

Densest packings of, and on, Euclidean spheres

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We consider the "sphere packing" problem in Euclidean space, and the "spherical code" problem on the surface of a Euclidean sphere, concentrating on the few and very special cases where an exact solution is known. It remains a mystery whether the highly ordered configurations that give these exact solutions give reliable hints or red herrings concerning the general problems of sphere packing in any dimension and spherical codes of any size.