Finance and Insurance



As part of the lectures of the Course in **Quantitative Financial Modelling**, on **Monday**, **May 19**, **2025**, **10 a.m.** (**Classroom Acquarietto**)

Professor Juan E. Trinidad Segovia Universidad de Almería (Spain)

will give the seminar

Econophysics: a look at financial markets from the perspective of statistical mechanics.

Abstract

Since the 1970s, the financial world has undergone profound transformations. With the advent of electronic trading and digital storage, unprecedented volumes of data have become accessible to researchers, opening new horizons for quantitative exploration.

Financial markets, far from being isolated or linear, exhibit hallmark features of complex systems—they are open, adaptive environments where myriad components interact nonlinearly and evolve under persistent feedback. Importantly, while the fundamental rules remain stable, the system's state is in constant flux, offering unique opportunities for real-time observation and modeling.

This seminar explores how physicists have contributed significantly to modern financial theory, bringing fresh perspectives and methodologies. Topics covered include:

- Theory of Distributions
- Memory Processes
- Random Matrix Theory
- Arbitrage Pricing Theory (APT)
- And other key frameworks that bridge physics and market finance.

Join us for an engaging discussion at the intersection of statistical physics and financial modeling.

Target Audience:

Graduate students, researchers, and professionals in economics, finance, physics, applied mathematics, and related disciplines.

Attendance is free, but registration at <u>sergio.bianchi@uniroma1.it</u> is encouraged.