Technische Universität Braunschweig

Institut für Automobilwirtschaft und Industrielle Produktion

Announcement of Seminars

Winter Term 2020/21

Seminars Winter Term 2020/21

Seminar topics

- Mobility strategies in the course of the mobility turnaround
- Sustainable and energy-efficient air transport system
- Business simulation: management interactiv
- Discrete Event Simulation in Production and Logistics Computer Seminar with Plant Simulation

Seminars Winter Term 2020/21

Registration

- Registration via Stud.IP
- When? 07/13/20 (07:00 am) to 07/15/20 (12:00 / noon)
- First come first serve
- Mandatory participation in the kick-off meeting of the seminar

Further Information

- Seminars are visible in Stud.IP for „Sommersemester 2020“
- Only register for one seminar! If you register to more than one seminar then we will delete all registrations!

  → Notice: You can delete a registration in Stud.IP yourself
- If you are on a waiting list then we will offer you another seminar

Mobility strategies in the course of the mobility turnaround

(Language of the seminar: German)

Subject

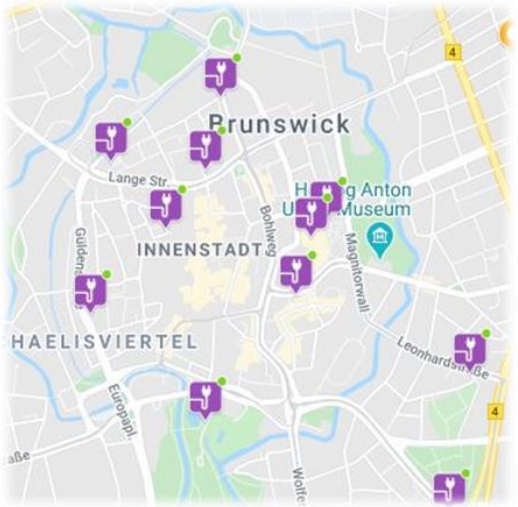
The aim of this seminar is to develop a basic understanding of the essential aspects and planning tasks associated with the mobility transition. The students will explore which types of mobility exist and how these can be assessed with regard to their effectiveness in an (urban) mobility system. In addition, the students shall develop an understanding of which basic conditions have to be established to ensure a successful roll-out of electric vehicles in the future. Given this background, the students should deal in detail with how to systematically support decision-making in the planning of charging infrastructure in order to derive recommendations for action in practice.

Organization

- Independent preparation of a seminar paper in seminar groups of 3 persons
- Kick-off: 20.07.2020, 17:30-18:30, digital via BigBlueButton
- Final presentations: 03.02.2021
- Limitation to 15 participants
- Mentoring: Dr. Kerstin Schmidt, David Kik, Sven Hemminghaus

Key Topics

- Assessment of mobility strategies
- Types and acceptance of different forms of mobility
- Planning of charging infrastructures for electric vehicles
- …



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Sustainable and energy-efficient air transport system

(Language of the seminar: English)

Subject

This seminar aims to examine the future development of the aviation sector critically. While novel propulsion concepts are seen as a key strategy to achieve the objective of sustainable and energy-efficient air transport system, this also requires the development of new aircraft designs, improved materials, optimized flight routes and the expansion of the infrastructure at the airport. This system-immanent complexity of the aviation sector poses a major challenge in achieving the goal of a sustainable air transport system. Within the cluster of excellence "SE2A - Sustainable and Energy-Efficient Aviation" such technologies, interrelationships, and issues are being researched. This seminar takes up current research topics and deals with the challenges of sustainable and energy-efficient air transport system.

Organization

- Independent preparation of a seminar paper in seminar groups of 3 persons
- Limitation to 15 participants
- Kick-off: 21.07.2020, 17:30-18:30, digital via BigBlueButton
- Presentations: 04.02.2021
- Mentoring: Prof. Dr. Thomas S. Spengler, Dr. Imke Joormann, Alexander Barke, Jan-Christian Resch, Chetan Talwar

Key Topics

- Sustainability of novel propulsion technologies and retrofitting options
- Dynamic relationships in the overall air transport system
- Revenue management of airlines
- …

Business simulation: management interactiv

(Language of the seminar: German)

Subject

The aim of this seminar is to apply and expand existing knowledge from the field of business administration within the framework of an interactive and competitive business game. The participants are divided into groups of 3 to 4 persons and take over the management of a company together. With the aim of holding their own against the competition, complex problems and conflicting goals in management practice have to be solved and business management decisions have to be made over the course of several periods. The focus here is on decisions in the area of production and logistics, such as determining locations, production and transport quantities.

Organization

- Indipendent preparation of a seminar paper in a seminar group of 4 persons
- Kick-off: 11.08.2020, 17:30-18:30 Uhr, digital via BigBlueButton
- Presentation and discussion date: probably 01.02.2021
- Limited to 32 participants
- Mentoring: Patrick Oetjegerdes, Patrick Schumacher

Key Topics

- Strategies of (production) management
- Competitive strategies
- Execution of a competitive management game
- Decision making in a managerial context
- …

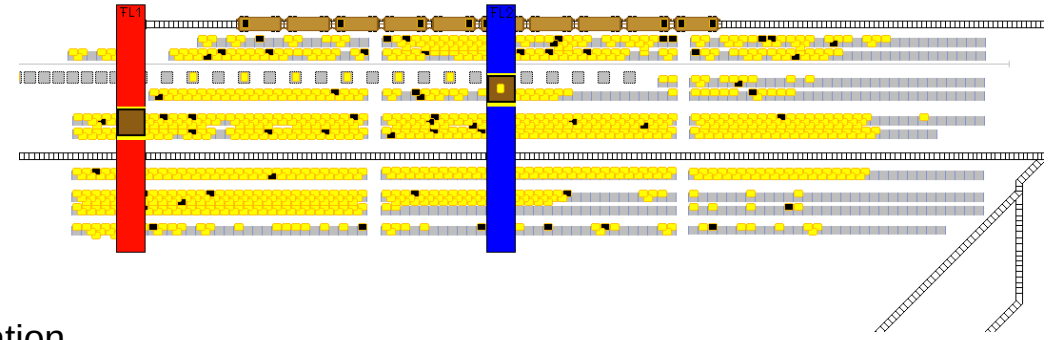
Discrete Event Simulation in Production and Logistics Computer Seminar with Plant Simulation™ (Language of the seminar: German)

Subject

Simulation of production and logistics systems is a cross-sectional topic. It combines specialist knowledge from production management and operations research with knowledge from mathematics/statistics, computer science and software engineering. After successful completion of this seminar, students will know the statistical basics of discrete simulation, they will be able to classify and apply appropriate software, they will know the relations between simulation and optimization as well as a number of application examples. They also know how to structure a simulation project and what to pay attention to in the course of the project.

Organization

- 6 lecture dates (digitally via BigBlueButton on the following dates: 06.11., 13.11., 20.11., 04.12., 18.12., 15.01.), followed by independent processing of a case study with the software Plant Simulation™ and the corresponding script language SimTalk in seminar groups of 3 persons each and subsequent presentation of the results in a seminar paper and colloquium
- No separate kick-off meeting, start and assignment of tasks on 06.11. (attendance at BigBlueButton required)
- For successful participation in the seminar, basic knowledge in programming is recommended, but not necessary
- Limited to 30 participants
- Lecturer: Dr. Sven Spieckermann, executive of the SimPlan AG
- Support: Patrick Oetjegerdes



Key Topics

- Understanding the basics of event-discrete simulation
- Conception, modelling, evaluation and analysis of simulation studies
- Further topics: Random numbers, simulators, simulation-based optimization