

SOCIO-CENTRIC AND EGO-CENTRIC NETWORK ANALYSIS WITH R

- > Two-day workshop
- > With Raffaele Vacca from the University of Florida
- > Tuesday 27th and Wednesday 28th June 2017

This 2-day workshop offers an introduction to the R programming language and its facilities for social network analysis. Participants will **learn the basics of R objects and functions**; how to manage data with R; how to import, manipulate, and **visualize socio-centric and ego-centric network data**; and how to conduct descriptive network analysis with R, including analysis of centrality, cohesion, and subgroups. The workshop will employ real-world network data, and will be mostly based on the *igraph* and *egor* R packages.

Special emphasis will be placed on **ego-network analysis**. The central idea behind ego-network research is that the people (alters) that an individual (ego) knows, and the way that these people interact with each other, affect outcomes in that individual's life such as mental wellbeing, smoking behavior, or incorporation into a foreign society. A typical ego-network study involves selecting a sample of focal individuals (the egos), and collecting a network of personal contacts (the alters) from each. Ego is asked about characteristics of each alter, characteristics of each ego-alter relation, and characteristics of alter-alter relations. This information is then aggregated into ego-level variables that summarize ego-network characteristics, which can subsequently be associated to other ego attributes and outcomes. The workshop will illustrate how R packages and functions for the so-called split-apply-combine strategy in data analysis can be used to greatly facilitate common tasks in ego-network analysis.

This workshop will be most beneficial to Phd students and researchers with no (or very limited) knowledge of R, and some basic familiarity with social network analysis concepts.

LOUVAIN-LA-NEUVE | BRUXELLES WOLUWE | MONS | TOURNAI | BRUXELLES SAINT-GILLES | CHARLEROI

Program

DAY 1

- > Introduction to the R programming language.
- > R objects: vectors, matrices, data frames, lists.
- > Arithmetic and logical operations.
- > Indexing objects.
- > R functions.
- > Basic data management: subsetting data frames, reordering cases and variables, transforming and recoding variables, merging and appending data frames.

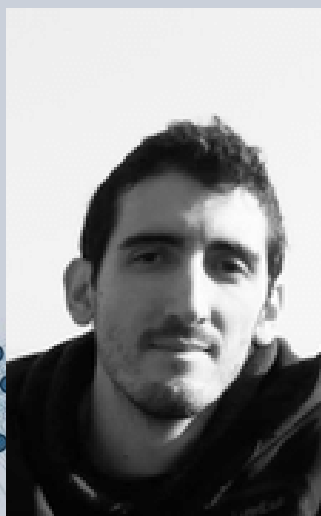
DAY 2

- > Importing and visualizing network data with *igraph*.
- > Vertex and edge attributes.
- > Indexing vertices and edges.
- > Centrality, cohesion, and subgroups.
- > The split-apply-combine strategy for ego-network analysis.
- > The *apply* family of functions.
- > The *plyr* package for easy split-apply-combining.
- > The *egor* package for ego-network data management.
- > Extracting whole networks from ego-networks.

Practical details

- > Tuesday 27th and Wednesday 28th June 2017 from 9 am to 3:30 pm
- > At UCL Campus Brussels, Centre Faculté, Avenue Emmanuel Mounier, 51, 1200, Woluwé-Saint-Lambert, level -1, Room « Avicenne ».
- > Registration required at valerie.vanbutsele@uclouvain.be
- > Registration fee of 10 euros (coffee and lunch), to be paid at IBAN BE60 0016 3988 9070 to UCL-IRSS/COLLOQUES with the mention "Workshop Vacca + your name"

With the support of



Dr. Vacca is a Research Assistant Professor at the University of Florida Department of Sociology and Criminology & Law. He is also affiliated with the Clinical and Translational Science Institute (CTSI) and BEBR. He is a sociologist and social network analyst, and his main research interests are migration and ethnicity, health disparities, and scientific and knowledge networks.

At BEBR Dr. Vacca works on personal network methods as well as networks of professional collaboration among scientists, their evolution in time and impact on scientific activity, and strategies of network intervention to foster scientific productivity.

Additional information about Dr. Vacca's work can be found at raffaelevacca.com.