

Figure 1: Example of the ϵ -excellence property not being monotonic. *On the left*, a bipartite graph with two independent sets A and B . A simple exhaustive check shows that A is $\frac{1}{5}$ -excellent. On the other hand, raising the ϵ -value up to $\frac{2}{5}$ introduces a new $\frac{2}{5}$ -good set B witnessing that A is not excellent, as half of the vertices of A have one truth value, and half the other. *On the right* is the corresponding bi-adjacency matrix.

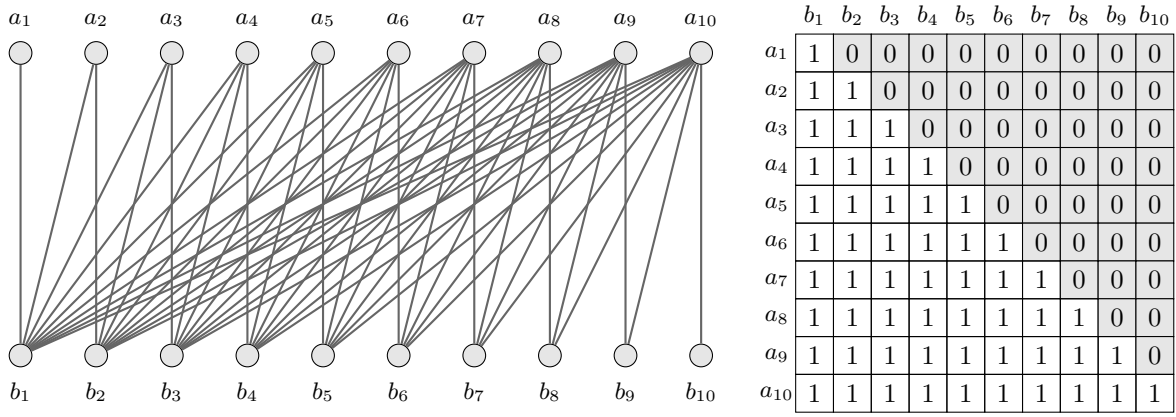


Figure 2: *On the left*, a half-graph with 2×10 vertices. *On the right*, the corresponding bi-adjacency matrix.

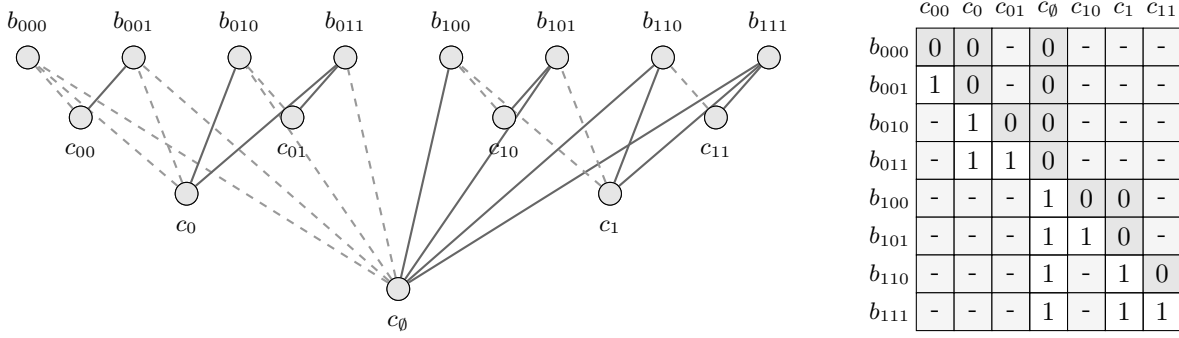


Figure 3: *On the left*, example of a 3-tree. Solid lines show adjacent vertices, and dashed lines show non-adjacent vertices. Pairs of vertices without a line may or may not be connected. In particular, notice that connections between disjoint sub-trees are not defined, and may be edges or non-edges in any combination (e.g. the pair (c_1, c_{01})). *On the right*, the corresponding bi-adjacency matrix.

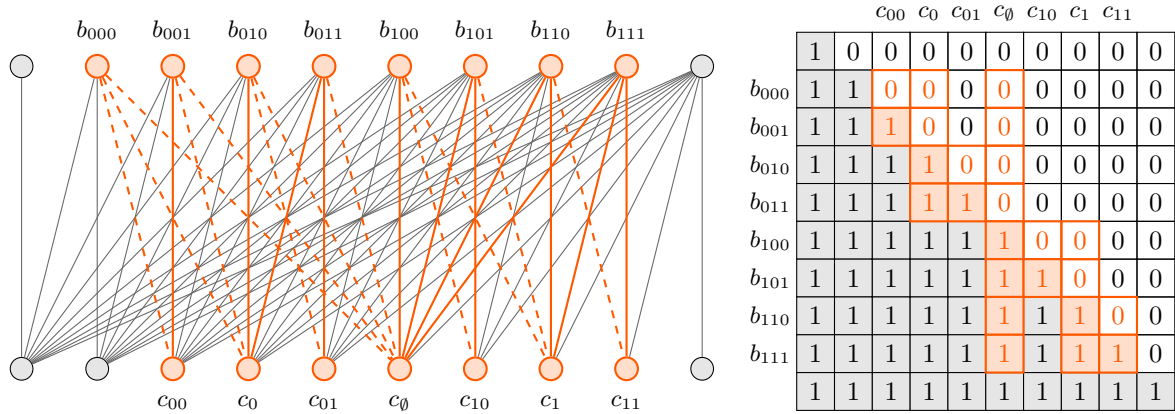


Figure 4: *On the left*, example of a 3-tree in a half-graph with 2×10 vertices. Orange lines and nodes highlight the 3-tree structure, with dashed orange lines remarking the relevant non-edges. *On the right* is the corresponding bi-adjacency matrix. Again, orange cells highlight edges relative to the 3-tree structure.