

INTERNSHIP DESCRIPTION

Research Assistant in the Department of Economics and Finance on the research project:

"Copula-Based Random Effects Models for General Networks (joint with Santiago Pereda-Fernández)"

1. Institutional details

- Tutor name and email: Professor Tiziano Arduini, tiziano.arduini@gmail.com
- Economic fields: Econometrics and Economics of Networks
- Internship start date (please indicate if flexible or not): March/April flexible
- Full-time/Part-time: Full-time

2. Skills and Experience required

- Languages required: Italian/English
- Degree requirement: Enrollment in MSc Economics
- Skills required: Knowledge of econometrics software Matlab/R; experience in micro-data management, good knowledge of Panel Data and Binary response models.

3. Job description: "Copula-Based Random Effects Models for General Networks (joint with Santiago Pereda-Fernández)"

- The objective of this research is to extend the standard random effects model which assumes independence among individuals. We propose a random effects estimator in which there is dependence among the unobserved heterogeneity of individuals connected in a general network. The dependence is modeled with a parametric copula and allows to consistently estimate the probability of joint and conditional events with a statistically coherent model. The estimator is computed by maximizing a pairwise composite likelihood function, which requires bidimensional numerical integration, which works for a well-defined class of copulas.
- We expect to involve the intern in different stages of research, including brainstorming, literature reviews, data processing, data analysis, and data visualization. In particular, the Intern will work on the empirical illustration of our approach using network data.
- The internship offers an opportunity to gain first-hand experience in carrying out and developing innovative empirical research. The intern will develop proficiency in working with Matlab/R.



Please note: The student must complete 150 internship hours at least 45 days prior to his/her graduation. Upon termination of the internship, the Tutor will be required to send immediate notice to Desk Imprese Economia Tor Vergata deskimprese@economia.uniroma2.it with msc_economics@economia.uniroma2.it in copy so the student may obtain credit recognition for the internship activity.