussed.