library(CliquePercolation)

library(qgraph)

### estimate network

n1 <- estimateNetwork(YF, default="EBICglasso")

W <- qgraph(n1$graph)

thresholds <- cpThreshold(W, method = "weighted", k.range = 3,

I.range = c(seq(0.20, 0.01, by = -0.01)), threshold = c("largest.components.ratio","chi")); thresholds

threshold2 <- cpThreshold(W, method = "weighted", k.range = c(3,4),

I.range = seq(0.3, 0.09, -0.01),

threshold = "entropy")

thresholds.permute <- cpPermuteEntropy(W, cpThreshold.object = threshold2)

thresholds.permute

results <- cpAlgorithm(W, k = 3, method = "weighted", I = 0.3)

summary(results)

results1 <- cpColoredGraph(W, list.of.communities = results$list.of.communities.labels,

layout = "spring", edge.labels = TRUE)