Week 2 Abstracts

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Title: Random geometries in various quantum gravity approaches";

abstract:The gravitational path integral involves a sum over geometries weighted by the exponential of the gravitational action. In certain quantum gravity (QG) models, this sum admits a precise probabilistic interpretation, namely as the partition function of random geometries. This perspective allows one to apply tools from random geometry, such as random maps and matrix and tensor models, to the study of QG. In this talk, I will give an overview of the different models I have worked on, including random maps, random hyperbolic surfaces, and random tensor models, and discuss their applications to quantum gravity, with examples ranging from JT gravity to dynamical triangulations.