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**Ferdinand Ihringer\*** (ferdinand.ihringer@gmail.com). *A Switching for the Collinearity Graphs of Polar Spaces.*

Consider the  $n$ -dimensional vector space over a finite field of order  $q$ :  $\mathbb{F}_q^n$ . Let  $s$  be a non-degenerate reflexive sesquilinear form on  $\mathbb{F}_q^n$ . We define a graph  $\Gamma$  as follows. The points are the 1-dimensional subspaces that vanish on  $s$ . Two points  $x$  and  $y$  are adjacent if  $s(x, y) = 0$ . It is well-known that  $\Gamma$  is a strongly regular graph. Recently, triggered by a result by Abiad and Haemers, several new strongly regular graphs with the same parameters were constructed for  $q = 2$  and sufficiently large  $n$  (e.g.  $n \geq 6$  for Abiad et al.). Here all the results use Godsil-McKay switching sets. We will present a generalization of one of these constructions that works for all  $q$ . Particularly, this implies that a strongly regular graph  $srg(v, k, \lambda, \mu)$  with the same parameters as the collinearity graph of a finite classical polar space of rank at least 3 is not determined by its parameters  $v, k, \lambda$  and  $\mu$ . (Received July 07, 2016)