

1135-20-2772 **Saikat Das*** (saikat.das@rutgers.edu), 101 Warren Street, Room 216, Newark, NJ 07003.
Coarse Geometric Properties of $\text{Out}(G)$.

Given $G = A_1 * A_2 * \dots * A_n$, a finite free product of finite groups; we are interested in understanding the coarse geometric properties of $\text{Out}(G) := \text{Aut}(G)/\text{Inn}(G)$. One such coarse geometric property is relative hyperbolicity of $\text{Out}(G)$.

$\text{Out}(G)$ acts geometrically on the spine of the deformation space of G -trees. Guirardel and Levitt showed that the deformation space is contractible and so is its spine. So, I am also interested in investigating the coarse geometric properties of the spine of the deformation space.

Behrstock, Drutu and Mosher showed that an algebraically thick group is non relatively hyperbolic. In our context, if the spine of the deformation space is metrically thick then $\text{Out}(G)$ is non relatively hyperbolic.

In this presentation we will investigate the algebraic thickness of $\text{Out}(G)$ and the metric thickness of the spine of the deformation space of G -trees to understand relative hyperbolicity of $\text{Out}(G)$ (Received September 26, 2017)