

COLLOQUIUM

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RECEPTION IMMEDIATELY FOLLOWING IN THE MATH LIBRARY

A NEW TECHNIQUE FOR FINDING SMALL KIRKMAN COVERING AND PACKING DESIGNS; A $KCD(11)$, A CANONICAL $KCD(13)$, AND MORE EXAMPLES.

[ABSTRACT]

We present a new technique which we call the 'type/unlabelled/labelled' technique for finding, or determining the non-existence of, small Kirkman covering and packing designs. Using this technique and different computational methods, we construct a new $KCD(11)$, and a new canonical $KCD(13)$, and make some progress on the existence question of a $KPD(19, 8)$.