Institut für Diskrete Mathematik

Seminar für Kombinatorik und Optimierung

18.5.2021, 16:00 on time

Webex virtual meeting

Different angles of a defender-attacker-defender game in a graph

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(University of Montreal)

In integer programming games, players' feasible strategies are described by lattice points inside polyhedra. This game representation is natural when players' decisions have integrality restrictions. In this talk, we will start by presenting practical examples of integer programming games. Then, we will focus on an integer programming game played between a defender and an attacker, the Multilevel Critical Node problem. Besides a discussion on the problem complexity, we will describe an exact cutting plane algorithm to determine the game equilibrium and a greedy approach based on reinforcement learning to approximate it.

Meeting link:

https://tugraz.webex.com/tugraz/j.php?MTID=m48d957ba86eacd9738296225267e3312

Meeting number: 121 358 0969 Meeting password: tCs2sCK7qr3

Eranda Dragoti-Çela and Bettina Klinz