Contribution ID: **8** Type: **not specified**

A Mean-Field Game network model for urban planning

Monday, 22 April 2024 17:00 (30 minutes)

We study a mathematical model to describe the evolution of a city, which is determined by the interaction of two large populations of agents, workers and firms. The map of the city is represented by a network with the edges representing at the same time residential areas and communication routes. We obtain a two population Mean-Field Game system coupled with an Optimal Transport problem defined on the network. We prove existence and uniqueness of the solution and several numerical simulations are also provided.

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