

# An algorithm for constructing all non-isomorphic bipartite graphs

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## Abstract

We give an algorithm to list all biadjacency matrices of bipartite graphs arranged in a lexicographic way and avoiding isomorphic graphs. We first introduce some definitions in order to choose a unique element in each isomorphic class that we call a lexicographic leader. Then, in order to avoid to check if a matrix is a lexicographic leader among the list of all possible biadjacency matrices, we restrict ourselves to a much shorter list of matrices that we call normalized and that our algorithm will construct in an effective way.

## References

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