



# ***EINLADUNG***

im Rahmen des Seminars für Mathematische Physik  
**(Joint TU/UV Theory Seminar)**

zum Vortrag

von

**Weizhen Jia**

(University of Illinois)

über

***„Weyl-Ambient Metrics, Obstruction Tensors  
and Their Roles in Holography“***

**Abstract:**

Weyl geometry is a natural extension of conformal geometry with Weyl covariance mediated by a Weyl connection. We generalize the Fefferman-Graham (FG) ambient construction for conformal manifolds to a corresponding construction for Weyl manifolds.

We first introduce the Weyl-ambient metric motivated by the Weyl-Fefferman-Graham (WFG) gauge, which is a generalization of the FG gauge for asymptotically locally AdS (AlAdS) spacetimes.

Then, the Weyl-ambient space as a pseudo-Riemannian geometry induces a codimension-2 Weyl geometry.

Through the Weyl-ambient construction, we investigate Weyl-covariant quantities on the Weyl manifold and define Weyl-obstruction tensors. We show that Weyl-obstruction tensors appear as poles in the Fefferman-Graham expansion of the AlAdS bulk metric for even boundary dimensions. [...]

**Zeit:** Dienstag, **24.10.2023, 14.00 h - 15.00 h**

**Online (ZOOM).** Link: <https://tuwien.zoom.us/j/67102039242?pwd=ZHhS>

gez.: D. Grumiller, S. Fredenhagen, A. Fiorucci