# Modularity Graph Clustering on the GPU

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Agglomerative clustering is an effective greedy way to quickly generate graph clusterings of high modularity in a small amount of time. In an effort to use the power offered by multi-core CPU and GPU hardware to solve the clustering problem, we introduce a fine-grained shared-memory parallel graph clustering heuristic. This heuristic is able to generate clusterings in very little time: a modularity 0.996 clustering is obtained from a street network graph with 14 million vertices and 17 million edges in 4.6 seconds on the GPU.