

Computational Network Analysis - Exercise 5

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February 25, 2014

1

Write a function that determines the highest modularity in a network based on calculating the edge betweenness. Use the co-authorship network provided in homework assignment 3.

1.1 Calculation of the edge betweenness

```
edgeBetweennessCommunity = edge.betweenness.community(g)
```

1.2 Determination of the maximal modularity

```
modularity(edgeBetweennessCommunity)
## [1] 0.1995
```

1.3 Visualization

Additional: Visualize the result in R (as network or as diagram). .

```
plot(edgeBetweennessCommunity,
     g,
     vertex.size=10,
     vertex.label=NA,
     edge.arrow.width=0.2,
     edge.width = 0.2)
```

