Gábor Farkas

Title: Alexander invariants, resonance and Chen ranks

Abstract: Having origins in knot theory, the Alexander invariants of a group and their associated Chen ranks are subtle topological invariants of its lower central series that turn out to be amenable to computations via powerful homological or algebro-geometric methods. I will present a gentle introduction to this circle of ideas and discuss explicit formulas for the Chen ranks of groups naturally associated to graphs, or hyperplane arrangements. Joint with M. Aprodu, C. Raicu and A. Suciu.