# Asymptotic convergence of k-point bounds on compact packing graphs

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**Abstract**

De Laat et al. introduced k-point bounds for the independence number of packing graphs as a generalisation of the Delsarte-Goethals-Seidel linear programming 2-point bound and the Bachoc-Vallentin semidefinite programming 3-point bound for spherical codes. It is a more tractable weakening of the Lasserre hierarchy, and indeed improves on earlier bounds for the equiangular line problem. We will show that some versions of this k-point bound converge, by comparing them to a hierarchy introduced by Kuryatnikova and Vera in Kuryatnikova's thesis.