

## On the existence of large set of partitioned incomplete Latin squares

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In this talk, we survey the existence of large sets of partitioned incomplete Latin squares (LSPILS). Algebraic and combinatorial methods are employed to construct the large sets of partitioned incomplete Latin squares of type  $g^nu^1$ . Furthermore, we prove that there exists a pair of orthogonal LSPILS( $1^pu^1$ )s for any odd  $u$  and some even values of  $u$ , where  $p$  is a prime. Lastly, we propose some problems for further research.