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*Coloring the Voronoi cell of a lattice*

We define the chromatic number of a lattice as the least number of colors one needs to color the interiors of the cells of the Voronoi tessellation of a lattice so that no two cells sharing a facet receive the same color. In this talk we give a brief overview of the techniques that can be applied to obtain bounds on the chromatic number of a lattice, with a special focus on the connections with sphere packings. This is a joint work with Mathieu Dutour Sikirić, David Madore, and Frank Vallentin.