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On the Q-polynomial property of the full bipartite subgraph of a Hamming graph H(D,n)

The Q-polynomial property is an algebraic property of distance-regular graphs, that was introduced by Delsarte in his seminal work on association schemes and coding theory.

In 2023, Paul Terwilliger generalized the Q-polynomial property to graphs that are not necessarily distance regular. In [J. Combin. Theory Ser. A, 205:105872, 2024], it was shown that the Hasse diagrams of the so-called attenuated space posets, which can be viewed as the q-analogs of Hamming posets, are Q-polynomial. However, the Hasse diagrams of Hamming posets were not studied in the context of the Q-polynomial property. In this talk, I will show that these are also Q-polynomial.