

# Stable Fixtures Problem with Payments

Péter Wojuteczky

CUB

## **Abstract**

In the stable fixtures problem with payments, that we can also refer to as the one-sided multiple partners assignment game, each player may be involved in as many two- members coalitions as her quota and two cooperating players can divide the worth of their coalition between themselves. An outcome of this problem is stable if there is no so-called blocking pair that is a pair of players who would be mutually better off by forming a new pair after possibly withdrawing from one of their other cooperations. In this paper we characterise the set of stable solutions by using linear programming techniques. We show how one can find a stable solution efficiently, if there is any. Finally we also give a path to stability result, saying that for a solvable instance a stable solution may always be reached from any unstable solution by successively satisfying blocking pairs.