

Filtering and Equilibrium in Repeated Games with Private Monitoring

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Abstract. We analyze a simple class of two-player repeated games with private monitoring where the stage-game payoffs are quadratic functions of the action profile (as in a Cournot duopoly with linear demand and constant marginal cost) and the players' private signals about their opponent's actions are distorted by (possibly correlated) Brownian motions. We employ methods from Linear-Quadratic-Gaussian control with partial observation to characterize sequential equilibria in linear strategies, and perform comparative statics with patience and monitoring parameters (precision and correlation).