

EINLADUNG

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Titel: Nash network formation in the one way flow model

Abstract:

We discuss the one-way flow model of dynamic network formation games. Here the nodes in the network correspond to agents, while the directed arcs indicate the flow of profits to these agents. At discrete moments in time agents can choose from any of the local actions: (1) passing (i.e. not changing anything), (2) adding a link, (3) removing a link, or (4) replacing a link, where each agent can only choose from the links pointing at him. In any given network a payoff for each agent is calculated as the total of profits flowing to his node minus the costs for the links directed at his node.

We prove the existence of Nash networks for the case of owner-homogeneous costs and we discuss a procedure of local improvements that leads to a Nash network in finitely many steps. Finally, we discuss an example to illustrate that Nash networks fail to exist if costs are heterogeneous, even if they are ε close to owner-homogeneity.