CLASSIFICATION OF TWO GENERA OF 32-DIMENSIONAL LATTICES OF RANK 8 OVER THE HURWITZ ORDER

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Abstract. A generalization of Kneser's neighboring method allows us to classify two interesting genera at the same time. The new method is used to determine the genus of Hermitian unimodular lattices of rank 8 over the Hurwitz order $\mathfrak{M}$ and the genus of those $\mathfrak{M}$-lattices corresponding to unimodular $\mathbb{Z}$-lattices.