## PARADOXICAL STRATEGIC BEHAVIOR IN NEGOTIATION

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## **Abstract**

It is paradoxical that successful agreements are usually achieved through severe negotiations, not through easy compromises. In this presentation, we will find the rationality of this phenomenon by introducing a dynamic model of negotiation based on Game Theory.

The model analysed in this presentation is based on a Principal-Agent model developed by Iida (1994) in the context of Two-Level Games. Analytical and numerical extension of the model enables us to trace the strategic behaviours in negotiations.

## Main results of the simulations are following:

- 1. When each negotiator is uncertain about the preference of its counterpart, he/she has an incentive to misrepresent his/her preference as intransigent. The degree of misrepresentation increases in accordance with the increase of the probability to achieve an agreement.
- 2. Strategic behaviours in negotiations make the agreement inefficient (Pareto inferior), which is an example of Prisoners' Dilemma. But the Pareto inferiority diminishes through re-negotiations together with the presentations of preferences approach to the truth.

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