

# DAPS&CO

## Social Network Analysis

**Instructor:** Robert Fahey <[robfahey@aoni.waseda.jp](mailto:robfahey@aoni.waseda.jp)>

### **Assignment 5**      **5 Mar 2021 (Fri)**

**This is a larger assignment than your usual assignments for this class, and is worth 15% of the module grade. The assignment submission is due by Monday, March 8th.**

#### **Assignment Details:**

In the file "trumpworld.csv" you will find an edgelist containing a large set of relationships (business, political and personal) between people in the orbit of former US president Donald Trump.

Using this data...

- 1) Create a network and find an effective community detection algorithm to analyse it. You may need to try multiple algorithms and settings to find one that works well.
- 2) Attempt to discover what each community in your data represents - what group of people or what kind of relationships it contains.  
*Hint: You can explore each group by finding out which individuals appear prominently (using various measures of centrality), and looking at the information about those individuals contained in the "Relationship" attribute of each edge.*
- 3) Finally, using the techniques we have looked at thus far, try to make a good quality visualisation of Trumpworld which shows all of the communities and how they are interconnected.

#### **Submission:**

**Email your graph, a brief description of the communities you found, and the R script you used for analysis to me ([robfahey@aoni.waseda.jp](mailto:robfahey@aoni.waseda.jp)) by Monday, March 8th.**

#### **Late Submission:**

*Late submissions without a reason (illness etc.) will be accepted up until the day of the module's final class (Friday, March 12th). Submissions after that date will be accepted, subject to a 5% per day grade penalty, until Friday, March 19th.*