SEMINAR

How to efficiently (and easily) compute solution of Single-Leader-Multi-Follower games: two different approaches

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Single-Leader-Multi-Follower games are mixture of bilevel optimization problems and equilibrium concepts. It corresponds to a situation in which one agent playing a dominant role on a market wants to anticipate the reaction of a (finite) set of agents to his strategy. This competitive situation occurs in many applications, like demand-side management in energy context, optimal design of circular economy, non cooperative markets...

But these problems cumulate both the computation difficulties of bilevel optimization and of non cooperative equilibrium. Our aim in this talk is to show two numerical methods to compute global solutions of these difficult problems: one under the assumption that the follower constraint functions are linear and the other one for polynomial Single-Leader-Multi-Follower games.