HELLENIC REPUBLIC
National and Kapodistrian University of Athens
DEPARTMENT OF ECONOMICS

Research Seminar Series in Economic Sciences, 2022-2023

Speaker: Xinwei Cao, *Professor with School of Business, Jiangnan University, China*
Webpage: https://www.researchgate.net/scientific-contributions/Xinwei-Cao-2167424021

Title: Online Portfolio Analysis For High Frequency Trading Based On Recurrent Neural Networks

Date & Time: Wednesday, October 5th, 2022, 15:00 - 16:30
Webex Link: https://uoa.webex.com/uoa/j.php?MTID=m6f2d44769f2375bf2090852c432d9ac6
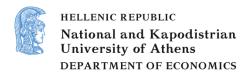**Url:** http://www.econ.uoa.gr/ereynhtika-seminaria-research-seminars.html

Abstract: The Markowitz model, a Nobel Prize winning model for portfolio analysis, paves the theoretical foundation in finance for modern investment. However, it remains a challenging problem in the high frequency trading (HFT) era to find a more time efficient solution for portfolio analysis, especially when considering circumstances with the dynamic fluctuation of stock prices and the desire to pursue contradictory objectives for less risk but more return. In this talk, a recurrent neural network model is established to address this challenging problem in runtime. Rigorous theoretical analysis on the convergence and the optimality of portfolio optimization are presented. Numerical experiments are conducted based on real data from Dow Jones Industrial Average (DJIA) components and the results reveal that the proposed solution is superior to DJIA index in terms of higher investment returns and lower risks.

Organizers: Dimitris Kenourgios, *Professor*
George Dotsis, *Assoc. Professor*
Frago Kourandi, *Assist. Professor*

Thank you.

HELLENIC REPUBLIC
National and Kapodistrian University of Athens
DEPARTMENT OF ECONOMICS

www.econ.uoa.gr