Lattice Coverings
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Lattice coverings are a simple case of covering problems. We will first expose methods for finding the covering density of a given lattice. If one considers a space of possible lattices, then one gets the theory of $L$-type. We will explain how this theory works out and how the over a given $L$-type the problem is a semidefinite programming problem. Finally, we will explore the covering maxima of lattices, i.e. local behavior of the covering density function.