Combinatorics of biplanes and Hussain graphs

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Figure 1: A family of Hussain graphs $\mathcal{H}$, representing the biplane of order 2. The set of points is $\mathcal{P} = \{4, 5, 6, 7\} \cup \{1, 2, 3\}$. The set of vertices of a graph is a line and a point $i \in \mathcal{P}$ is on a line $[pq]$ if a $(p, q)$ is an edge of $G_i$. Note that a biplane can also be represented as a labeled complete graph.

References


