

**Jungnickel, Dieter; Vanstone, Scott A.**

**On resolvable designs  $S_3(3, 4, v)$ .** (English) Zbl 0648.05007  
*J. Comb. Theory, Ser. A* 43, 334-337 (1986).

We study a method of Lonz and Vanstone which constructs an  $S_3(3, 4, 2n)$  from any given 1-factorization of  $K_{2n}$ . We show that the resulting designs admit at least 3 mutually orthogonal resolutions whenever  $n \geq 4$  is even. In particular, the necessary conditions for the existence of a resolvable  $S_3(3, 4, v)$  are also sufficient. Examples without repeated blocks are shown to exist provided that  $n \not\equiv 2 \pmod 3$ .

**MSC:**

**05B05** Combinatorial aspects of block designs

**05C70** Edge subsets with special properties (factorization, matching, partitioning, covering and packing, etc.)

Cited in **1** Review  
Cited in **7** Documents

**Keywords:**

resolvability; designs; mutually orthogonal resolutions

**Full Text:** [DOI](#)

**References:**

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