School of Mathematics
Tata Institute of Fundamental Research

Mathematics Colloquium

Speaker	:	*Swathi Krishna*
Affiliation	:	*TIFR, Mumbai*
Title	:	*Existence of Cannon-Thurston map*
Date & Time	:	*Thursday, 13 October, 2022 at 04.00 p.m.*
Venue	:	*Lecture Room (AG-69)*

Abstract

Let G be a hyperbolic group and H be a hyperbolic subgroup of G. If the embedding $H \to G$ extends continuously to a map between the Gromov compactifications of the groups, this extension is called a Cannon-Thurston map (CT). While it is known that not every hyperbolic subgroup embedding in a hyperbolic group admits CT, over time the existence of CT has been proven in many cases. We will start with a survey of these results and move on to the following case where CT exists. Let $1 \to N \to G \xrightarrow{\pi} Q \to 1$ be a short exact sequence of non-elementary hyperbolic groups and $K = \pi^{-1}(Q_1)$, where Q_1 is a qi-embedded subgroup of Q. Then K is hyperbolic and $K \to G$ admits CT. This is part of joint work with Pranab Sardar.

Milind Pilankar

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