

# ENDS OF HYPERBOLIC 3-MANIFOLDS

DAVID GABAI

(Joint work with Danny Calegari)

This is joint work with Danny Calegari. We introduce a new technique for finding  $\text{Cat}(-1)$ -surfaces in hyperbolic 3-manifolds and use this to prove

**Theorem:** If  $N$  is a complete hyperbolic 3-manifold with finitely generated fundamental group, then  $N$  is geometrically and topologically tame.

PRINCETON UNIVERSITY