Economics and Complexity

CAUSAL ARTIFICIAL INTELLIGENCE: CAUSAL MODELS OF TIME SERIES AND STOCHASTIC PROCESSES

COURSES ON CAUSAL ARTIFICIAL INTELLIGENCE

SCHEDULES OF THE COURSE

Duration: three hours, from 17,00 to 20,00 pm
The course is on-line
Price: 200 euros
A 20% discount will be applied to members of CFA societies.

Friday, June 13, 2025
Friday, June 20, 2025
Monday, June 23, 2025

To order a place go to the section Order Forms of the site www.sergiofocardi.net and select the course of your choice.

A PRACTICAL COURSE

This intensive on-line course offers an in-depth discussion of methodologies to represent causality in a dynamic environment and how to estimate dynamic causal models.

The course is focused on financial and economic applications. We study causal dynamic factor models, causal VARs, causal regime shifting models as well as continuous time models.

After discussing the general principle of dynamic caiusal models the course will discuss practical examples. We will use with TETRAD, a software developed at Carnegie Mellon University, as well as specialized applications for dynamic models,

The course is presented by Sergio Focardi, PhD. Focardi has a long experience of financial and economic modelling. He currently teaches Risk Management at the University of Genoa - DIME

Focardi is the author and/or coauthor of many books and articles. The book **Causal Modeling for Finance and Business: Foundations, Frameworks, and Applications,** coauthored with Prof . Frank Fabozzi, is forthcoming with MIT Press.

COURSE ON CAUSAL MODELS OF TIME SERIES AND STOCHASTIC PROCESSES

Causal Artifcial Intelligence is rapidly becoming a critical tool for financial and economic applications. Causal Artificial Intelligence is based on causal modelling.

Current causal models such as Structural Causal Models SCM are static models. Variables respect a causal order but models do not have any time dynamics.

However, modern economies are evolving complex systems. Most variables of interest, such as stock prices or economic GDP can be represented as time series or stochastic processes.

Dynamic frameworks for causal time series and stochastic processes have been proposed. This course discusses these dynamic causal framewors. The course describes how to represent causality in a dynamic environment and discusses the relationship between causal frameworks and classical dynamic econometrics