Felix Cheysson (Paris Sorbonne University)
TBA

Claude Lefevre (Bruxells)
Abel-Gontcharoff pseudopolynomials and applications to some first crossing problems.
Joint work with Philippe Picard (Lyon)

Denys Pommeret (AMU, Marseille)
TBA

Laurence Reboul (AMU, Marseille)
TBA

3 Jean-Michel Zakoian (ENSAE)
Testing for breaks in the conditional mean based on the estimating function approach.
Joint work with Christian Francq (ENSAE), Lorenzo Trapani (Nottingham)

Abstract: The estimating function approach [Godambe (1960) and Durbin (1960)] is particularly attractive for time series models where the dynamics is not fully specified, but the conditional mean is assumed to be a given parametric function of past observations. In many financial applications, however, the conditional mean may undergo a structural change. We propose a class of cumulative sum, CUSUM, statistics to detect breaks in the conditional mean under weak assumptions. This procedure depends on the choice of a sequence of weights, leading to a potentially infinite number of consistent tests, and we show that the best test is related to Godambe's optimal estimator, also discussing data-driven procedures for this optimal choice of weights. We study inference in the presence of a changepoint, and we also study the case where the conditional mean is misspecified. Our results are illustrated using Monte Carlo experiments and real financial data.

3- Christian Francq (ENSAE),
Asymptotics for penalized QMLEs of time series regressions
Joint work with Sébastien Laurent (Marseille), Julie Schnaitmann (Tübingen)