

Strongly regular configurations

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We report on the recent study [1] of combinatorial configurations with the associated point and line graphs being strongly regular. A prominent family of such configurations are the partial geometries, introduced by R. C. Bose in 1963. We focus on such configurations that are not partial geometries nor known generalisations such as semipartial geometries and strongly regular (α, β) -geometries, neither are they elliptic semiplanes of P. Dembowski. Several families are constructed, necessary existence conditions are proved, and a table of feasible parameters with at most 200 points is presented.

- [1] M. Abreu, M. Funk, V. Krčadinac, D. Labbate, *Strongly regular configurations*, preprint, 2021. <https://arxiv.org/abs/2104.04880>