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201800063

Traffic Forecasting and Analysis

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Cursus	201800063	Collegejaar	2018
Studiepunten (ECTS)	5	Aanvangsblok	1B
Cursustype	Cursus	Aanmeldingsprocedure	Zelf aanmelden via OSIRIS Student
Voertaal	Engels	Inschrijven via OSIRIS	Ja
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Docenten			
Contactpersoon van de cursus	dr. T. Thomas		
Docent	dr. T. Thomas		

Leerdoelen

At the end of this course the students will be able to:

Objective	Evaluated in
To describe, prepare and clean traffic data such that it can be used for all kinds of data analyses.	Assignment
To gain insight in the different types of variation in traffic data time-series that enables the student to describe and predict the future traffic situation.	Exam & assignment
To know how errors in measurement data propagate through mathematical models.	Exam
To be able to evaluate and assess forecasting models.	Exam & assignment

Verplicht materiaal

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Aanbevolen materiaal

Studiemateriaal
Reader no 840: "Statistic tools for data analysis in traffic engineering"

Handouts

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Werkvormen

Hoorcollege

Project begeleid

Aanwezigheidsplicht Ja

Toetsen

Group assignment + Ind. written exam

Inhoud

Background and context:

An important aspect of traffic engineering is the monitoring and forecasting of traffic flows. Policy makers for example want to know how much traffic is on their network, and what will happen in the near future. These forecasts help them to anticipate and hence manage traffic in a proactive way. Travel time forecasting is another important example as travelers and logistic companies depend on accurate time of arrival estimates. The course Traffic Forecasting and Analysis provides an introduction to the analyses and forecasting of the traffic situation using traffic data.

Course content:

This course is about the description and analysis of traffic data, and using these traffic data to make forecasts about the future traffic situation. The theory deals with data concepts such as variation, time-series, and errors. Several techniques to analyze these data concepts such as autocorrelation, cross-correlation and error propagation are discussed. These techniques are used to describe and clean the data, and improve predictions of traffic flows. In the assignment, teams of students participate in a competition for the best prediction scheme. Evaluation and assessment

Voorkennis

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DEELNEMENDE OPLEIDING

Master Civil Engineering and Management

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