Ph.D. Program in Consumers and Markets

Curriculum: Finance, markets and regulation

INTRODUCTION TO GRAPH THEORY AND APPLICATIONS

Given by Andrea Scozzari | Full Professor of Mathematical Methods of Economics, Finance and Actuarial Sciences at University Niccolò Cusano, Department of Economics, Psychological and Communication Science.

When Monday 20th May, h: 14:30 – 17:30; Wednesday 22nd May, h: 14:30 – 17:30; Friday 24th May, h: 14:30 – 17:30; Monday 27th May, h: 14:30 – 17:30

Where Computer lab (small room), ground floor | Department of Business Studies – Roma Tre University | Via Silvio D'Amico, 77, 00145 - Rome, Italy | Google Maps

Main Topics:

LECTURE I (3 hours)

- Graphs, Simple Graphs and their representation
- Paths, Cycles and Connectivity
- Subgraphs, Trees
- Applications

LECTURE II (3 hours)

- Centrality Measures: Closeness centrality, Betweenness centrality, Eigenvector centrality.
- Concentration measures: Freeman, Entropy
- Applications

LECTURE III (3 hours)

- Flows
- Applications

LECTURE IV (3 hours)

- Matching and Coverings
- The Personnel Assignment problems
- Project Management: Critical Path method

Material:
Supporting material will be provided during the course.