Lie Groups and Representation Theory Seminar at the University of Tokyo

リー群論・表現論セミナー

DATE May 31 (Tue), 2011, 16:30–17:30

PLACE Room 126, Graduate School of Mathematical Sciences

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TITLE On character tables of association schemes based on attenuated spaces

ABSTRACT An association scheme is a pair of a finite set X and a set of relations $\{R_i\}_{0\leq i\leq d}$ on X which satisfies several axioms of regularity. The notion of association schemes is viewed as some axiomatized properties of transitive permutation groups in terms of combinatorics, and also the notion of association schemes is regarded as a generalization of the subring of the group ring spanned by the conjugacy classes of finite groups. Thus, the theory of association schemes had been developed in the study of finite permutation groups and representation theory. To determine the character tables of association schemes is an important first step to a systematic study of association schemes, and is helpful toward the classification of those schemes.

In this talk, we determine the character tables of association schemes based on attenuated spaces. These association schemes are obtained from subspaces of a given dimension in attenuated spaces.