ICON8002 SNA

ICON 2017 Cohort

2018-11-04

Social Network Analysis

This is a report generated from social network analysis of the actors within the shrimping industry on the Georgia Coast. The resulting output of the analysis demonstrates the relationships between shrimpers, dockers, and other agencies/organizations.

Network attributes

- Diameter

  The network has a diameter of 12. This measure is the length of the longest geodesic (the largest distance between any two vertices in a connected graph).

- Reciprocity

  The network has a reciprocity of 0.0518868. The measure of reciprocity defines the proportion of mutual connections, in a directed graph.

- Number of edges

  The network has 848 total edges.

- Number of egos

  The network has 229 total egos

- Edge density

  The network has a density of 0.0162415. This measure is the ratio of the number of edges and the number of possible edges.

- Transitivity

  The network has a transitivity of 0.1008833. This measure is the probability that the adjacent vertices of a vertex are connected. This is sometimes also called the clustering coefficient.

Vertex attributes

- Closeness

  The vertex with the greatest closeness is $Geissler, Franki$ (closeness of 54). This measures how many steps is required to access every other vertex from a given vertex.

  The vertex with the least closeness is $Solomon, Mila$ (closeness of 7). This measures how many steps is required to access every other vertex from a given vertex.

- Degree

  The vertex with the greatest degree is $Radebaugh, Angel$ (degree of 18). This measure is the number of its adjacent edges.

  The vertex with the fewest degree is $Cheung, Kiana$ (degree of 1). This measure is the number of its adjacent edges.

Network plots

Keyplayer

Table 1: Network keyplayers based on individual centrality statistics

Statistic	A	B	C
Closeness	Geissler, Franki	Jones, Brandon	Gordon, Mohamed
Betweenness	Radebaugh, Angel	Nixon, Tessa	Fernandez, Joel

Statistic	A	B	C
Degree	Leyva, Jazmin	Radebaugh, Angel	Nixon, Tessa
Eigenvector	Adams, Dior	Shackelford, Matthew	Radebaugh, Angel

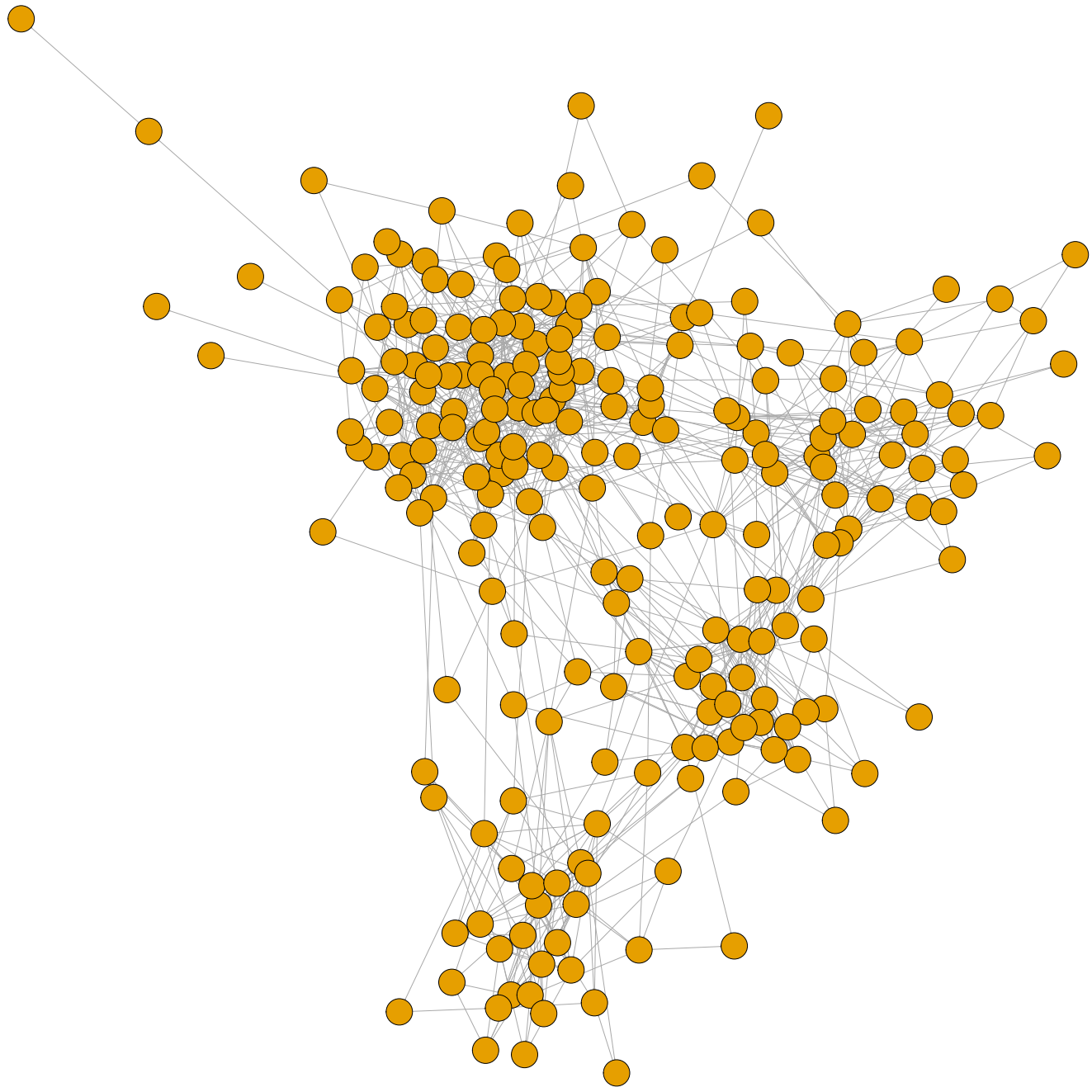

Figure 1: Original social network plot with no alterations (Nicely layout)

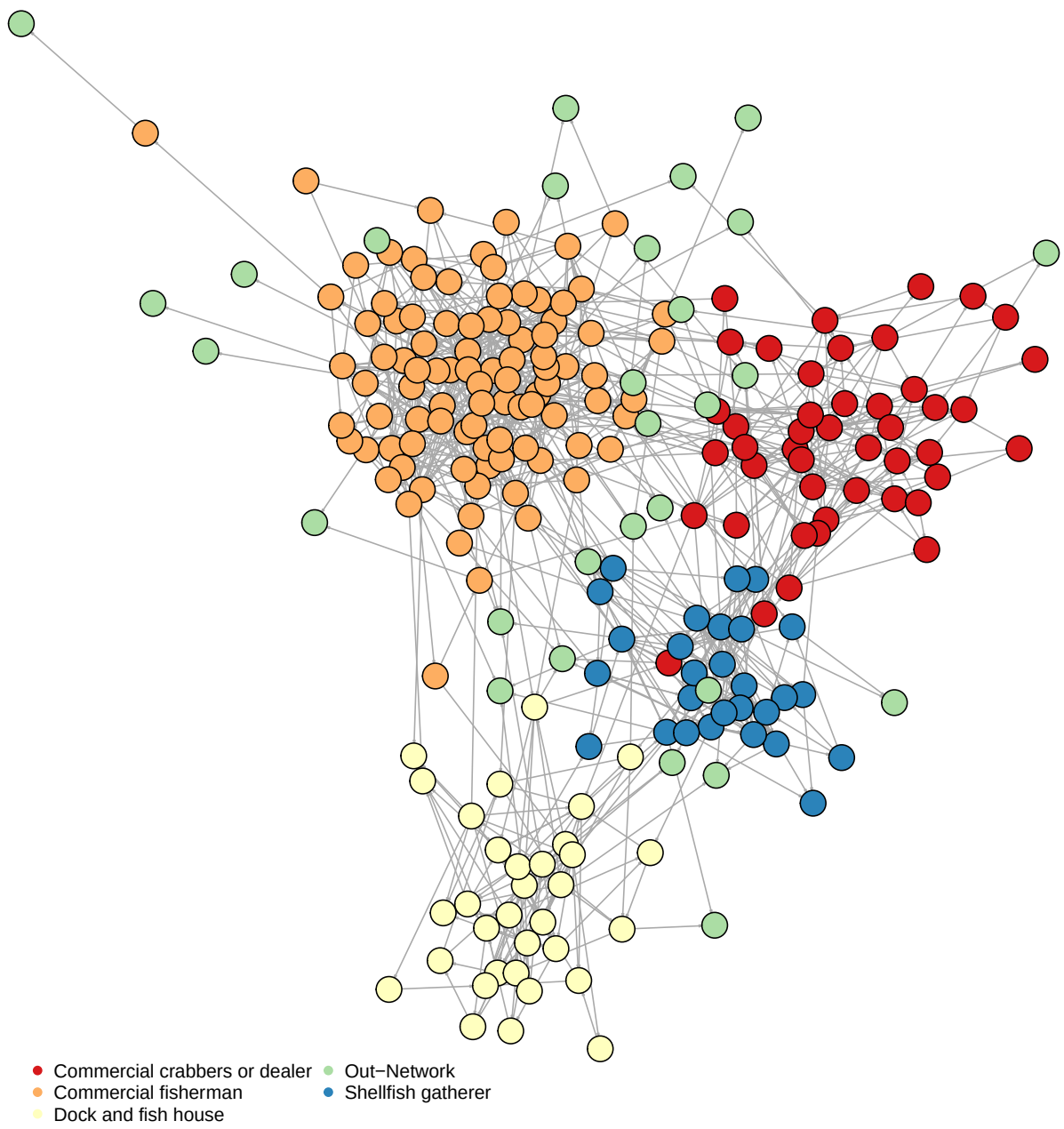

Figure 2: Social network plot with vertex colored based on profession (Nicely layout)

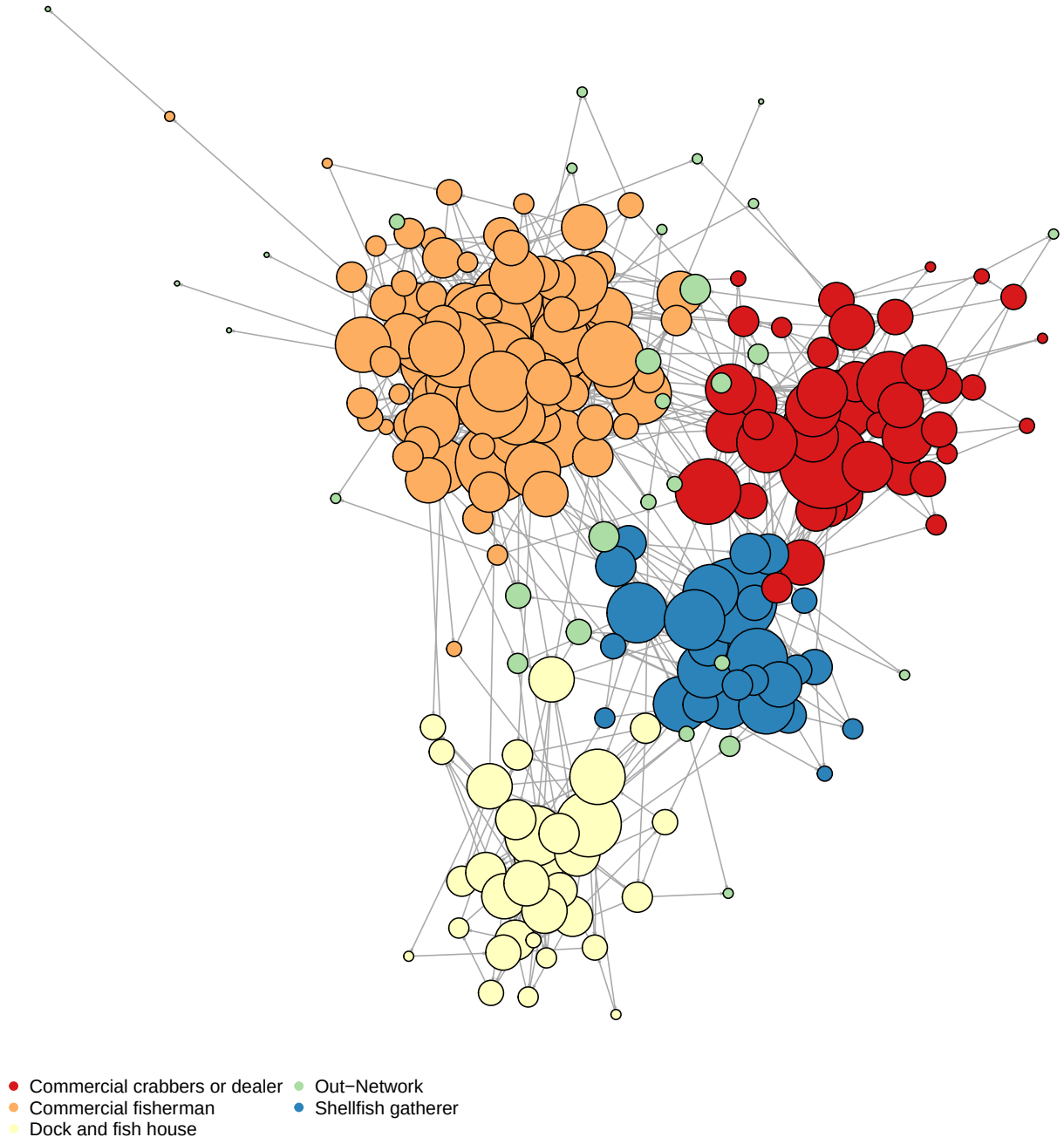

Figure 3: Social network plot with vertex colored based on profession and vertices weighed by total degree

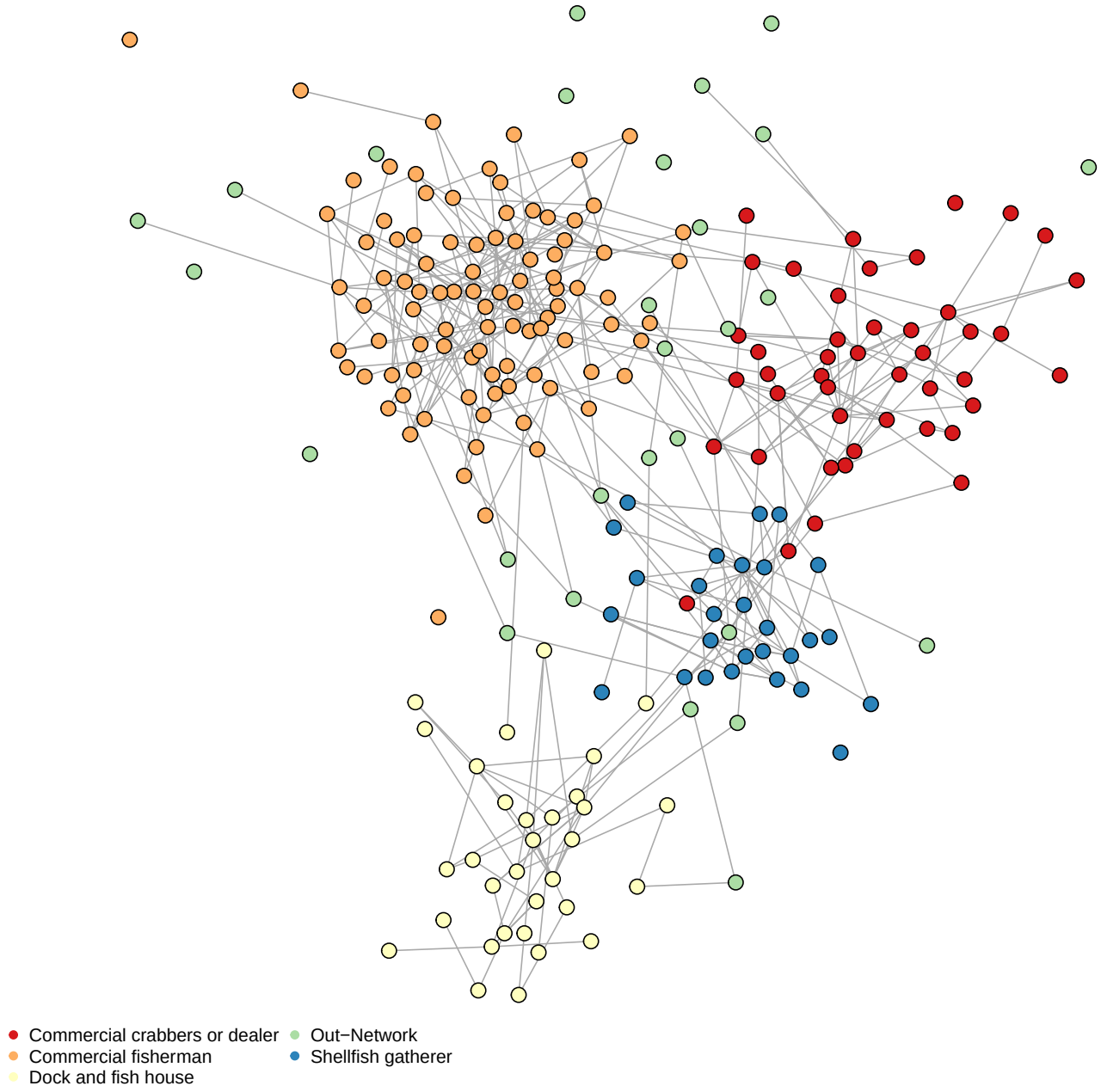

Figure 4: Social network plot demonstrating how long vertices have worked with each other

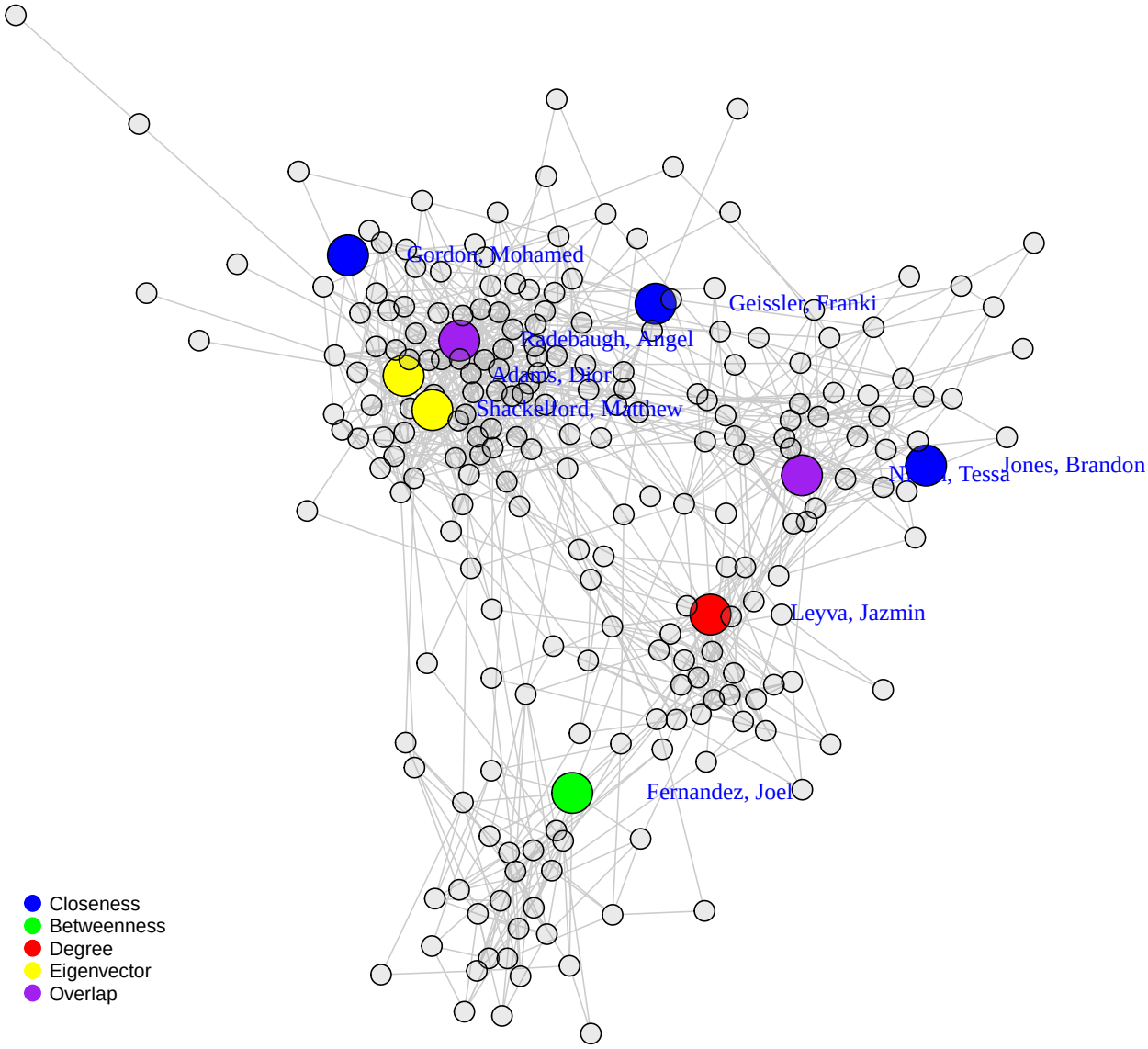

Figure 5: Social network plot with keyplayers highlighted based on network statistics