



Economics Seminars

Friday 19 September 2025 at 12:00

Aula Magna Edificio Baffi

Facoltà di Scienze Economiche Giuridiche e Politiche - Viale Sant'Ignazio 74

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Regulating Algorithmic Collusion

Abstract. What happens when sellers outsource their pricing decisions to algorithms? Recent work has shown that reinforcement learning algorithms may learn to collude independently. This has alarmed antitrust authorities, as standard enforcement approaches based on communication between firms are no longer relevant. For now, the relatively slow rate of learning has provided some protection against these concerns. We present a new algorithm based on a neural network that increases learning speed by several orders of magnitude and leads to more collusive equilibria. We propose a new approach to regulate collusion based on algorithmic "intent" as revealed through an audit of the underlying learning process. We demonstrate the advantages of this approach relative to a regulation based on the observed behavior of an algorithm.