

1030-05-56

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Zieschang (Theory of Association Schemes, Springer Monographs in Mathematics, Springer-Verlag, Berlin, 2005) introduced the notion of (combinatorial) morphisms for association schemes. Although morphisms of association schemes have very nice properties and play an important role in the study of algebraic structures of association schemes, they may not induce algebra homomorphisms between the scheme rings of association schemes. The main purpose of this talk is to present a necessary and sufficient condition under which a morphism between association schemes induces an algebra homomorphism between their scheme rings. In order to prove this result, we will need to study scheme ring homomorphisms of naturally valenced association schemes. (Received July 09, 2007)