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Amanda E Redlich* (amanda_redlich@um1.edu). *Missed connections: Finding similar vertices using random walks.*

Community detection, or clustering "similar" vertices in naturally-occurring networks, is a highly active area of research. For many applications, neighboring vertices are assumed to have something in common; more closely-connected vertices are more similar. However, many natural networks do not have this trait. For example, edges in some biological networks simply indicate interaction. Measuring similarity in this type of graph requires a different method than clustering algorithms. In this talk I discuss several similarity metrics appropriate for this type of graph that use random walks. (Received August 21, 2018)