



WEBINAR

“Risky vs Safe production mode: when to invest and when to switch?”

Prof. Carlos Oliveira

*Department of Mathematics, ISEG
Universidade de Lisboa*

Chair Prof. Sergio Vergalli

*March 16th, 2022 h. 11:30 CET (UTC +1)
Sala Biblioteca, S. Faustino building
and*

Live presentation on google meet

[Registration form here >>](#)

ABSTRACT. In this paper we study the investment strategy of a firm that upon investment may produce in two alternative modes. These two modes differ in terms of the risk associated with the running payoff: one being more profitable when the market conditions are favorable but leading to larger losses in times of crisis (risky mode), whereas the other mode leads to smaller profits and losses (safe mode). Once the investment takes place, the firm may still switch from one mode to another. Therefore the firm may adjust itself, in terms of production mode, to the conditions of the market. Moreover, we assume that the firm may decide to exit the market, and this decision is possible in both production modes. We find that the investment strategy may be dichotomous. In this case we have an inaction region, for a range of prices in a certain bounded interval, where the firm does not invest and waits to have more information about the price evolution. Another interesting fact that we find is that under some conditions, the firm can operate with a negative instantaneous profit. This region - the hysteresis region - can only be reached under special conditions.