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Combinatorial Aspects of Key Distribution for Sensor Networks

In sensor networks, each sensor node is typically assigned a subset of keys chosen from a larger key pool. It helpful to model these key assignments as a set system. Desirable properties of the key distribution scheme include connectivity and resilience. These properties correspond in a natural way to combinatorial properties of the associated set system. In this talk, we review some useful ways of constructing these types of schemes from combinatorial designs. We also analyze the above-mentioned properties and give some new results.