"The Trans-Carpathian Seminar on Geometry & Physics"

(See also the Geometry & Physics @ DFT seminar homepage)

Date: Wednesday, Jan. 8, 2025, 15:15 EET (Bucharest time)

Location: online via Zoom

Speaker: **Prof. Ingo Runkel** (University of Hamburg)

Title: **Topological symmetries and their gaugings in 2dCFT and 3dTFT**

Abstract: The study of topological defects in quantum field theory has seen a wealth of activity recently leading to many interesting insights, for example the explicit realisation of non-invertible topological defects in higher dimensional QFTs via the gauging of higher form symmetries, or the description of the higher algebraic structures inherent in these topological defects.

In this talk, I would like to focus on low-dimensional examples, where such defects and their properties have been investigated for some time already. I would like to exhibit some of the properties of topological defects in two-dimensional conformal field theory and in three-dimensional topological field theory, and show some of the structural insights into 2dCFT and 3dTFT one can gain with the help of defects. In this way, the well-understood low-dimensional case might serves as a source of ideas and as a test-case for higher dimensional constructions.