

CIFREM SEMINARS

Out of Equilibrium Dynamics: An algorithmic model based on von Neumann-Sraffa-Leontief production schemes

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Via Inama, 5

Modern macroeconomics is characterized by the postulate that the economic system is in a perpetual state of general economic equilibrium. The aggregated dynamics is explained by the existence of (real or monetary) shocks that require a revision of the agents' (inter)temporal decisions. These low dimensional Stochastic Dynamic General Equilibrium Models are also the 'benchmark' models for the cases in which out of equilibrium behaviours are considered. In this paper an attempt is made to design a high dimensional dynamic system where the postulate of perpetual general economic equilibrium is relaxed. An algorithmic model in which interactions between agents and regions is constructed using the theoretical toolbox of coupled dynamical systems. To be more specific the algorithmic model is based on the tradition set by von Neumann's growth model, by the Keynes-Stone's conceptual work on national accounting and by Vellupillai's computable economics. The final aim is to use the model as a type of virtual laboratory in which to implement conceptual experiments aimed to study: the convergence towards equilibrium; the emergence of monetary-financial magnitudes; price dynamics; the effects of technological innovations. During the seminar it will be shown how the model can be calibrated using standard information present in input-output tables (OCSE, ESA95, Eurostat, ISTAT).

Referente

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