



# EINLADUNG

## Lunchseminar

zum Vortrag von

**Mario Hudelist**  
(University of Vienna)

über

***“Space-time curvature-induced corrections to Rytov's law  
in optical fibers“***

### **Abstract:**

According to Rytov's law, the polarization vector of light follows a Fermi-Walker transport equation in optical fibers. Recent advancements in theory propose a modification to Rytov's law due to fiber bending. The aim of this talk is to further extend these predictions from flat to curved space-time. This involves perturbatively solving Maxwell's equations under the assumption that the wavelength is significantly shorter than the fiber's radius of curvature, as well as the characteristic length-scales of the ambient space-time. This results in a coupling of the polarization vector to the spatial Riemann curvature tensor and second derivatives of the lapse function.

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**Zeit: Dienstag, 9.7.2024, 12:30h**

**Ort: Library, Währinger Straße 17, 1. Stock**