



SEMINARIUM MATEMATYKA DYSKRETNA

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Short Cycles for Local Density and Community Detection

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Community detection involves finding dense subsets in a graph, and is a fundamental problem in unsupervised network science. Previous works have used triangle or clique motifs as evidence that the vertices belong in a community together, but usually there are not enough of these motifs to create a strong signal. In this talk, we propose cycles instead of cliques as the generalization of triangles, and discuss their connection to local density, a method for finding short cycles, and their application to community detection.