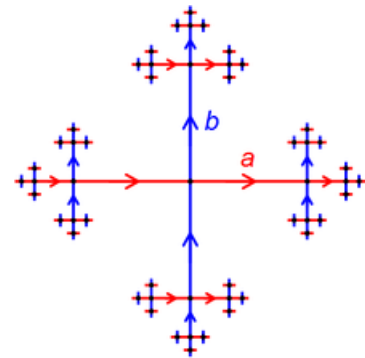


**Oberseminar Geometrie**  
Department of Mathematics  
University of Fribourg  
Lecture room 2.52 Physics  
**Wednesday October 7, 2020, 10:20**



GIULIANO BASSO (UNIFR)

### **Spaces with convex bicomblings**

A bicombing on a metric space distinguishes for every pair of points a geodesic connecting them. A deep result of Descombes and Lang states that every Gromov hyperbolic group acts geometrically on a proper, finite dimensional metric space with a unique bicombing satisfying a strong convexity condition. This convexity condition may be regarded as a weak global notion of non-positive curvature in metric spaces with not necessarily unique geodesics. In this talk, I will give a survey of recent results on the geometry of metric spaces with such bicomblings. I will discuss existence and uniqueness results for bicomblings satisfying various convexity conditions. Moreover, I will outline how classical results from the theory of CAT(0) spaces may be transferred to this broader setting of non-positive curvature.