Université Polytechnique HAUTS-DE-FRANCE

Game Theory Fundamentals

ECTS
4 crédits

Composante
INSA Hauts-de-France, UPHF

Présentation

Description

Goal : To provide the fundamental concepts and tools related to operational research and game theory which will be applied to different transport domains. Important issues such incentivation and rewarding play a key role in biasing user behaviour aiming at optimizing system operation.

List of subjects to be presented to the students :

Extensive form and normal form games.
Two-person zero-sum games.
Rectangular/matrix games.
The minimax/Von Neumann Theorem.
Two-person non-cooperative, non-zero sum games.
Two-person cooperative, non-zero sum games.
N-person games.
Shapley theory for N-person games.
Aumann-Maschler theory for N-person games.