



universität  
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FAKULTÄT FÜR MATHEMATIK  
Dekan Univ.-Prof. Dr. Radu Ioan Boț

Einladung zur öffentlichen Defensio

**Felix ROTT**

Thema der Dissertation

**Fundamental constructions in Lorentzian length spaces**

Abstract:

This thesis deals with fundamental constructions and concepts concerning the theory of Lorentzian length spaces, which can be described as an abstraction of Lorentzian geometry in the spirit of metric length spaces and metric geometry. On the one hand, a gluing construction for Lorentzian length spaces is developed. Building on this, an analogue to the Reshetnyak gluing theorem as well as the preservation of various other (causal) properties are established. On the other hand, a splitting theorem for spaces with non-negative curvature bounds in the sense of triangle comparison is presented.

## **Prüfungssenat**

Univ.-Prof. Mag. Dr. Andreas Cap  
(Vorsitz, Universität Wien)

Univ.-Prof. Mag. Mag. Dr. Michael Kunzinger  
(Universität Wien)

Prof. Nicola Gigli  
(SISSA)

Prof. Ettore Minguzzi  
(Università degli Studi di Firenze)

## **Zeit und Ort**

Montag, 18. März 2024, 09:00 Uhr

Online:

<https://univiennea.zoom.us/j/62146248282?pwd=cDExaFJRY2gxMkU5cC80eGJNZzhydzo9>

Meeting ID: 621 4624 8282

Passcode: 391958