

Traffic assignment models

Professor

Alessandro Farina

Email

alessandro.farina@unipi.it

Institution

University of Pisa,
Department of Civil and
Industrial Engineering

General Information

The course will deal with the main models of assignment of the demand to transport networks. The course will be held online and will cover the following topics:

- Brief recall/overview on assignment models for uncongested networks and constant cost functions: AoN (All-or-Nothing) assignment (with Dijkstra algorithm) and the Probit model.
- Deterministic assignment to congested networks: the deterministic equilibrium concept; the Frank & Wolfe algorithm. The diagonalization algorithm.
- Stochastic assignment to congested networks: the stochastic equilibrium concept; the MSA algorithm.
- The system optimum and the 2nd principle of Wardrop
- Overview on dynamic assignment

Materials

No material is needed, the course slides will be provided to the students by the professor. However, a suggested book is (in Italian): Paolo Ferrari, "Fondamenti di Pianificazione dei Trasporti", Pitagora Editrice, Bologna.

Schedule

Dates	Description
12/04/2023 – 14:00-18:00	Online course
14/04/2023 – 09:00-13:00	Online course
19/04/2023 – 14:00-18:00	Online course
26/04/2023 – 14:00-18:00	Online course
03/05/2023 – 14:00-18:00	Online course
Total 20 Hours - 10 Credits	

For any information www.indicee.unifi.it - dott-dicea@unifi.it