

A U S H A N G

FREIE UNIVERSITÄT BERLIN

Fachbereich Mathematik und Informatik

Promotionsbüro, Arnimallee 14, 14195 Berlin

D I S P U T A T I O N

Montag, 14. Juli 2025, 14:00 Uhr

Ort: Seminarraum 2006

(Zuse-Institut-Berlin, Takustr. 7, 14195 Berlin)

Disputation über die Doktorarbeit von

Enrico Bortoletto

Thema der Dissertation:

**Geometric Advances and Infrastructure Awareness in Periodic
Timetabling**

Thema der Disputation:

The Minimization of Scrap: On What We Choose to Waste

Die Arbeit wurde unter der Betreuung von **Prof. Dr. R. Borndörfer** durchgeführt.

Abstract: The cutting stock problem (CSP) is a practical task: how to efficiently cut large pieces of raw material into useful items. It is with this same naïveté that this question motivated many foundational steps of operations research. From the earliest use of linear inequality systems in industrial settings, to the birth of column generation, and even to the very idea of mathematically optimal solutions as a business goal. In this talk, we present the classical CSP, its theoretical foundations, its most widely used practical variants, and the broad spectrum of formulations and solution methods it inspired in the past century. In conclusion, we will look at the context in which these discoveries were made, and what we may choose to learn.

Die Disputation besteht aus dem o. g. Vortrag, danach der Vorstellung der Dissertation einschließlich jeweils anschließenden Aussprachen.

Interessierte werden hiermit herzlich eingeladen

Der Vorsitzende der Promotionskommission
Prof. Dr. R. Borndörfer