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*Percolation and quantum error correction*

Surface codes, introduced by Kitaev, are quantum error-correcting codes defined from a tiling of surface. First, we recall how the parameters of the surface code are related with the properties of the tiling of surface. Then, we observe the similarities between quantum erasures and percolation theory. Using these similarities, we derive an upper bound on the percolation threshold of a family of hyperbolic lattices from results of quantum information theory. This talk is based on joint work in progress with Gilles Zémor.