Number of distinct eigenvalues of joins of unions of complete graphs

Rupert H. Levene, University College Dublin; Polona Oblak*, University of Ljubljana; Helena Šmigoc, University College Dublin;

With respect to a simple graph G, let $S(G)$ denote all symmetric matrices whose off-diagonal zero-nonzero pattern is determined by edges of G, and let $q(G)$ denote the minimal number of distinct eigenvalues among all symmetric matrices in $S(G)$.
In this talk we consider joins $G \vee H$, where G and H are the unions of complete graphs. We show that $q(G \vee H)$ is either two or three and we characterise when each case occurs.

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