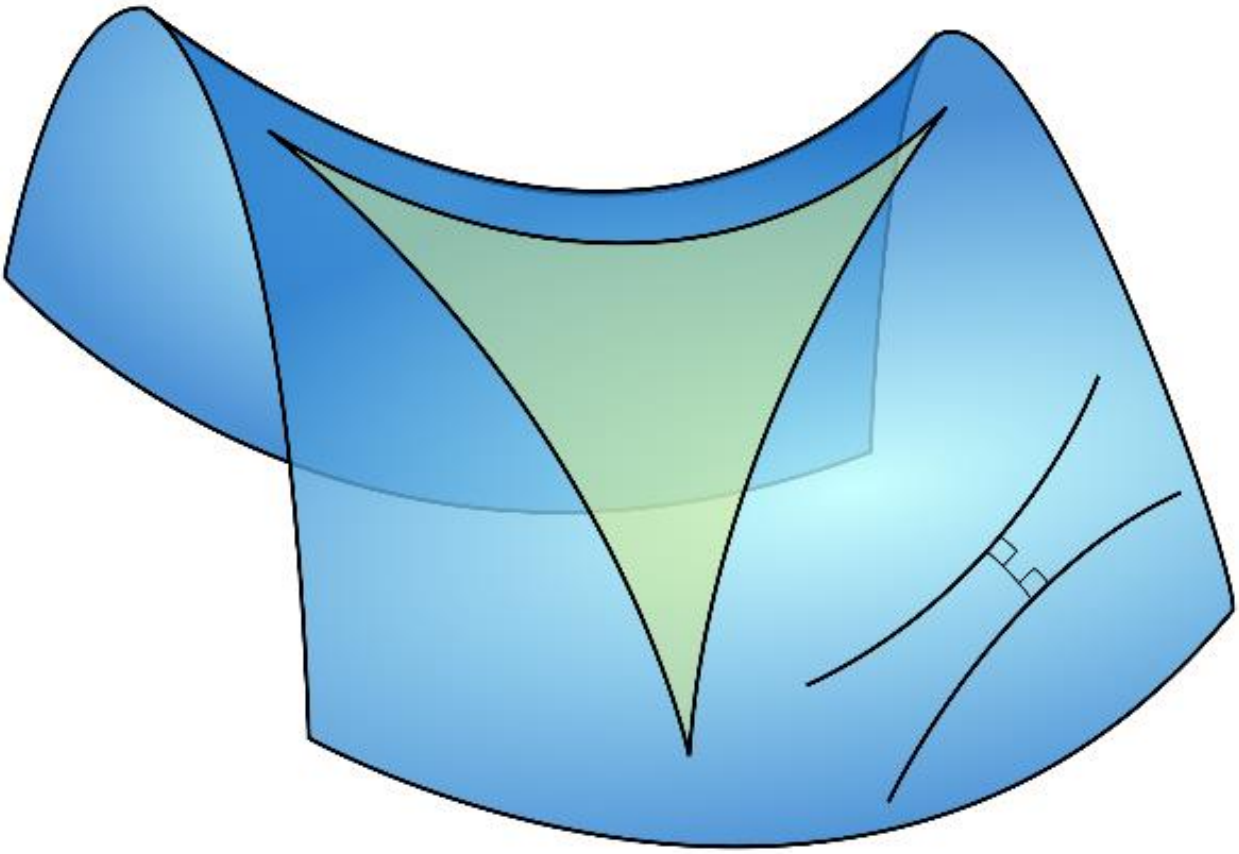

Interplay between analysis and geometry in non-Euclidean spaces

The interplay between analysis and geometry in non-Euclidean spaces reveals a deep and interesting relationship where each shapes the other. In hyperbolic and elliptic geometries, basic ideas like distance and parallelism differ from their Euclidean counterparts, requiring analytical tools to adapt when studying functions, measures, and integrals. Geometry, in turn, dictates the structure and curvature of space, influencing how analysis is carried out. This mutual influence produces rich mathematical theories with several applications in fields such as physics, biology, and robotics.

Some recent works

Quasi α-firmly nonexpansive mappings in Wasserstein spaces

A. Bërdëllima, “On a weak topology for Hadamard spaces”, Sb. Math., 214:10 (2023), 1373–1389

https://link.springer.com/article/10.1134/S0016266322010038

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