

- **Saratchandran, Hemanth: Complements of 2-tori in closed smooth simply connected 4-manifolds that admit a complete finite volume hyperbolic structure (204)**

The study of hyperbolic knot complements has a long history leading to many exciting results in the field of 3-manifold topology.

In this talk, I will present a 4-dimensional analogue of this study.

Namely, I will consider when a closed

smooth simply connected 4-manifold can contain a collection of 2-tori, whose complement can admit a complete finite volume hyperbolic structure. I will start by presenting some necessary conditions, based on a classification theorem of S. Donaldson and M. Freedman, and then move on to outline how one can try to build such complements.