

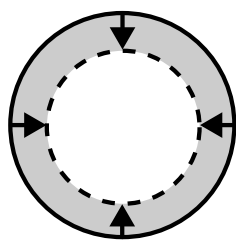
Friday, 12.01.2024, 1:15 p.m.
in Lecture Hall I of the Physics Institute



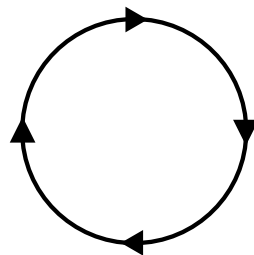
**Dennis Lehmkuhl and
Christian Röken**
Bonn University

**„On Penrose's Analogy between Curved
Spacetime Regions and Optical Lenses”**

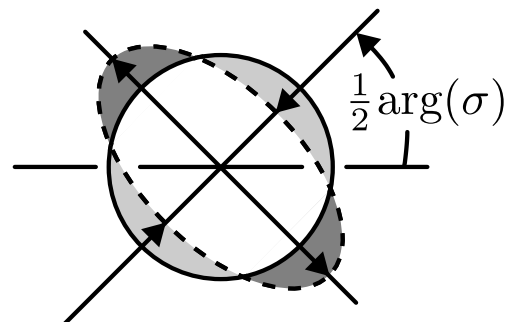
We present an analysis of the analogy between the focusing effects of particular families of Ricci- and Weyl-curved spacetime regions on the one hand and anastigmatic and astigmatic optical lenses on the other. This gravito-optical analogy was pioneered by Roger Penrose in the early 1960s. We put the analogy in its historical context, showing among other things how Penrose drew on results of Ray Sachs, and investigate its underlying assumptions, its range of validity, and how it should be interpreted.



convergence θ



rotation ω



shear σ

Everybody is welcome, especially students of all semester.
Coffee and tea will be available after the colloquium.

