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*Bounds for contact numbers of locally separable unit sphere packings*

The contact number of a sphere packing is the number of touching pairs of balls in the packing. A packing of balls in Euclidean  $d$ -space is called totally separable if any two balls can be separated by a hyperplane such that it is disjoint from the interior of each ball in the packing. We call a packing of balls locally separable if each ball of the packing together with the balls that are tangent to it form a totally separable packing. We prove bounds for the contact numbers of locally separable packings of  $n$  unit balls in Euclidean  $d$ -space.