

VORträge zum Operations Research

Kolloquium des Instituts für Operations Research

Zeit: Donnerstag, 16. Juni 2016, 17:30 Uhr

Ort: Raum 253, Gebäude 11.40

Es spricht: Maartje van de Vrugt, University of Twente / Jeroen Bosch Ziekenhuis

Zum Thema: **Dual topic talk: literature review on online appointment scheduling and assigning treatment rooms and physicians at the Emergency department.**

Abstract: In the first part of this talk, I will provide an overview of recent online appointment scheduling literature. Online appointment scheduling has received increasing academic attention over the past years. In online appointment scheduling customers receive a quick response to their appointment request. Thus, future demand for the same service period is still unknown when appointments are scheduled. I will elaborate upon the used taxonomy, which consists of the number of appointments each customer requires, the number of resource types at the facility, and the horizon at which the scheduling decisions are made. The paper provides an overview of the scheduling decisions, the objectives, and the operations research methods applied in different application areas.

In the second part of this talk, I will present ongoing research on assigning treatment rooms and physicians to patients at the Emergency department (ED). At EDs one physician typically occupies multiple rooms in parallel; when patients are awaiting diagnostic test results, the physician treats other patients. Both prioritizing patients and assigning patients to physicians significantly affect patients' length of stay at the ED. Each time a physician completes (a phase of) a patient's treatment time, she has the choice between treating a new patient from the waiting area or an existing patient who is already treated before. Due to their different specializations, not all physicians can treat all patients and treatment times for each patient type may differ among physicians. Additionally, patients are preferably treated by a single physician for all the phases of their treatment. These factors make assigning and prioritizing patients efficiently a complicated task, which is in practice often performed by the triage-nurse or physicians. I will both present analytical heavy traffic results for some extreme cases, and numerical results for more realistic cases based on hospital data.

Die Vorträge zum Operations Research wenden sich an alle Interessierten!

Bei Rückfragen wenden Sie sich bitte an:

Prof. Dr. Stefan Nickel, Institut für Operations Research.