



1st PPB-challenge

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Problem

- *What is the minimum number of dimensions needed to place an arbitrary network consisting of N nodes and L links having Euclidean length 1?*
The network is undirected and unweighted, multiple links are not allowed, nodes cannot share locations.
- Example: A tetrahedron, consisting of 4 nodes and 6 links, needs 3 dimensions. For the same structure with one link less 2 dimensions are sufficient.
- The solution to the problem needs to be exact but can either be analytical or numerical, such as an algorithm.
- Price: Depending on the quality of the solution the price is a related book, such as "Complex Networks: Structure, Robustness and Function" by R. Cohen and S. Havlin (Cambridge University Press, 2010).
- Solutions for special cases will be considered individually.
- Solutions should be provided best before 31.12.2015.
- The conditions of the challenge can be modified at any time and will be announced.