

A new type of transformation technique for solving sufficient linear complementarity problems

Zsolt Darvay

Joint work with Tibor Illés and Petra Renáta Rigó

Abstract

In this talk we propose a new predictor-corrector interior-point algorithm for solving sufficient linear complementarity problems. The algorithm is based on a new algebraic equivalent transformation technique (AETT) of the system which defines the central path. We also deal with the relationship between this new type of AETT introduced by Darvay and Takács [Optim. Lett., 12(5), 1099-1116, 2018] and the classical AETT proposed by Darvay [Adv. Model. Optim., 5(1), 51-92, 2003]. We prove that the obtained search direction is based on a positive-asymptotic kernel function. We provide numerical results, which shows the efficiency of the proposed method.