

GRADUATE SEMINAR

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Schurian Association Schemes For Parabolic Subgroups of Finite Coxeter Groups

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3:00 PM

via Zoom

Abstract:

Let $G//H$ be the set of double cosets of a subgroup H in G . When G is finite, the characteristic functions $(HgH)^+ = \sum_{x \in HgH} x$ of the double cosets of H in G are the basis of a subalgebra of the group algebra $\mathbb{C}G$. When every double coset HgH is involutive (i.e. it contains an element x with $x^2 = 1$) then the double coset algebra $\mathbb{C}[G//H]$ is commutative.

When H is a *vertex stabilizer subgroup* of a finite string Coxeter group G , it was shown in all but one case that $G//H$ is involutive. In this talk we will explore variations of this problem for other *face-stabilizing subgroups*, *parabolic subgroups*, and *all finite Coxeter groups*, including those of *non-string type*.

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