

SÉMINAIRE

SILENT SPREADERS: BEHAVIOR AND EQUILIBRIUM UNDER ASYMPTOMATIC INFECTION

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Lemma - Salle Maurice Desplas (4 rue Blaise Desgoffe, 75006 Paris)

Séminaire du LEMMA

<u>Flavio TOXVAERD</u> (Université de Cambridge) présentera un article intitulé : **Silent Spreaders: Behavior and Equilibrium Under Asymptomatic Infection**

Abstract:

This paper analyzes equilibrium social distancing choices in a model with potentially asymptomatic infection. Since infection only prompts symptoms probabilistically, individuals cannot perfectly infer their health state from the absence of symptoms. Instead, they must form beliefs about their health state based on knowledge of the population frequencies. I show that relative to a benchmark with perfect health state information, asymptomatic infection leads to lower mitigation through four distinct channels, some mechanistic and some that work through beliefs and thus decisions. The model is then applied to an analysis of individual and mass testing. The value of the former derives from the value of information and it is shown that the latter may influence the course of the epidemic through its influence on aggregate equilibrium behavior. Tests for immunity generally have a higher value of information and aggregate effects than tests for infection.

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