

# Orthogonal Latin Rectangles

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I shall in the allotted span of forty minutes

- (1) (presumably) discuss some old results by Torbjörn Gustavsson regarding the completion of orthogonal partial latin squares where every row, column and symbol is used at most  $An$  times where  $A$  is a universal nonzero constant.
- (2) discuss some joint work with Anders Johansson titled Orthogonal Latin Rectangles and available from the site:  
[ArXiv:math.CO/0409398](https://arxiv.org/abs/math/0409398).
- (3) mention some old questions and some facts regarding the existence of a transversal in latin squares, row latin squares etc
- (4) given time and inclination mention some fairly new but still surprising positive results on the Alon and Tarsi conjecture regarding the discrepancy between the number of even and odd latin squares for some orders  $n$ .