

What can the gluing equation matrices tell us about a 3-manifold?

vendredi 25 avril 2025 16:45 (1 heure)

Ideal triangulations of 3-manifolds with nonempty boundary were introduced by Thurston as an effective means of computing the complete hyperbolic structure on a cusped hyperbolic 3-manifold and its Dehn fillings. The combinatorics of the triangulations leads to gluing equations via Neumann-Zagier matrices, and these in turn lead to a plethora of quantum 3-manifold invariants. We will give a sample of such invariants that include the 3D-index, the Kashaev-Luo-Vartanov state integrals the quantum dilogarithm invariants of G.-Kashaev and the perturbative Chern-Simons invariants around $q=1$ of G.-Wheeler-Storzer.

Orateur: GAROUFALIDIS, Stavros (ICM-SUSTech, and IHÉS)