

AGCO Seminar

2018-26-12:

Author: Matias Siebert, Georgia Tech.

Where: Republica 701, Sala 33.

When: Wednesday, December 26, 14:30.

Title: A Linear Programming Based Approach to the Steiner Tree Problem with a Fixed Number of Terminals

Abstract: We present a set of integer programs (IPs) for the Steiner tree problem with the property that the best solution obtained by solving all, provides an optimal Steiner tree. Each IP is polynomial in the size of the underlying graph and our main result is that the linear programming (LP) relaxation of each IP is integral so that it can be solved as a linear program. However, the number of IPs grows exponentially with the number of terminals in the Steiner tree. As a consequence, we are able to solve the Steiner tree problem by solving a polynomial number of LPs, when the number of terminals is fixed.