

1058-15-210

**Louis A Deaett\*** (deaett@math.uvic.ca), Dept of Mathematics and Statistics, University of Victoria, P.O. Box 3060 STN CSC, Victoria, BC V8X 2R9, Canada. *Minimum semidefinite rank and the Heawood graph.*

Assign vectors to the points and lines of the Fano plane such that a point is on a line if and only if the corresponding vectors are not orthogonal. This forms an *orthogonal representation* for the incidence graph of the Fano plane, i.e. the Heawood graph. We investigate the smallest number of dimensions in which such a representation exists. (Received February 15, 2010)