



## Mathematics and CS Seminar

# A Discovery Tour in Random Riemannian Geometry (2012.06796)

**Lorenzo Dello Schiavo ( IST Austria)**

**Host: M. Beiglböck, N. Berestycki, L. Erdős, J. Maas, F. Toninelli**

In this talk, we discuss constructions and properties of massive Fractional Gaussian Fields  $h$  on a given Riemannian manifold  $(M, g)$  of bounded geometry. Our focus is on the regular case with Hurst parameter  $H > 0$ , the celebrated Liouville Geometry in 2d being borderline. We study random perturbations of the metric  $g$  by conformal factor the Fractional Gaussian Field  $h$ , provide estimates for basic geometric and functional-analytic objects relating to the random metric, such as intrinsic distance, spectral gap, and spectral bound, and we construct the random Brownian motion associated to the random geometry. The talk is based on joint work with Eva Kopfer and Karl-Theodor Sturm

**Tuesday, January 12, 2021 04:30pm - 05:15pm**

IST Austria Campus online via Zoom



This invitation is valid as a ticket for the IST Shuttle from and to Heiligenstadt Station. Please find a schedule of the IST Shuttle on our webpage: <https://ist.ac.at/en/campus/how-to-get-here/> The IST Shuttle bus is marked IST Shuttle (#142) and has the Institute Logo printed on the side.